

## 11 AGRICULTURE AND LAND USE

### 11.1 Introduction

11.1.1 This Chapter of the Environmental Appraisal appraises the agriculture and land use impacts arising from the construction (including overhead line (OHL) removal), and decommissioning phases of the Proposed Project; and presents the requirements for mitigation.

### 11.2 Scope and Methodology

11.2.1 This appraisal of agriculture and land use has been informed by data from other Chapters as follows:

- Chapter 2: Project Description (which provides a description of the different phases of the Proposed Project)
- Chapter 5: Planning Policy
- Chapter 7: Terrestrial Ecology
- Chapter 9: Water Resources
- Chapter 10: Geology, Soils and Contaminated Land
- Chapter 13: Socio-Economics and Tourism

11.2.2 This appraisal relates to the following principal factors:

- the soil types and their sensitivity and suitability for reinstatement;
- the extent of permanent land take in relation to high quality land as assessed within the Agricultural Land Classification (ALC) system (with reference to the potential presence of best and most versatile (BMV) land (ALC grades 1, 2 and 3a));
- the type of farm enterprises and farming/land management practices present, including any agri-environment schemes; and
- the possible presence of crop/soil/animal diseases or noxious weeds, and the risk of spreading such disease/weeds.

11.2.3 The objectives of the appraisal are to:

- characterise the baseline environmental conditions for soils, land use and agriculture within the Study Area;
- identify all soils, land use and agricultural receptors within and adjacent to the Site Boundary that may be affected by the construction and decommissioning phases of the Proposed Project;
- appraise the potential impacts of the Proposed Project on soil, land use and agriculture, taking account of temporary effects on soils, permanent land take requirements and site restoration; and
- recommend measures, if appropriate, to mitigate potential adverse effects on soil, land use and agriculture.

11.2.4 As detailed in the Scoping Report (National Grid, October 2018) the following topics have been scoped out:

- Operational effects on land use and agriculture;

- Potential economic effects that the Proposed Project will have on individual landowners and farmers; and
- Temporary land take during construction and decommissioning.

11.2.5 Farmers will be reasonably compensated for loss of earnings as a direct result of the Proposed Project due to the financial consequences of both temporary (where the land will be reinstated after the construction phase and after the decommissioning phase) and permanent land take.

11.2.6 In relation to temporary land take, whilst predictive mapping indicates some Grade 3a land could be present, as defined under the ALC system<sup>1</sup>, all land required on a temporary basis will be returned to agricultural use once construction or decommissioning activities have been completed.

### ***The Study Area***

11.2.7 The Study Area for the agriculture and land use baseline appraisal comprises the Area of Search for Permanent and Temporary Works (defined within Chapter 3) which was established for data collection purposes to encompass the likely maximum extent of all temporary and permanent works associated with the Proposed Project. The Study Area is located to the west of Porthmadog, running east from Minffordd and crossing the Dwyryd Estuary and then north of Trem-y-Garth towards the Llyn Tecwyn Reservoir.

### ***Assessment Criteria***

11.2.8 There are no established or published methods for appraising the impacts of development upon agricultural receptors; however, there are a number of other guidance documents which are of relevance. The following documents have been used to inform the methodology:

- Design Manual for Roads and Bridges (DMRB), Volume 11, Section 1, Part 4: LA104 Environmental assessment and monitoring (Highways England, 2019); and
- DMRB, Volume 11, Section 2, Part 11: LA109 Geology and Soils (Highways England, 2019).

11.2.9 In appraising the potential effect of the Proposed Project two factors have been taken into account:

- The sensitivity of the receiving environment; and,
- The magnitude of the potential impact.

11.2.10 The approach to assigning levels of sensitivity to receptors was outlined in the Scoping Report, as detailed in the Table 11.1. Whilst the effects on temporary loss of agricultural land have been scoped out, reference to land quality and its sensitivity is provided within the table below to provide the context on this and to enable appraisal of permanent land take.

---

<sup>1</sup> 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 characteristics, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Grades 1, 2 and 3a are defined as best and most versatile (BMV) land.

**Table 11.1: Value/sensitivity of receptor**

Sensitivity	Description	Examples
High	Very high agricultural and land use value, quality or rarity on a national scale.	<ul style="list-style-type: none"> <li>National land use allocations;</li> <li>Grades 1, 2 and 3a agricultural land (i.e. BMV land);</li> <li>Higher Tier Agri-Environmental Schemes;</li> <li>Soils with a very low resilience to structural damage (e.g. clayey soil);</li> <li>Pastoral Farms.</li> </ul>
Medium	High agricultural and land use value, quality or rarity on a national scale.	<ul style="list-style-type: none"> <li>Regional land use allocations;</li> <li>Grade 3b agricultural land;</li> <li>Soils with a moderate resilience to structural damage (e.g. loamy soils);</li> <li>Mixed farms.</li> </ul>
Low	Medium agricultural and land use value, quality or rarity on a regional scale.	<ul style="list-style-type: none"> <li>Local land use allocations;</li> <li>Grade 4 agricultural land;</li> <li>Soils with a low resilience to structural damage (e.g. sandy soils);</li> <li>Organic arable farms.</li> </ul>
Very Low	Low or negligible agricultural and land use value, quality or rarity on a local scale.	<ul style="list-style-type: none"> <li>Grade 5 agricultural land;</li> <li>Individual planning applications;</li> <li>Lower Tier Agri-Environmental Schemes;</li> <li>Other soil types (e.g. made ground);</li> <li>Non-organic arable farms.</li> </ul>

11.2.11 The principal agricultural and related receptors are the quality of the agricultural land and the land management practices (along with the facilities/ machinery required for such operations), as well as diversified activities on farms.

11.2.12 The magnitude of a potential impact considers the physical and geographical scale of the predicated change to baseline conditions resulting from a given potential impact. It also takes into account the duration of impact, for example whether it is temporary or permanent, direct or indirect, as well as reversibility of the effect. Impacts can also be classified as adverse or beneficial. Table 11.2 below details the approach to the appraisal of the magnitude of potential impact.

**Table 11.2: Appraisal of the magnitude of potential impact**

Magnitude	Description	Examples
High	Total loss or substantial change to key features or attributes of the resource, or its key characteristics, features or elements, such that post development character/ composition will be fundamentally changed, affecting its integrity or viability.	<ul style="list-style-type: none"> <li>• Permanent loss of &gt;20ha of BMV land;</li> <li>• Permanent, full displacement of intended land uses;</li> <li>• Current farm practice is seriously affected and effects on farm profitability, and lead to viability issues or likely to have a major financial impact.</li> </ul>
Medium	Partial loss or alteration to key features or attributes of the resource, or its key characteristics, features or elements, such that post development character/ composition will be materially changed, affecting its integrity or viability.	<ul style="list-style-type: none"> <li>• Permanent loss of 5-20ha of BMV land;</li> <li>• Permanent, moderate displacement of intended land uses;</li> <li>• Current farm practice is affected and effects on farm profitability, but unlikely to affect viability or likely to have a moderate financial impact.</li> </ul>
Low	A measurable, but not material change, to key features or attributes of the resource, or its key characteristics, features or elements, such that post development character/composition will be similar to the pre-development situation.	<ul style="list-style-type: none"> <li>• Permanent loss of &lt;5ha of BMV land;</li> <li>• Permanent loss of peripheral land for intended land use or temporary loss of large-moderate area;</li> <li>• Current farm practice is marginally affected, with small impacts on farm profitability, but unlikely to affect viability or only minor financial impact.</li> </ul>

Magnitude	Description	Examples
Very Low	Little or no change to key features or attributes of the resource, or its key characteristics, features or elements, such that change is barely distinguishable.	<ul style="list-style-type: none"> <li>• Permanent loss of non-BMV land;</li> <li>• Permanent loss of minor land, such that existing and intended land use can continue or temporary loss of minor area;</li> <li>• No noticeable changes in farm practices, or no discernible financial loss as losses are compensated for.</li> </ul>

### **Appraisal Methodology**

11.2.13 A range of baseline information sources held in the public domain have been reviewed in order to appraise the baseline character of the Study Area in terms of land use, agriculture and soils, including:

- Ordnance Survey mapping and aerial photography to establish land use and settlement patterns;
- ALC details for the Study Area based on the Welsh Government Predictive ALC Tool<sup>2</sup>;
- Review of Land Information System Soilscales database<sup>3</sup>;
- Available information on known agricultural practices affected by the Proposed Project;
- Review of the Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026)<sup>4</sup> and the Eryri Local Development Plan (2016-2031)<sup>5</sup>.

11.2.14 A site walkover was undertaken to assess how the land was being used. This was followed by a peat depth survey which was undertaken across the low-lying land at the eastern end of the Proposed Project. The Peat Depth Survey Report (February 2019) is provided in the Outline CEMP in Appendix 2A.

### **Assumptions and Limitations**

11.2.15 No assumptions or limitations have been identified. It is considered that sufficient coverage was achieved during the peat survey to provide an understanding of the ground conditions across the survey area.

<sup>2</sup> Welsh Government Agricultural Land Classification: predictive map. Accessed September 2019 from <https://gov.wales/agricultural-land-classification-predictive-map>.

<sup>3</sup> Cranfield Soil and Agrifood Institute Soilscales. Accessed September 2019 from <http://www.landis.org.uk/soilscales/>

<sup>4</sup> Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026). Accessed Sept 2019 from <https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Joint-Local-Development-Plan/Joint-Local-Development-Plan.aspx>

<sup>5</sup> Eryri Local Development Plan (2016-2031). Accessed Sept 2019 from <https://www.snowdonia.gov.wales/planning/planning-policy/local-development-plan-ldp>

### 11.3 Consultation Undertaken

11.3.1 The scope of the appraisal has been informed by ongoing consultation and engagement with statutory consultees throughout the design and appraisal process. As detailed in Table 11.3 below, no specific advice was received as part of the Scoping Opinion with regard to the land use and agriculture chapter. Further consultation was undertaken specifically in relation to the presence of peat.

**Table 11.3: Consultation**

Date	Summary of Scoping Opinion	Where addressed in the Agriculture and Land Use Chapter
15/02/2019	Gwynedd Council Planning Manager: The LPA is <i>satisfied with the contents of this chapter [Agriculture and Land Use] and the mitigation measures proposed.</i>	The appraisal has followed the approach set out in the Scoping Report.
30/09/2019	Site meeting with Natural Resources Wales (NRW) and Snowdonia National Park Authority to present data on presence of peat and proposed mitigation measures.	Site meeting outcomes and post-meeting advice from NRW has been followed in developing the baseline and mitigation.

### 11.4 Statutory and Planning Context

11.4.1 Legislation and planning policy have been reviewed where relevant to agriculture and land use; this has influenced the identification and categorisation of sensitive receptors and the scope and method of appraisal.

#### **Legislation**

11.4.2 There are no legislative requirements governing the appraisal/ assessment of agricultural matters, the framework of any assessment is derived from a combination of EU and national agricultural and land use policies and measures. The key elements of these can be summarised as:

- the conservation of the best and most versatile resources of agricultural land;
- retention of a competitive and sustainable agricultural industry;
- the diversification of individual farm businesses into supplementary non-agricultural activities; and
- the more positive engagement of individual farm businesses with the delivery of environmental benefits.

#### **National Planning Policy**

11.4.3 National planning policy guidance on development involving agricultural land is set out in Planning Policy Wales (PPW) 10<sup>th</sup> Edition<sup>6</sup>.

<sup>6</sup> Planning Policy Wales (PPW) 10<sup>th</sup> Edition (Welsh Government, December 2018)

11.4.4 The document includes reference to the best and most versatile land stating that, in paragraphs 3.54 and 3.55: *'Agricultural land of grades 1, 2 and 3a of the Agricultural Land Classification system (ALC) is the best and most versatile, and should be conserved as a finite resource for the future. When considering the search sequence and in development plan policies and development management decisions considerable weight should be given to protecting such land from development, because of its special importance. Land in grades 1, 2 and 3a should only be developed if there is an overriding need for the development, and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations. If land in grades 1, 2 or 3a does need to be developed, and there is a choice between sites of different grades, development should be directed to land of the lowest grade.'*

The Environment Strategy for Wales (2006)<sup>7</sup> requires sustainable resource use, which includes soils. It also states that *'The very small proportion of land that is classified as 'Best and Most Versatile' agricultural land in Wales makes it important to conserve it.'* Outcome No. 16 states that *'Soil is managed to safeguard its ability to support plants and animals, store carbon and provide other important ecosystem services.'*

11.4.5 A number of other guidance documents relevant to soils and agriculture are available. In general these relate back to the policy and guidance documents referenced above, and include:

- Technical Advice Note 6 (TAN 6), Planning for Sustainable Rural Communities (Welsh Assembly Government, 2010)<sup>8</sup>.
- Good Practice Guide for Handling Soils (MAFF, 2000)<sup>9</sup>; and,
- British Standard Specification for Topsoil and Requirements for Use (BS3882:2007)<sup>10</sup>.

### **Local Planning Policy**

11.4.6 The Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026)<sup>11</sup> was adopted on 31 July 2017.

11.4.7 Strategic Policy PS 5: Sustainable development states that development will be supported where it is demonstrated it is consistent with the principles of sustainable development, including that it should *'Reduce the effect on local resources, avoiding pollution and incorporating sustainable building principles in order to contribute to energy conservation and efficiency; using renewable energy; reducing / recycling waste; using materials from sustainable sources; and protecting soil quality'*.

<sup>7</sup> Welsh Government (2006). Environment Strategy for Wales.

<sup>8</sup> Welsh Assembly Government (2010). Technical Advice Note 6, Planning for Sustainable Rural Communities.

<sup>9</sup> MAFF (2000). Good Practice Guide for Handling Soils.

<sup>10</sup> British Standard Specification for Topsoil and Requirements for Use (BS3882:2007).

<sup>11</sup> Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026). Accessed Sept 2019 from <https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Joint-Local-Development-Plan/Joint-Local-Development-Plan.aspx>

- 11.4.8 Strategic Policy PS 6: Alleviating and adapting to the effects of climate change states that in order to alleviate the effects of climate change proposals will only be permitted where they ‘safeguard the best and most versatile land’.
- 11.4.9 The revised Eryri Local Development Plan (2016-2031)<sup>12</sup> was adopted by Snowdonia National Park Authority on the 6th of February 2019.
- 11.4.10 The Plan commits to conserving and enhancing ‘the National Park’s natural resources including its geodiversity and water, soil and air quality’. This is set out in Strategic Policy A: National Park Purposes and Sustainable Development.
- 11.4.11 Development Policy 1: General Development Principles states that development will only be permitted where: ‘The development will not have an unacceptable adverse impact, through increased resource use, discharges or emissions, on public health, surface and ground water (quality, quantity or ecology), air quality, soil and the best and most versatile agricultural land’.
- 11.4.12 Strategic Policy Dd: Climate Change (Dd) states that the contribution that emissions of greenhouse gases from the National park make to climate change will be reduced by ‘Conserving and enhancing areas of woodland, upland soils and peatland areas to assist in carbon retention, water storage and flood prevention’.

## 11.5 Existing Environment

### Land Use

- 11.5.1 A large proportion of the Study Area comprises saltmarsh and estuarine environments.
- 11.5.2 A large area to the north-west of the Dwyryd Estuary is urban, consisting of the settlements of Minffordd and Penrhyndeudraeth as well as the Snowdonia Park Business Park. On the eastern side of the estuary the land is predominantly farmland with the small village of Trem-y-garth lying south of the OHL.
- 11.5.3 There are areas of farmland around Minffordd used for sheep and cattle grazing. This comprises individual fields with stone wall or tree lined boundaries. Grazing is also available on the low-lying areas of saltmarsh habitat on both sides of the main channel.
- 11.5.4 On the south eastern side of the estuary the land is predominantly farmland used for grazing and small pockets of woodland. At the eastern extent of the Proposed Project is an area of mire habitat, supported by wet alluvial deposits which include peat. The land then rises steeply with gorse and bracken present in extensive areas.
- 11.5.5 There are a number of Public Rights of Way (PRoW) that dissect the Study Area, including the Wales Coast Path.
- 11.5.6 There are land allocations in the Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026) that are applicable in the settlement of Minffordd. These include:
- Safeguarded employment sites, associated with the Snowdonia Park Business Park and the disused hospital site;
  - Three housing allocations without planning permission; and
  - Two areas of protected open space.
- 11.5.7 There are no applicable land allocations included in the Eryri Local Development Plan 2016-2031.

<sup>12</sup> Eryri Local Development Plan (2016-2031). Accessed Sept 2019 from <https://www.snowdonia.gov.wales/planning/planning-policy/local-development-plan-ldp>



- 11.5.8 Glastir is an Agri-Environmental Scheme delivered by the Welsh Government. Within this there are a range of schemes that landowners/ farmers can apply for (for example Glastir Entry, Advanced, and Organic).
- 11.5.9 Land at the Garth (western) and at the Cilfor (eastern) ends of the Proposed Project is under the Glastir Rural Development Scheme. For the western end this expires at the end of 2019, but may be subject to renewal. No further information is available in relation to the Cilfor location.
- 11.5.10 The Glastir Woodland Creation Opportunities maps<sup>13</sup> show areas on the lower slopes of Y Garth and around the sewage treatment works as having potential for woodland planting.

### **Topography**

- 11.5.11 The topography is dominated by the Dwyrdd Estuary. To the west the land rises up to approximately 40m AOD in Minffordd. To the east the land remains relatively flat and low-lying along the course of a small stream before starting to rise relatively steeply to the east up towards the Llyn Tecwyn Uchaf Reservoir.

### **Geology**

- 11.5.12 A description of the geology within the Study Area is provided in Chapter 10: Geology, Soils and Contaminated Land. The solid geology is mainly mudstone, siltstone and sandstone<sup>14</sup>. Across the floor of the estuary the solid geology is overlain with drift deposits described as tidal flat deposits comprising clay, silt and sand of Quaternary age. These deposits are mapped as lying across the estuary and underneath the low-lying land to east of the estuary.

### **Soils**

- 11.5.13 Where soils have formed on the solid geology (i.e. the higher land to both the east and west of the estuary) the soils here are mapped as freely draining acid loamy soils overlying rock (see Figure 11.1).
- 11.5.14 Within the low-lying areas east and west of the estuary the soils are mapped as saltmarsh soils with loamy textures, subject to tidal flooding (i.e. in places covered at high tide). Where not directly affected by high tides the soils in these low-lying areas will have naturally high groundwater.
- 11.5.15 A peat survey undertaken across the low-lying land at the eastern end of the Proposed Project confirmed the presence of a complex sediment stratigraphy, including peat deposits likely to have formed within old channels/depressions in the low-lying areas over the Quaternary period.

### **Agricultural Land Classification**

- 11.5.16 The main physical factors influencing agricultural land quality are:
- Climate;
  - Site (gradient, micro-relief, risk of flooding);
  - Soil (including geology); and

---

<sup>13</sup> Welsh Government Glastir Woodland Creation Opportunities maps. Accessed September 2019 at <http://lle.gov.wales/apps/woodlandopportunities/#lat=52.9188&lon=-4.0447&zoom=16>

<sup>14</sup> British Geological Survey Geology of Britain Viewer. Accessed September 2019 at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

- Interactive limitations (such as soil wetness or droughtiness).

- 11.5.17 Available ALC mapping (from the predictive ALC tool) shows a range of land grades are likely to be present, from Grade 3a to Grade 5 (see Figure 11.2).
- 11.5.18 The ALC system classifies land into five grades of land numbered 1 to 5, with Grade 3 subdivided into Subgrades 3a and 3b. The BMV land is defined as Grades 1, 2 and 3a by policy guidance (Technical Advice Note TAN 6), Planning for Sustainable Rural Communities (Welsh Assembly Government, 2010). This is the land which is most flexible, productive and efficient in response to inputs.
- 11.5.19 To the west of the Dywyrd estuary the higher, better drained land is predicted to be predominantly Grade 3a land, with some Grades 3b and 4 present. The lowest grades lie on the steeper topography or where soil depth is limited by the underlying solid geology (in places rock is exposed at the ground surface), with the higher grades occurring where the land is flatter.
- 11.5.20 The soils associated with the estuarine sediments give rise to predominantly Grade 5 land, with flood risk and waterlogging likely to be the main constraints to productivity.
- 11.5.21 On the eastern side of the estuary the low-lying flat land along the line of the A496 is predicted to be Grade 3a. However, the peat depth survey undertaken in the area east of the road has confirmed significant wetness limitations are present here, and it is considered that this land would not comprise BMV land. As the land rises further to the east the predicted land grades are 3b, 4 and 5, likely to represent limitations resulting from steep topography and shallow soil depth in particular.
- 11.5.22 Only the Grade 3a land would be classified as BMV land, according to TAN 6, Planning for Sustainable Rural Communities (Welsh Assembly Government, 2010).

#### *Notifiable Scheduled Diseases*

- 11.5.23 No notifiable scheduled diseases are currently known to have been reported in the Study Area. The Avian Influenza Prevention Zone in place during part of 2018 has been revoked and thus no longer applies in Wales.

#### *Noxious/ Injurious Weeds and Invasive Plant Species*

- 11.5.24 The location of invasive and weed species is detailed in the Ecological Baseline Report<sup>15</sup>. Japanese Knotweed is reported to be the most abundant, with stands of Montbretia, Indian Balsam and Virginia-creeper also recorded. These are all associated with the farmland on the western side of the estuary.

## **11.6 Key Parameters for Appraisal**

- 11.6.1 Of particular relevance to Agriculture and Land Use are the following embedded mitigation measures which will be implemented during the construction phase:
- A Construction Environmental Management Plan (CEMP) will be prepared and used to manage environmental impacts to air, land and water from construction operations. This will include a commitment to follow appropriate industry best practice and published guidelines to reduce pollutant and sediment movement, minimise the spread of invasive species, deal with potential livestock burial sites (should they be encountered) and ensure biosecurity. An Outline CEMP is provided in Appendix 2A and the measures contained would be implemented during the construction phase of the Proposed Project. This will include details of the approach

<sup>15</sup> RSK (2019). Ecological Baseline Report (Botanical). Visual Impact Provision. Snowdonia Project.

to soil management to ensure protection, conservation and reinstatement of soil material, its physical and chemical properties and functional capacity for its intended end use.

- A Peat Management Plan has been prepared and forms an appendix to the Outline CEMP (Appendix 2A).
- The main works contractor will develop, in consultation with National Grid, a Site Waste Management Plan (SWMP). An Outline Waste Management Plan forms an appendix to the Outline CEMP (Appendix 2A).
- A Considerate Constructors Scheme will be in place to ensure that everything is done, where practicable, to reduce the effect on the environment and this will include awareness-raising, through toolbox talks, of the sensitivity required should livestock be in close proximity to works.
- During the construction phase, access to individual fields will be maintained where required (for example for animal welfare reasons) or alternative arrangements will be made to ensure continued access.
- In relation to temporary land take requirements or access limitations National Grid will liaise with landowners to agree commercial terms with affected parties including any loss of ongoing payments or fines relating to agri-environmental stewardship schemes. In addition, in discussion with landowners, temporary water supplies and troughs will be provided for livestock as necessary.
- Following the completion of all construction works, the land temporarily used within the working area will be fully reinstated as near as practically possible to its former condition or as agreed with landowners and stakeholders in advance. Where foundations have been required for temporary facilities these will be fully removed to at least 1.5m below ground level and the appropriate soils reinstated over this.

11.6.2 No specific embedded mitigation has been deemed necessary other than best practice environmental management during the decommissioning phase.

## 11.7 Predicted Impacts During Construction

11.7.1 The potential impacts of the Proposed Project are detailed below. This appraisal is based on the assumption that the embedded mitigation measures outlined above are implemented.

### ***Tunnel Head House, Sealing End Compounds (SEC) and 400kV Cable (Undergrounding)***

#### *Infrastructure Western Side of the Dwyrdd Estuary*

11.7.2 The construction of the tunnel head house (and associated permanent access route), the reconfiguration of the SEC, construction of the tunnel shaft and the direct burial of the cable between the tunnel head house and the existing SEC will result in the permanent loss of approximately 0.17ha of agricultural land currently used for grazing. There will be no permanent loss of agricultural land as a result of the reconfiguration of the SEC, construction of the tunnel shaft and the direct burial of the cable between the tunnel head house and the existing SEC.

11.7.3 This land is predicted to be potentially Grade 3a (i.e. BMV land) and thus would be of **High** sensitivity in relation to agricultural productivity. Given the very limited scale of

permanent land take it is considered that this would be an impact of **Very Low** magnitude.

- 11.7.4 Impacts on agricultural land resulting from temporary land take, as detailed above, have been scoped out as all such land will be returned to agricultural production. There is the potential for impacts to soils as a result of their handling and restoration (such as soil compaction). The soils are loamy and would be considered as **Medium** sensitivity. With the embedded mitigation measures outlined above and in the Outline CEMP (i.e. the use of soil handling measures) it is considered that this would be an impact of **Very Low** magnitude.
- 11.7.5 The Proposed Project (temporary and permanent) has the potential to result in disruption to agricultural activities and thus affect farm viability. Agricultural practices are considered to be of **High** sensitivity, including the presence of land under an agri-environment scheme. With the embedded mitigation measures detailed above it is considered that the impact will be of **Very Low**.
- 11.7.6 With the embedded mitigation measures outlined above, no impacts are envisaged in relation to invasive and weed species and notifiable diseases.
- 11.7.7 Tunnelling activities between the western and eastern shafts will have no additional impacts as this results in no surface disturbance or restrictions.

*Infrastructure Eastern Side of the Dwryd Estuary*

- 11.7.8 The construction of the tunnel head house (and associated permanent access route), the SEC, the tunnel shaft and the new terminal pylon and replacement of conductors to the SEC will result in the permanent loss of approximately 0.59ha of agricultural land currently used for grazing.
- 11.7.9 This land is not predicted to be BMV land (likely to be Grade 4 and 5) and thus would be of **Low** to **Very Low** sensitivity in relation to agricultural productivity. At the scale of land take proposed, this would be an impact of **Very Low** magnitude.
- 11.7.10 There is the potential for impacts to soils as a result of their handling and restoration (such as soil compaction). The soils are loamy to clay-rich and would be considered as receptors of **Medium** to **High** sensitivity. With the embedded mitigation measures outlined above and in the Outline CEMP (i.e. the use of soil handling measures) it is considered that this would be an impact of **Very Low** magnitude.
- 11.7.11 Peat is also present in this area and would be affected by the Proposed Project. Peat would be considered to be a receptor of **High** sensitivity. Impacts associated with the peat include direct disturbance (excavation) of peat deposits (and associated potential loss of carbon) and indirect impacts (for example through trafficking and dewatering). Impacts on peat will be minimised through adherence to the Peat Management Plan, which utilised the peat mitigation hierarchy and will ensure that re-use of any excavated peat is maximised. It is considered that this would be an impact of **Medium** to **Low** magnitude, dependant on the final quantity of peat which can be re-used in suitable areas.
- 11.7.12 Impacts on agricultural land resulting from temporary land take, as detailed above, have been scoped out as all such land will be returned to agricultural production.
- 11.7.13 The Proposed Project (temporary and permanent) has the potential to result in disruption to agricultural activities and thus affect farm viability. Agricultural practices are considered to be of **High** sensitivity, including the presence of land under an agri-environment scheme. With the embedded mitigation measures detailed above it is considered that the impact will be of **Very Low** magnitude.
- 11.7.14 With the embedded mitigation measures outlined above, and in the Outline CEMP, no impacts are envisaged in relation to invasive and weed species and notifiable diseases.

***Removal of Existing Infrastructure (VIP subsection)***

- 11.7.15 The OHL (conductor) removal, dismantling of pylon structures and removal of pylon foundations will result in some temporary land take. As above, temporary land take has been scoped out as this will be returned to agricultural production (where applicable) once construction activities are complete.
- 11.7.16 There will be the potential for temporary disruption to agricultural activities due to the establishment and use of temporary laydown areas/ construction compounds/ access tracks. Agricultural practices are considered to be of **High** sensitivity. With the embedded mitigation measures detailed above it is considered that the impact will be of **Very Low** magnitude.
- 11.7.17 The removal of the OHL structure and foundations to 1.5m below ground level, with the ground reinstated, will have a positive effect on agricultural practices considered to be of **High** sensitivity. Given the limited footprint of the OHL structures it is considered that the positive impact would be of **Very Low** magnitude.

**11.8 Predicted Impacts during Decommissioning*****Tunnel Head Houses, Sealing End Compound and 400kV Cable (Undergrounding)***

- 11.8.1 The detailed decommissioning methodology cannot be finalised until immediately prior to decommissioning, but would be in line with relevant policy at that time. However, it is likely that the embedded mitigation outlined above for the construction phase would all be relevant and would be used to minimise any potential impacts.

**11.9 Mitigation and Summary of Residual Effects**

- 11.9.1 For all the identified potential impacts, the mitigation embedded would be sufficient to minimise potential impacts therefore no addition mitigation is deemed necessary.

***During Construction***

- 11.9.2 There would be a small loss of BMV land associated with the permanent land take for the western tunnel head house. There would be impacts on soils (potential for compaction and soil degradation) and on peat (excavation and water table fluctuations). There would also be a limited impact on agricultural operations resulting from potential disturbance due to construction activities.

***During Decommissioning***

- 11.9.3 Impacts during decommissioning would be limited, and less than those identified during construction, given that the tunnel, buried cables and deep foundations are unlikely to be removed.