



AQUIND Limited

PEIR CHAPTER 17

Soils and Agricultural Land Use

CONTENTS

17	SOILS AND AGRICULTURAL LAND USE	17-1
17.1	SCOPE OF THE ASSESSMENT	17-1
17.2	LEGISLATION, POLICY AND GUIDANCE	17-3
17.3	METHODS OF ASSESSMENT	17-6
17.4	BASELINE ENVIRONMENT	17-11
17.5	PREDICTED IMPACTS	17-14
17.6	PROPOSED MITIGATION	17-15
17.7	SUMMARY AND CONCLUSIONS	17-15
17.8	ASSESSMENTS AND SURVEYS STILL TO BE UNDERTAKEN	17-15
	REFERENCES	17-17

TABLES

Table 17.1 – PINS Scoping Opinion	17-5
Table 17.2 – Sensitivity of Agricultural Land and Soils	17-7
Table 17.3 – Magnitude of Change to Agricultural Land and Soils	17-8
Table 17.4 – Sensitivity of Farm Holdings	17-9
Table 17.5 – Magnitude of Change to Farm Holdings	17-9
Table 17.6 – Significance of Effects Matrix	17-10

FIGURES

Figure 17.1 – Agricultural Land Use

APPENDICES

- 17.1 - Detailed Agricultural Land Classification Survey
- 17.2 - Agricultural Land Classification Report

17 SOILS AND AGRICULTURAL LAND USE

17.1 SCOPE OF THE ASSESSMENT

17.1.1 INTRODUCTION

17.1.1.1 This chapter provides the preliminary soils and agricultural land use environmental impact assessment of the Proposed Development. The Proposed Development that forms the basis of this assessment is described in Chapter 3 Description of the Proposed Development.

17.1.1.2 The soils and agricultural land use assessment will consider the potential impacts associated with the following activities:

- Construction of the proposed Converter Station and associated infrastructure at Lovedean;
- Construction of the proposed 400kV AC Cable Route connecting the new Converter Station to the existing National Grid Lovedean substation; and
- Construction of the proposed DC Onshore Cable Route and fibre optic cables where it crosses agricultural land outside of the highway boundary.

17.1.1.3 FOC infrastructure is anticipated to be located adjacent to the Converter Station (up to two Telecommunications buildings) and within approximately 1 km of Landfall (up to two Optical Regenerations Stations), and other associated equipment for auxiliary power supply, and security fencing, as described in Chapter 3. However, as the locations are not yet confirmed, the assessment of these elements of the Proposed Development will be considered in the ES when further details are available.

17.1.2 STUDY AREA

17.1.2.1 The study area for the soils and agricultural land use assessment is confined to the area of agricultural land and natural soil resources within the Site Boundary. Agricultural land is as defined in section 336 of the Town and Country Planning Act 1990 (as amended):

“agriculture” includes horticulture, fruit growing, seed growing, dairy farming, the breeding and keeping of livestock (including any creature kept for the production of food, wool, skins or fur, or for the purpose of its use in the farming of land), the use of land as grazing land, meadow land, osier land, market gardens and nursery grounds, and the use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes, and “agricultural” shall be construed accordingly”.

17.1.2.2 The Proposed Development is broken down into ‘Sections’, outlined below and shown on Figure 3.9 in Chapter 3 - Description of the Proposed Development.

Section 1 – Lovedean (Converter Station Area)

- 17.1.2.3 The study area for assessment includes all land within Section 1 other than the site of the existing National Grid Lovedean substation. This is mostly in agricultural use with some woodland.

Section 2 - Anmore

- 17.1.2.4 The study area for assessment includes all land within Section 2, which is mostly in arable agricultural use.

Section 3 – Denmead/Kings Pond Meadow

Options 3a (i and ii) Kings Pond Meadow and 3b) Anmore Road

- 17.1.2.5 The study area for assessment includes all land within Section 3, Options 3a (i and ii) and 3b, comprising permanent pasture at Kings Pond Meadow.

Option 3c) Highways

- 17.1.2.6 No agricultural land is present within this option and therefore, it is not included within the assessment.

Sections 4 to 6 - Hambledon Road to Burnham Road, Farlington Road, Zetland Field and Sainsbury’s Car Park

- 17.1.2.7 No agricultural land is present within these Sections and therefore, they are not included within the assessment.

Section 7 - Farlington Junction to Airport Service Road

- 17.1.2.8 No agricultural land is included within the assessment for this Section, although an assessment will be made of the natural soil resources affected.

Section 8 - Great Salterns Golf Course to Velder Avenue/Moorings Way

Option 8a) Eastern Road to Milton Road

- 17.1.2.9 No agricultural land is present within this option, and therefore it is not included within the assessment.

Option 8b) Eastern Road, Minor Roads and Moorings Way

- 17.1.2.10 No agricultural land is present within this option, and therefore it is not included within the assessment.

Option 8c) Milton Common (i) and (ii)

- 17.1.2.11 No agricultural land is present within this option, and therefore it is not included within the assessment, although an assessment will be made of the natural soil resources affected within the ES.

Section 9 Velder Avenue/Moorings Way to Bransbury Road

Option 9a) Highways Route

17.1.2.12 No agricultural land is present within this option, and therefore it is not included within the assessment.

Option 9b) Allotments (i and ii)

17.1.2.13 No agricultural land is present within this option, therefore it is not included within the assessment, although an assessment will be made of the natural soil resources affected.

Option 9c) Ironbridge Lane (i) to (iii)

17.1.2.14 No agricultural land is present within this option, and therefore it is not included within the assessment, although an assessment will be made of the natural soil resources affected in the ES.

Section 10 – Eastney (Landfall)

17.1.2.15 No agricultural land is present within this Section, and therefore it is not included within the assessment.

17.2 LEGISLATION, POLICY AND GUIDANCE

17.2.1.1 This assessment has taken into account the current legislation, policy and guidance relevant to soils and agricultural land use. These are listed below.

17.2.2 LEGISLATION

17.2.2.1 There is no adopted legislation at the EU or national level relating to soil protection. The EU Thematic Strategy for Soil Protection (2006) outlines the condition of soils in Europe and aims to ensure their protection and sustainable use. The overarching aims are to prevent further soil degradation, preserve soil functions, and restore degraded soils to a standard appropriate to their intended use.

17.2.3 PLANNING POLICY

National Policy

- The Overarching National Policy Statement for Energy (EN-1) states at paragraph 5.10.8 that applicants should seek to minimise impacts on the best and most versatile ('BMV') agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification '(ALC')) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed and that they have considered the risk posed by land.

- i For decision making, paragraph 5.10.15 advises that the IPC should ensure that applicants do not site their scheme on BMV agricultural land without justification. It should give little weight to the loss of poorer quality agricultural land (in grades 3b, 4 and 5), except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy.
- Paragraph 170 of the National Planning Policy Framework indicates that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing soils (in a manner commensurate with their identified quality). They should also prevent new development from contributing to unacceptable levels of soil pollution.
- Paragraph 170 also indicates that policies and decisions should recognise the wider benefits from natural capital and ecosystem services, including the economic and other benefits of BMV agricultural land, and use areas of poorer quality agricultural land in preference to those of a higher quality for significant development of agricultural land.

Local Policy

Portsmouth City Council

17.2.3.1 There are no relevant policies to take into account in this assessment.

Havant Borough Council

- Policies CS11 and DM8 of the Havant Borough Core Strategy seek to protect and enhance natural soil resources; and Policy CS11 also seeks to protect BMV agricultural land that has the greatest potential for local food security.
- Policy E19 of the Draft Havant Borough Local Plan 2036 seeks the protection of BMV agricultural land.

Winchester City Council

17.2.3.2 There are no relevant policies from Winchester City Council to take into account in this assessment.

East Hampshire District Council

17.2.3.3 Policy CP20 of the East Hampshire District Local Plan Joint Core Strategy seeks to protect and enhance soils.

17.2.4

GUIDANCE

- Defra's Soil Strategy for England seeks to encourage the sustainable management of soil resources. The Strategy sets out Defra's vision that by 2030 all of England's soils will be managed sustainably and degradation threats will be tackled successfully in order to improve soil quality and safeguard the ability to provide essential services for future generations. The Strategy sets out priorities

for the better protection of agricultural soils; enhancing stores of soil carbon; building the resilience of soils to a changing climate; preventing soil pollution; protecting soils during construction and development; and dealing with the legacy of contaminated land.

- Defra’s Construction Code of Practice for the Sustainable Use of Soils on Construction Sites is a practical guide to assist the construction industry to protect the soil resources with which it works and achieve good soil management at all stages of the construction process. It advises that the protection, use and movement of soil should be considered from the outset of a development project’s planning, through its design and construction phases and on into future maintenance and operation. The sustainable use and management of soil resources during construction can help with the re-establishment of soil functions following their storage or movement, including food production, habitat provision and support, and natural cycling of elements such as carbon and nitrogen.

17.2.5 SCOPING OPINION

17.2.5.1 As detailed within Chapter 1 Introduction, a Scoping Opinion was received by the Applicant from PINS (on behalf of the SoS) on 7th December 2018. The responses from PINS in relation to soils and agricultural land use and how those requirements should be addressed by the Applicant, are set out below in Table 17.1. Appendix 5.3 provides a complete set of responses in the PEIR to the contents of the Scoping Opinion.

Table 17.1 – PINS Scoping Opinion

Scoping Opinion Ref	Summary of Inspectorate’s comments	How has this been addressed by the Applicant
4.15.2	The Soil Resources Plan should be appropriately secured. An Outline Plan should be provided with the DCO application.	An Outline Plan will be submitted alongside the ES and the draft DCO and Planning Statement will set out how the Soil Resources Plan will be secured.
4.15.3	The ES should include appropriate cross references between the Ground Conditions and Soils and Agricultural Land Use chapters to avoid overlap and duplication.	Duplication between the two chapters has been avoided within the PEIR, and will be avoided in the ES, and where cross references are needed these will be provided.

Scoping Opinion Ref	Summary of Inspectorate's comments	How has this been addressed by the Applicant
4.15.4	The ES should address the potential for impacts to field drainage regimes and consequently soils with appropriate cross reference to Ground Conditions and Water Resources and Flood Risk chapters. Any resulting significant effects should be presented within the ES.	The baseline surveys of farm holdings will seek to establish existing networks of field drainage in order that these can be considered in the detailed design, and adverse effects on soil quality will be addressed.

17.2.6

CONSULTATION

17.2.6.1

Consultation is a key part of the DCO application process. Further consultation will continue to be undertaken once the PEIR is made available, during further consultation opportunities and the DCO application submission. No specific consultation has been undertaken for the soils and agricultural land use assessment, however relevant responses from organisations such as Natural England will be used in the assessment. Consultation will also take place with the owners and occupiers of agricultural land affected by the Proposed Development to determine the impacts on their agricultural operations and identify potential measures required to mitigate significant adverse effects.

17.2.6.2

Full details of Project consultation for all disciplines are presented within Chapter 5 Consultation.

17.3

METHODS OF ASSESSMENT

17.3.1.1

The assessment methodology used in this PEIR is based on that set out in the Scoping Report. All impacts on soils and agricultural land occur during the Construction Stage, therefore operational impacts are not considered further.

17.3.2

CONSTRUCTION

17.3.2.1

The sensitivity of agricultural land is assessed according to its grade within the ALC, as set out in Table 17.2.

17.3.2.2

The impact on the soil resource is assessed according to the degree to which disturbed soil resources are re-used in a manner that enables the resource to fulfil one or more of the primary soil functions of:

- the production of food and biomass, and the provision of raw materials;
- the storage, filtration and cycling of water, carbon and nitrogen in the biosphere;
- the support of ecological habitats and biodiversity;
- support for the landscape;

- the protection of cultural heritage; and
- the provision of a platform for human activities, such as construction and recreation.

17.3.2.3

The sensitivity of the soil resource reflects its textural characteristics and its susceptibility to the effects of handling during construction and the re-instatement of land, as shown in Table 17.2.

Table 17.2 – Sensitivity of Agricultural Land and Soils

Sensitivity	Agricultural Land	Soil Resources
High	Grade 1, excellent quality agricultural land	Soils with high clay and silt fractions (clays, silty clays, sandy clays, heavy silty clay loams and heavy clay loams)
Medium	Grade 2 and Subgrade 3a, very good to good quality agricultural land	Silty loams, medium silty clay loams, medium clay loams and sandy clay loams
Low	Subgrade 3b and Grade 4, moderate to poor quality agricultural land	Soils with a high sand fraction (loamy sands, sandy loams and sandy silt loams)
Negligible	Grade 5, very poor quality agricultural land	Sands

17.3.2.4

The magnitude of change to agricultural land is assessed according to the criteria set out in Table 17.3. The thresholds for determining the magnitude of change have been derived taking into account the statutory consultation procedures with Natural England for development involving the loss of agricultural land. These require specific consultation with Natural England for non-agricultural development proposals that are not consistent with an adopted local plan and involve the loss of 20 ha or more of BMV land.

17.3.2.5

The magnitude of change on soil resources takes into account the continued ability of a soil to fulfil its primary functions, as set out in Table 17.2. These definitions have been derived from good practice guidance on handling soils, particularly the Defra Construction Code of Practice for the Sustainable Use of Soils (2009).

Table 17.3 – Magnitude of Change to Agricultural Land and Soils

Sensitivity	Agricultural Land	Soil Resources
Large	Development would directly lead to the loss of over 50ha of agricultural land	The soil displaced from development is unable to fulfil one or more of the primary soils functions
Medium	Development would directly lead to the loss of between 20ha and 50ha of agricultural land	The soil displaced from development mostly fulfils the primary soil functions off-site or has a reduced capacity to fulfil the primary functions on site
Small	Development would directly lead to the loss of between 5ha and 20ha of agricultural land	The soil displaced from development mostly fulfils the primary soil functions on-site
Negligible	Development would directly lead to the loss of less than 5ha of agricultural land	The soil retains its existing functions on-site

- 17.3.2.6 The impacts on farm holdings relate primarily to the loss of land and other key farm infrastructure (dwellings, buildings and other structures such as irrigation reservoirs and slurry pits) and the fragmentation of land from the residually farmed area.
- 17.3.2.7 The sensitivity of farm holdings is determined by the extent to which they have the capacity to absorb or adapt to impacts, which will be determined primarily by their nature and scale, as set out in Table 17.4.
- 17.3.2.8 Guideline criteria for determining the magnitude of change caused by the loss of land and/or loss of farm infrastructure are presented in Table 17.5. The magnitude of change to farm holdings to be used in the final assessment of effects then accords with whichever of the impacts is greater. The criteria for assessing sensitivity and magnitude of change have been accepted as appropriate when applied to other major infrastructure projects.
- 17.3.2.9 The environmental effects associated with the impacts on farm holdings relate to the consequential land use implications for the residual farm holding, and the continued ability to manage the residual land in a viable form.

Table 17.4 – Sensitivity of Farm Holdings

Sensitivity	Definition
High	Farms in which the operation of the enterprise is dependent on the spatial relationship of land to key infrastructure, and where there is a requirement for frequent and regular access between the two, or dependent on the existence of the infrastructure itself, e.g. dairying, irrigated arable cropping and field-scale horticulture, and intensive livestock or horticultural production
Medium	Farms in which there is a degree of flexibility in the normal course of operations, e.g. combinable arable farms and grazing livestock farms (other than dairying)
Low	Off-lying areas of land that are not contiguous with the main farm holding
Negligible	Off-lying areas of agricultural land used for non-commercial purposes

Table 17.5 – Magnitude of Change to Farm Holdings

Sensitivity	Loss of land	Loss of farm infrastructure
Large	Loss of 20% or more of all land farmed	Direct loss of farm dwelling, building or structure
Medium	10% or more and less than 20% of all land farmed	Loss of or damage to farm infrastructure affecting land use
Small	5% or more and less than 10% of all land farmed	Infrastructure loss/damage does not affect land use
Negligible	Less than 5% of all land farmed	No impact on farm infrastructure

17.3.3 SIGNIFICANCE CRITERIA

17.3.3.1 The overall significance will be assessed using the matrix shown in Table 17.6. This uses sensitivity of the receptor and magnitude of change to demine significance.

Table 17.6 – Significance of Effects Matrix

		Value/Sensitivity			
		High	Medium	Low	Negligible
Magnitude /Scale of Change	Large	Major	Major to Moderate	Minor to Moderate	Negligible
	Medium	Major to Moderate	Moderate	Minor	Negligible
	Small	Moderate	Minor to Moderate	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

17.3.4 ASSUMPTIONS AND LIMITATIONS

17.3.4.1 This chapter provides preliminary environmental information as it relates to the evolving Proposed Development and to data currently available and gathered at this point of the assessment process.

17.3.4.2 The information contained herein is intended to inform consultation responses at this stage. A more detailed assessment of potential significant effects as a result of the Proposed Development on identified sensitive receptors will be undertaken at subsequent stages to inform the ES.

17.3.4.3 Information gaps identified at this PEIR stage will be considered and addressed along with specific mitigation measures as part of the assessments for the ES.

17.3.4.4 The assessment has been able to take into account detailed soil and ALC data for land surrounding the Lovedean substation (part of Section 1) and land at Anmore (part of Section 2). Where there is no survey data available, the assessment has relied on published soil and ALC data which suffers from limitations of scale. No assessments have been undertaken of the impacts on farm holdings at this stage.

17.3.4.5 It is assumed throughout the assessment, that where components need to be removed for decommissioning, the impacts are similar to those for construction.

17.4 BASELINE ENVIRONMENT

- 17.4.1.1 As set out in the MAFF ALC guidelines and Natural England's Technical Information Note ('TIN') 049, agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. Grade 1 land is 'excellent quality' agricultural land with very minor or no limitations to agricultural use, and Grade 5 is 'very poor quality' land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a ('good quality' land) and Subgrade 3b ('moderate quality' land).
- 17.4.1.2 Initial baseline collection has been carried out through desk study and has drawn upon a range of published information, including:
- Provisional ALC mapping (1983);
 - BGS mapping of bedrock and superficial geology (online);
 - the Soil Survey of England and Wales soil association maps (1984) (soil associations are groups of similar soil types);
 - climatic data from the Meteorological Office's standard 5 km grid point data set (1989); and
 - detailed ALC surveys undertaken on behalf of MAFF at Denmead and Cowplain (1995).
- 17.4.1.3 A detailed ALC survey of approximately 26 ha of agricultural land surrounding the National Grid Lovedean substation has been undertaken in October 2018 in accordance with the ALC guidelines (see Appendix 17.1). The initial survey was undertaken for Section 1 as the main permanent effects on BMV agricultural land are anticipated to be associated with the Converter Station Area. The survey involved examining 27 soil profiles within Section 1 using an auger at an observation density of approximately one per hectare in accordance with the ALC guidelines. Three small soil pits were also dug to examine subsoil structures and stone content. The soil characteristics were recorded and analysed in accordance with the ALC guidelines to specify the grade of land.
- 17.4.1.4 The results of the detailed ALC survey undertaken and the detailed surveys undertaken on behalf of MAFF are shown in Figure 17.1, and the Agricultural Land Classification Report is contained in Appendix 17.2. The Provisional ALC is shown for those areas not yet covered by detailed survey.
- 17.4.1.5 The following baseline describes only those parts of the study area that include agricultural land and natural soil resources that are likely to be affected by the Proposed Development.

Section 1 – Lovedean (Converter Station Area)

- 17.4.1.6 Agricultural land quality surrounding the Converter Station Area within Section 1 is affected mostly by soil wetness, with some profiles also limited by soil droughtiness and topsoil stone content. Approximately half of the area surveyed is classified as Subgrade 3a, with other areas classified as Subgrade 3b and Grade 4.
- 17.4.1.7 The main soils include slightly stony brown medium clay loam topsoils of around 29 cm thickness. Heavy clay loam and silty clay loam topsoils are also present mostly to the south-east and north-west. The upper and lower subsoil is mostly a stony, slowly permeable brown clay or heavy clay loam, with occasional medium loam, which is mottled and gleyed.
- 17.4.1.8 Where there are medium clay loam topsoils and permeable subsoils in the east of the survey area, the land is classified as Subgrade 3a on soil wetness. Where the subsoils are slowly permeable across the remainder of the survey area, imperfectly drained profiles with medium loam topsoils are Subgrade 3a, whilst those with heavy loam topsoils are Subgrade 3b. Where the profiles are poorly drained, medium loam topsoils are Subgrade 3b and heavy loam topsoils Grade 4.
- 17.4.1.9 Topsoil stone content (of more than 15%) also limits agricultural land quality in the north of the survey area and in other isolated areas to Subgrade 3b. The high stone content in some of the subsoils also introduces a droughtiness limitation to these profiles.

Section 2 - Anmore

- 17.4.1.10 The agricultural land in the Site Boundary of Section 2 is mapped on the Provisional ALC map as Grade 3, and a detailed ALC survey in the southern part of this section classifies the land as mostly Subgrade 3a, with a smaller area of Subgrade 3b.
- 17.4.1.11 The soils typically have a medium silty clay loam topsoil over a heavy silty clay loam upper subsoil overlying a mottled stony slowly permeable clay. They are mostly limited to Subgrade 3a on soil wetness but also on soil droughtiness where the subsoil stone contents are higher.
- 17.4.1.12 The soils in the remainder of this area are mapped as Carstens association, which are well drained fine silty over clayey soils and often very flinty, and in common with the area surveyed, would be expected to be mostly Subgrade 3a with some Subgrade 3b.

Section 3 - Denmead/Kings Pond Meadow

Option 3a) King Pond Meadow and 3b) Anmore Road

- 17.4.1.13 The agricultural land in King Pond Meadow is classified on the Provisional ALC map as Grade 4 land.

17.4.1.14 The soils are mapped as Windsor association which are slowly permeable seasonally waterlogged clayey soils mostly with brown subsoils. This area is not expected to contain any BMV agricultural land.

Sections 4 to 6 - Hambledon Road to Burnham Road, Farlington Road, Zetland Field and Sainsbury's Car Park

17.4.1.15 The Provisional ALC map shows this area as urban and non-agricultural land. There is no mapped soils data available.

Section 7 - Farlington Junction to Airport Service Road

17.4.1.16 The Provisional ALC map shows this area as urban and non-agricultural land. There are no detailed ALC survey results available. The soils are shown as Wallasea 1 association soils which are deep stoneless clayey soils over marine alluvium. This area is not expected to contain any BMV agricultural land.

Section 8 - Great Salterns Golf Course to Velder Avenue/Moorings Way

17.4.1.17 The Provisional ALC map shows this area as urban and non-agricultural land. There is no mapped soils data available.

Section 9 - Velder Avenue/Moorings Way to Bransbury Road

17.4.1.18 The Provisional ALC map shows this area as urban and non-agricultural land. There is no mapped soils data available.

Section 10 – Eastney (Landfall)

17.4.1.19 The Provisional ALC map shows this area as urban and non-agricultural land. There is no mapped soils data available.

17.4.2 FUTURE BASELINE

17.4.2.1 The baseline for agricultural land quality and soil resources is not anticipated to change between the submission of the ES and the anticipated date of commencement of construction.

17.4.2.2 The long-term potential effects of climate change on soils and agricultural land quality are uncertain and difficult to quantify at a site-specific level, although they could involve:

- soils becoming more susceptible to erosion in longer drier summer months, but also more susceptible to waterlogging and anaerobism with more intense or frequent rainfall events; and
- a reduction in the carbon sequestration potential and organic matter content as a result of increased rainfall, periods of drought and higher temperatures.

17.5 PREDICTED IMPACTS

17.5.1 SECTION 1 - LOVEDEAN (CONVERTER STATION AREA)

Construction

Permanent loss of best and most versatile agricultural land

- 17.5.1.1 The detailed ALC surveys have identified that the siting of the Converter Station (including FOC infrastructure such as up to two Telecommunications buildings) would not involve the permanent loss of BMV land, and that there will be a small impact on a receptor of low sensitivity which is likely to give rise to a minor adverse effect. Some land in Subgrade 3a will be required to the south of Lovedean substation. The magnitude of impact is likely to be small on a receptor of medium sensitivity, giving rise to a likely **minor to moderate** permanent adverse effect on BMV land.

Loss of soil resource

- 17.5.1.2 The construction of the Converter Station would generate a surplus of soil resources which would need to be used within the design of the development to avoid significant effects on the resource. The option to use soils within the Proposed Development or re-used off site will be considered in the ES. It is assumed that there is potential for the land to be reinstated if structures are removed during decommissioning.

17.5.2 SECTIONS 2-10 - ONSHORE CABLE CORRIDOR AND EASTNEY (LANDFALL)

Construction

Loss of Best and Most Versatile Agricultural Land

- 17.5.2.1 The Onshore Cable Route, to be located within the Onshore Cable Corridor, is likely to involve the temporary loss of BMV land in Subgrade 3a during construction in Sections 1 and 2 only. The quantum of temporary loss is undetermined at this stage, and so the level of effect cannot be determined.

- 17.5.2.2 The remainder of the Onshore Cable Corridor where it crosses agricultural land is not likely to have any effect on the temporary loss of BMV land, and the effect on agricultural land will be **minor adverse or negligible**.

- 17.5.2.3 The construction and decommissioning of the Onshore Cable Route is not predicted to lead to the permanent loss of a substantial loss of BMV agricultural land, and no significant effects are predicted in this respect. Further assessment on the impact will be reported in the ES.

Loss of Soil Resource

- 17.5.2.4 It is anticipated that the construction and decommissioning of the Onshore Cable Route will re-use the soil resources that are disturbed in the same location. Following good practice for the handling and storage of soils will ensure that the temporary and permanent impacts on soil resources will be **negligible**.

17.5.3 CUMULATIVE IMPACT ASSESSMENT

17.5.3.1 Cumulative Impacts have not been assessed in the PEIR and will be assessed and reported within the ES. In particular, potential for cumulative effects with other developments on loss of agricultural land and uses for surplus soils will be considered.

17.6 PROPOSED MITIGATION

17.6.1.1 A Soil Resources Management Plan ('SRMP') will identify the existing soil resources that will be affected by the Proposed Development, based on existing and further detailed soil surveys. The SRMP will set out measures to ensure that the soils are handled, stored and replaced according to good practice as set out in the Defra Construction Code of Practice for the Sustainable Use of Soils (2009), particularly to minimise compaction and biodegradation of soils in storage. In this way, soils that are re-used within the Proposed Development will be able to continue to fulfil their various ecosystem functions.

17.7 SUMMARY AND CONCLUSIONS

17.7.1 BASELINE

17.7.1.1 Agricultural land quality including and in close proximity to the Converter Station Area is a mixture of good quality land in Subgrade 3a (within the BMV agricultural land), and moderate and poor quality land in Subgrade 3b and Grade 4. The soils are mostly medium clay loam topsoils over clay and heavy clay loam.

17.7.2 ASSESSMENT

17.7.2.1 The indicative siting of the Converter Station will involve the loss of land in Subgrade 3b and Grade 4, which is not BMV land. However, some Subgrade 3a land to the south of Lovedean substation is also likely to be required, for example for the access road (within the Site Boundary), giving rise to a likely **minor** to **moderate** permanent adverse effect on BMV land.

17.7.2.2 There are not anticipated to be any significant effects on BMV land or soil resources arising from the construction of the Onshore Cable Route, on the assumption that good practice is used in the handling and storage of soil resources.

17.7.3 MITIGATION

17.7.3.1 A SRMP will identify the existing soil resources that will be affected by the Proposed Development, based on existing and further detailed soil surveys to be undertaken.

17.8 ASSESSMENTS AND SURVEYS STILL TO BE UNDERTAKEN

17.8.1.1 Detailed soil and ALC surveys will be required of the agricultural land and natural soil resources affected by the Onshore Cable Route, and any land required for the Converter Station that has not already been surveyed in detail.

17.8.1.2

The impact on farm businesses will need to be assessed following the collection of farm-specific data from the farmers and landowners, including details of:

- the area farmed;
- the nature of land tenure;
- the nature and scale of agricultural and diversified enterprises undertaken;
- the labour employed on the farm holding;
- items of fixed farm capital, including existing field drainage;
- the present means of agricultural access to land; and
- the extent of any agri-environment scheme involvement.

REFERENCES

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