

4 Landscape and Visual

Introduction

- 4.1 The focus of the VIP Project is on the mitigation of landscape and visual impacts from electrical infrastructure. A Landscape and Visual Impact Assessment (LVIA) will be undertaken to assess any potential negative and positive effects as a result of the Proposed Project. LVIA is a tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right, and on peoples' views and visual amenity.
- 4.2 The LVIA will identify and appraise the likely effects during construction, operation and decommissioning. This will include temporary effects relating to construction and longer-term effects during which the beneficial effects of removing the existing section of 400kV OHL (the Visual Impact Provision (VIP) subsection) become apparent and any proposed planting becomes established.
- 4.3 Building on previous work which is presented in the Landscape and Visual Impact Assessment Technical Report (National Grid, 2014)¹ and Options Appraisal Study (OAS) (National Grid, 2015)², the LVIA will update the VIP LVIA and OAS baseline information for the VIP subsection, adding further new or updated information as required.

Scope and Definitions

- 4.4 For the purposes of the LVIA:
- Landscape effects means impacts or effects on 'the landscape as a resource in its own right' (Guidelines for Landscape and Visual Impact Assessment (GLVIA3), page 21, paragraph 2.21). It includes direct effects upon the fabric of the landscape (such as the addition, removal or alteration of structures, woodlands, trees or hedgerows), which may alter the character and perceived quality of the area, or more general effects on landscape character and designated areas of landscape arising from the introduction of new man-made features. In landscapes designated or valued for their scenic or landscape quality such as Snowdonia National Park, such changes can affect the purpose of the designation or perceived value of the landscape.
 - Visual effects means impacts or effects on 'specific views and on the general visual amenity experienced by people' (GLVIA3, page 21, paragraph 2.21). These relate to specific changes in the composition of views and the effects of those changes on visual receptors and wider visual amenity³. In accordance with GLVIA3, the assessment will focus on public views experienced by those groups of people who are likely to be most sensitive to the effects of the Proposed Project. This includes: local communities where views contribute to the landscape setting enjoyed by residents in the area, road users and people using recreational routes, features and attractions.
- 4.5 Cumulative effects are the effects of the Proposed Project adding to the effects of other similar proposed developments. There are two main types of cumulative effect. Intra-project cumulative effects are those effects which arise from different environmental factors affecting a single receptor (for example tree removal may affect both ecological and visual receptors).

¹ Landscape and Visual Impact Assessment of Existing Electricity Transmission Infrastructure in Nationally Protected Landscapes in England and Wales (National Grid, 2014).

² VIP, Snowdonia- Options Appraisal Study (National Grid, 2015).

³ Meaning the overall pleasantness of the views people enjoy of their surroundings

Inter-project cumulative effects are those which arise from the additional effects caused by the Proposed Project interacting with the effects of other similar developments in the locality.

- 4.6 The terms impact and effects will be considered to be interchangeable for the purposes of the assessment but in general the term effects will be used as this is the approach taken in GLVIA3.

Consultation

- 4.7 As set out in Chapter 3 of this Screening and Scoping Report, consultation with Snowdonia National Park Authority (SNPA), Gwynedd Council, and local stakeholder and community groups was undertaken as part of the VIP LVIA and OAS. This information will inform preparation of the assessment.

Legislation and Policy

- 4.8 A desk-based review of relevant legislation and planning policy relating to electricity transmission and the landscape will be undertaken. This will include a review of:

Welsh National Planning Advice and Policies

- Welsh Government (2016). Planning Policy Wales Edition 9;
- Welsh Government (2018). Draft Planning Policy Wales Edition 10; and
- Welsh Government (2014). Technical Advice Note (TAN 12) Design, 2016.

Local Planning Policy and Guidance

- Isle of Anglesey County Council and Gwynedd Council (2017). Anglesey and Gwynedd Joint Local Development Plan (2011 – 2026);
- Gwynedd Council (2012); Anglesey and Gwynedd Joint Local Development Plan Background Paper, Gwynedd Landscape Strategy Update (2012);
- Gwynedd Council and Anglesey County Council (2012). Joint Local Development Plan Background Paper, Review of Special Landscape Areas in Gwynedd and Anglesey;
- Isle of Anglesey County Council and Gwynedd Council (2014). Joint Local Development Plan Background Paper, Wind Turbines and Pylons: Guidance on the Application of Separation Distances (2014);
- Isle of Anglesey County Council and Gwynedd Council (2014). Joint Local Development Plan Background Paper, Isle of Anglesey, Gwynedd and Snowdonia National Park Landscape Sensitivity and Capacity Study (2014);
- Gwynedd Council (2009). Supplementary Design Guidance: Landscape Character (2009);
- Snowdonia National Park Authority (2011). Eryri Local Development Plan (2007 – 2022);
- Snowdonia National Park Authority (2011). Supplementary Planning Guidance 2 General Development Considerations (September 2011);
- Snowdonia National Park Authority (2014). Supplementary Planning Guidance 7 Landscapes and Seascapes of Eryri (July 2014);
- Snowdonia National Park Authority (October 2016). Supplementary Planning Guidance 13, Landscape Sensitivity and Capacity Assessment;

- Snowdonia National Park Authority (2016). Supplementary Planning Guidance 14, Obtrusive Lighting (Light Pollution), Draft Version (May 2016);
- Snowdonia National Park Authority (2017) Eryri Local Development Plan, Deposit Version, (2016 – 2031);
- Snowdonia National Park Authority (2017). Eryri Local Development Plan Review, Background Paper 8, Landscape (November 2017);
- Snowdonia National Park Authority. Snowdonia National Park Management Plan 2010 – 2015; and
- Snowdonia National Park Authority (2018). Cynllun Eryri - Snowdonia National Park Partnership Plan (Consultation Document 2018).

4.9 In addition, the following guidance will be referenced:

- Hinton, C. and Holford, W. (1959). The Holford Rules – Guideline for the Routeing of New High Voltage Overhead Transmission Lines;
- National Grid Company plc (2003). The Horlock Rules – Guidelines on the Siting and Design of National Grid Substations;
- Landscape Institute (2011). Photography and Photomontage in Landscape and Visual Impact Assessment: Advice Note 01/11;
- National Grid (2012). Our Approach to the Design and Routeing of New Electricity Transmission Lines;
- Natural England (2014). An Approach to Landscape Character Assessment;
- Natural Resources Wales (2017). LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas;
- Natural Resources Wales (2016). LANDMAP Methodology: Visual and Sensory;
- Natural Resources Wales (2013). LANDMAP Guidance Note 3: Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines;
- Natural Resources Wales (2016). LANDMAP Guidance Note 4: LANDMAP and the Cultural Landscape;
- Natural Resources Wales (2016). LANDMAP Methodology: Historic Landscape; and
- Scottish Natural Heritage (2017). Visual Representation of Windfarms, Guidance, Version 2.2, 2017.

Baseline Environment

4.10 This section will establish the baseline landscape and visual conditions which the Proposed Project will be assessed against and form the basis for the identification and description of the changes that may result from the proposals. This will include the existing 4ZC OHL, which will be included in the baseline for the purposes of the assessment. The extent of the 'LVIA study area' is defined as a distance of 5km from an Area of Search for Permanent and Temporary Works (the Area of Search).

Landscape

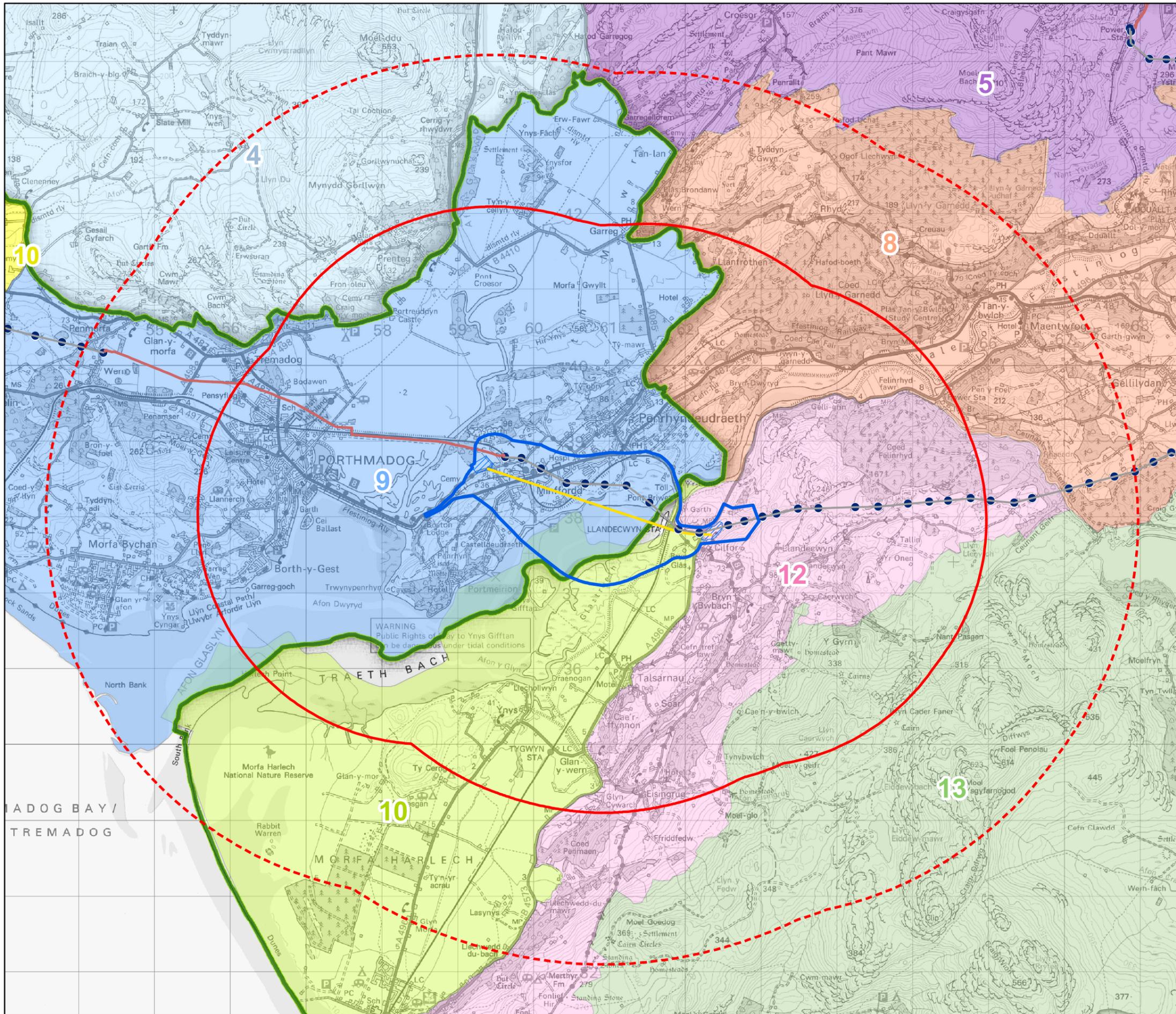
4.11 The landscape baseline will review all the available information to establish an understanding of the landscapes of the LVIA study area, their constituent elements and features, character, condition, how these are experienced, and any designations and/ or values attached to them.

Sources of information will include those listed under the Legislation and Policy section above together with the following:

- Aerial photography;
- Site visits; and
- National Grid VIP Landscape and Visual Impact Assessment Technical Report (2014) and VIP: Snowdonia National Park Options Appraisal Study (2015) (National Grid plc, 2015).

Overview of Landscape Character within the Study Area

- 4.12 The Study Area is centred on the Dwyryd Estuary, near the small settlement of Minfordd. The landscape of the Dwyryd Estuary has a strong sense of place, derived from its coastal setting and juxtaposition to the dramatic rugged landform of Snowdonia National Park. Distinctive 'islands' and ridges of higher ground sit within and on either side of the estuary. The Afon Dwyryd flows through a distinctive rocky gorge. The estuary comprises extensive intertidal mud, sand and salt marshes with areas of coastal heath and grassland found on the rocky landforms either side of the estuary. Landcover to the north-west of the estuary is influenced by linear settlement and road and rail infrastructure, interspersed with small scale irregular fields and small blocks of deciduous woodland and overgrown hedgerows. There is a large area of plantation woodland at Coed Felinrhyd. Landcover to the south-east of the estuary comprises large areas of rough grazing, drystone walls and woodland clumps with small settlements, farmsteads and houses linked by small local lanes.
- 4.13 The existing 4ZC OHL passes through areas regionally characterised in the Landscapes and Seascapes of Eyrí (Snowdonia National Park Authority, 2014) and Gwynedd Landscape Strategy Update landscape character assessments (Gwynedd Council, 2012), both of which utilised LANDMAP methodology and evaluations. Outside the National Park in Gwynedd, the line passes through the Porthmadog Landscape Character Area (LCA), which includes parts of the estuary and the coastal margin and is described as a buffer zone to the National Park. Within Snowdonia National Park, the line runs through the Morfa Harlech LCA and Cefnwlad Arfordir Ardudwy and Dyffryn y Ddwryd LCAs. The existing 400kV OHL, particularly to the west, has a very high scale of impact on the Morfa Harlech and Cefnwlad Arfordir Ardudwy LCAs (and also on the Porthmadog LCA – although this LCA lies wholly outside the National Park). LCAs are illustrated on Figure 4.1.



- Legend**
- Existing Pylon
 - Existing Overhead Line
 - Existing Underground Cable Route
 - Proposed Tunnel Alignment
 - ▨ Sealing End/Tunnel Head House Search Area
 - ▭ Area of Search for Permanent and Temporary Works
 - ▭ Proposed LVIA Study Area - 3km from Area of Search
 - ▭ 5km from Area of Search
 - ▭ Snowdonia National Park Boundary
- Gwynedd Landscape Character Areas**
- 9. Porthmadog
 - 10. Central Llyn
- Snowdonia Landscape Character Areas**
- 4. Moel Hebog Uplands
 - 5. Afon Glaslyn & Ysgafell Wen
 - 8. Vale of Ffestiniog
 - 10. Morfa Harlech
 - 12. Arduwy Coastal Hinterland
 - 13. Rhinog Mountains

Source:
 Tower and overhead line: National Grid, 2015.
 Area of Search: RSK 2018

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		Snowdonia

Scheme Name:
400kV Visual Impact Provision - Snowdonia

Document Title:
**Figure 4.1
 Landscape Character Areas
 and Proposed LVIA Study Area**

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Description of the Existing Landscape in the Area of Search for Permanent and Temporary Works

- 4.14 The Area of Search for Permanent and Temporary Works is shown on Figure 4.1. From Garth Sealing End Compound (SEC), located to the north of Minffordd (outside the National Park Boundary), the existing 4ZC OHL runs in a south-easterly direction through Minffordd towards the Dwyryd Estuary. The landscape here is characterised by small ridge and valley landform and is strongly influenced by linear settlement (including Minffordd and the industrial village of Penrhyndeudraeth) and road and railway infrastructure, all of which locally reduce tranquillity. The 4ZC OHL then runs between the Cambrian Coast railway and the A487 Porthmadog bypass, with some pylons visible on the skyline as they descend down to the estuary.
- 4.15 The existing VIP subsection then oversails the railway and crosses the open salt marshes and sand banks north of the estuary, before passing into the National Park boundary (at roughly the centre of the Dwyryd Estuary). It then continues in a south-easterly direction over the southern half of the estuary and oversails the Cambrian Coast railway once again at the southern point of Pont Briwet (new road/ rail/ pedestrian bridge opened in 2015). The existing VIP subsection is considered to have a high impact on the character and perceptual characteristics of the estuary including its openness and tranquillity.
- 4.16 On the south side of the estuary the VIP subsection passes around and very close to the almost vertical rock face of the distinctive rocky landform known as Y Garth and crosses the A465 before ascending up a steep rocky gorge in a north-easterly direction, heading towards the summit of Moel Tecwyn and Llyn Tecwyn Uchaf (reservoir). The scale and industrial appearance of the pylons conflict with this rugged and very distinctive landform.

Visual

- 4.17 The area within which the Proposed Project may be seen will be established using digitally created Zones of Theoretical Visibility (ZTVs), by analysing maps and aerial photography and by site visits. Site visits are particularly useful in identifying and confirming groups of likely visual receptors who may experience changes to views or their visual amenity.
- 4.18 Sources of information will include:
- Nationally designated and regionally promoted walking routes, cycleways and bridleways, as well as Public Rights of Way (PRoW), Common Land and Open Access Land (OAL);
 - Tourist attractions, recreational sites and settlements identified from 1:25,000 Ordnance Survey (OS) maps or tourist literature;
 - Landscape and Visual Impact Assessment of Existing Electricity Transmission Infrastructure in Nationally Protected Landscapes in England and Wales (National Grid, 2014);
 - National Grid's VIP Technical Report and Visual Impact Provision: Snowdonia National Park Options Appraisal Study (National Grid plc, 2015); and,
 - Advice provided by stakeholders on locally used recreational routes and visitor locations.

Visual Amenity

- 4.19 This section will identify the baseline in terms of visual amenity and availability of views as currently experienced by people (visual receptors). Visual receptors include local communities, occupiers of residential properties, visitors to the area, recreational users

including users of the public rights of way, motorists on the local road network and people working within the area.

- 4.20 General visibility along the coast is open and far reaching with views from elevated locations tending to be focussed over the coast to the west. Views inland are often foreshortened by the steep hillsides or undulating topography and blocks of woodland and mature trees along field boundaries. Visibility around the estuary is contained by rising landform either side particularly as the Afon Dwyryd flows inland. Views over the estuary, to the coast and to the mountains are highly scenic especially from elevated vantage points and the immediate coastline.
- 4.21 People within the National Park who experience these views include the residents of Cilfor and occupiers of the scattered settlements and properties, particularly those located along the estuary coastline. Motorists on well used 'A' roads and the local minor road network, rail passengers on the Cambrian Coast railway, cyclists on National Cycle Route 8 and users of the Wales Coast Path regional trail and local public rights of way have opportunities to gain very near views of pylons due to the relationship between the existing VIP subsection and the roads/ footpaths particularly as the line crosses the estuary.
- 4.22 In addition to receptors within the National Park, views of the existing VIP subsection are also experienced by many people located outside the National Park as follows: residents of Minffordd and Penrhyndeudraeth; tourists visiting Portmeirion, the Ffestiniog Railway and the North Wales Wildlife Trust (NWWT) Gwaith Powdwr Nature Reserve. The VIP subsection has a very high impact on these receptors in particular around Minffordd and where it crosses the open Dwyryd Estuary. The visual impact here influences the setting of the National Park and affects the quality of views into the National Park from areas north of the estuary (outside the National Park boundary).

Potential Impacts

- 4.23 The assessment will consider the landscape and visual effects of constructing, operating and decommissioning the Proposed Project. The key information which will be used to inform the assessment includes the location and length of the section of 400kV OHL to be removed (VIP subsection), the location and height of any replacement terminal pylons, the location of the SEC and the location of the eastern tunnel head house and western tunnel head house, the location of temporary construction and storage areas, access roads and any other infrastructure such as temporary pylons required to facilitate the development.

Beneficial (Positive) Effects of Removing the VIP Subsection

- 4.24 It is envisaged that the removal of the existing VIP subsection (10 pylons and approximately 3km of OHL) would result in significant long-term and permanent positive landscape and visual effects as it is currently deemed to have landscape and visual effects of very high importance (this will be discussed under operational impacts within the Environmental Assessment Report). This benefit would be to both the character and special qualities of the National Park and the Glaslyn and Dwyryd Estuary Landscape SLA as well as on visual receptors within the area, including visitors to the National Park.
- 4.25 These significant effects have to be balanced against any adverse effects of the new above ground infrastructure (operation of the underground cable crossing of the Dwyryd Estuary will result in no long-term effects on the landscape or views as the land will be reinstated and the cable would not be visible).

Potential Effects of Underground Cable Crossing of Dwyryd Estuary

- 4.26 The following list sets out the potential adverse effects of the Proposed Project. These effects would typically be temporary and localised in comparison to the effects of the existing 4ZC OHL.

Construction Effects

4.27 Construction of the Proposed Project would result in potentially short term temporary adverse effects as a result of the following:

- Site clearance, tree felling and boundary/hedgerow removal;
- Topsoil stripping, earthworks and excavation;
- Construction of temporary bellmouths and access tracks;
- Movement of traffic along construction routes including delivery and removal of material to and from site and workers travelling to and from site;
- Movement of vehicles and plant along temporary access tracks;
- General construction activities related to the new tunnel head houses and SEC including the use of large scale construction equipment, construction compounds and temporary buildings and scaffolding required for construction, parking on-site and materials stockpiles, temporary hoardings and/or security fencing or signage;
- Construction of terminal pylon in a similar location to the existing 4ZC027;
- The introduction of a temporary pylon;
- Reconfiguration of existing Garth SEC;
- Removal of 10 pylons and approximately 3km of OHL potentially with the use of a hydraulic crane and the activity associated with this; and
- Construction site lighting, particularly in the winter months.

4.28 The potential effects as a result of the above may include the following:

- Direct loss or fragmentation of distinctive landscape elements during removal of the existing 10 no. pylons and construction of new infrastructure e.g. vegetation clearance to allow for temporary work areas, access tracks (both temporary and permanent) and construction of tunnel head houses and SEC;
- Effects of construction activities and temporary infrastructure on the scale, quality and pattern of the existing landscape character and adjacent landscape character areas, including on the setting and special qualities of Snowdonia National Park and other designated sites; and
- Effects on views which will depend on the extent to which construction works (including all accesses, working areas, lighting and construction traffic using the wider road network) appear in views experienced by receptors such as residents, recreational users and others in the area including local workers.

Operation Effects

4.29 Operation of the Proposed Project would result in some long-term localised adverse landscape and visual effects, which are likely to include the following:

- Localised permanent vegetation loss at the sites of new infrastructure (tunnel head houses and SEC);
- The introduction of western tunnel head house and associated compound and access road; and
- The introduction of eastern tunnel head house and SEC and associated compound and access road.

4.30 The potential effects as a result of the above may include the following:

- Effects of the new infrastructure on the scale, quality and pattern of the existing landscape character and adjacent landscape character areas, including on the setting and special qualities of Snowdonia National Park and other designated sites; and
- Effects on views which will depend on the extent to which the different components of the Proposed Project (including any permanent access roads) would appear in views experienced by receptors such as residents, recreational users and others in the area including local workers.

Decommissioning Effects

- 4.31 Decommissioning of the Proposed Project would result in very similar potential adverse effects on landscape character and views as those identified for the construction phase (excluding the effects of removing the pylons and OHL).

Duration and Reversibility

- 4.32 The duration of the likely effects is defined as follows:
- Short term – temporary during construction and decommissioning only (zero to five years);
 - Medium term – declining due to the effect of mitigation measures (five to 15 years); and
 - Long term – effects still felt 15 years after construction, and no longer declining.
- 4.33 Reversibility is a judgement about whether the particular effect is reversible in the long term. In this case the operational effects of the Proposed Project would be long-term but potentially reversible since the project has a limited life and could eventually be removed and the land reinstated. Reversibility is particularly relevant to construction effects as works will cease and land and most landscape features will be reinstated in the short term.
- 4.34 The short-term (and where relevant the long-term) landscape and visual effects arising during the construction of the Proposed Project between commencement on site and the opening year), and also during decommissioning will be considered.
- 4.35 The assessment year (or years) for the assessment of construction effects on landscape and visual receptors is dependent on a number of factors - for example, the character of the landscape receptor, the geographical location of the visual receptor and the specific component(s) of the Proposed Project, which are considered to give rise to a landscape or visual effect(s). Effects on landscape and visual receptors also have the potential to arise for a part of the construction phase or the entirety of the construction phase.
- 4.36 It is considered appropriate to assess the significance of potential effects when such effects would be at their peak, for example views of the Proposed Project on completion prior to establishment of mitigation planting. This complies with the general approach to the assessment of a realistic worst-case scenario.
- 4.37 The opening year will be used as the basis of assessment of operation effects on the landscape and on views and visual amenity. Landscape and visual effects of the Proposed Project will be considered during operation at the opening year and include any guaranteed mitigation planting.
- 4.38 The long-term residual landscape and visual effects of the Proposed Project will be considered fifteen years after completion (to include the establishment of guaranteed mitigation planting).
- 4.39 For each receptor, landscape and visual assessment tables will identify the sensitivity, the nature of the change (magnitude of effect) and the judgement of the overall significance of effect.

Proposed Assessment Methodology

- 4.40 The methodology for undertaking the LVIA will be based on principles set out by the Landscape Institute (LI) and Institute of Environmental Management and Assessment (IEMA) in the GLVIA3 (Landscape Institute and IEMA, 2013). GLVIA3 is the established good practice guidance for landscape and visual impact assessment.
- 4.41 Photography and visualisations will be produced in accordance with GLVIA3, as well as guidance contained in the Landscape Institute Advice Note 01/11 (Photography and Photomontage in Landscape and Visual Impact Assessment) (Landscape Institute, 2011). Photomontage production will also have regard to guidance provided in Scottish Natural Heritage's (SNH's) 2014 document, 'Visual Representations of Windfarms: Good Practice Guidance Version 2.1' (SNH, 2014), which the LI Advice Note 01/11 strongly advises members to follow where applicable in preference to any other guidance or methodology.

Study Area

- 4.42 Field assessment work has determined that there are circumstances when a steel lattice 400kV pylon approximately 50m high can be discerned at distances up to 10km. However, in most instances it is likely to be barely perceptible beyond 3km and therefore unlikely to give rise to significant effects. This is because at 3km distance, when viewed at arm's length, a 50m tall pylon will appear to be approximately 1 cm high in the landscape).
- 4.43 Based on these observations and the nature of the Proposed Project, it is proposed that the LVIA study area will extend 3km from the Area of Search. This will ensure the inclusion of the site of the Proposed Project and also the wider landscape around it which the Proposed Project may influence in a significant manner. Although the focus of the assessment will be receptors lying within 3km of the Area of Search the survey team and assessment will also consider effects on sensitive receptors between 3km and 5km. This approach ensures that assessment considers the beneficial effects of the removal of existing pylons and the potential adverse effects of the replacement of one existing pylon with a new terminal pylon as these are the tallest and therefore potentially the most widely visible component of the Proposed Project.
- 4.44 The LVIA Study Area will continue to be monitored during preparation of the assessment. Should particular concerns be raised about any particularly sensitive receptors at (or beyond) 5km then these will be taken into account, although this is not anticipated due to the nature of the Proposed Project.
- 4.45 To support the assessment, Zone of Theoretical Visibility (ZTV) maps will be produced for the different components of the Proposed Project to a 10km distance. The reason the ZTVs will be prepared over a 10km distance is to demonstrate that the LVIA study area is appropriate and to help identify any particularly sensitive receptors which may lie at or beyond 5km as noted above.

Landscape Receptors

- 4.46 There is a wealth and hierarchy of information in terms of published descriptions of the landscape character of the study area and landscape related designations that fall within the study area. The proposed study area has been reviewed in order to identify potential landscape receptors. The proposed scope of the assessment in terms of landscape receptors is outlined for ease of reference in Table 4.1 below.
- 4.47 As outlined in Table 4.1, the Landscape Character Areas (LCA) identified within landscape character assessments produced by Snowdonia National Park and Gwynedd Council have been selected as the basis for undertaking the assessment of effects on landscape character. The original VIP study considered these LCA when making judgements relating to existing impacts of the 4ZC OHL on the landscape. LANDMAP Visual and Sensory Aspect Areas

(VSAAs) broadly correspond with the LCA and as such will be used to help inform the underlying landscape value of each LCA. Cross references will be made between the LCA and corresponding VSAA for clarity in the chapter.

- 4.48 The LVIA will not include a detailed sensitivity study of the LCA, instead the LVIA will refer to published Landscape Sensitivity and Capacity Studies (2014)⁴ when considering judgements of landscape value, susceptibility and sensitivity.

Table 4.1: Proposed Landscape Receptors

Potential Landscape Receptor	Approach to assessment	Proposed to be taken forward as a Landscape Receptor in the LVIA
Landscape elements (i.e. tree cover, field boundaries, landform, water courses)	<p>The LVIA will describe landscape elements as part of the baseline in terms of contribution to landscape character.</p> <p>The assessment will consider landscape elements in the assessment in terms of how any changes to the elements may influence effects on landscape character.</p> <p>Landscape elements will not be assessed as receptors in their own right.</p>	No
National Landscape Character Areas (NLCA)	<p>National Landscape Character Areas (NLCA) (as published on the NRW website on 15 September 2017) will be reviewed and outlined in the baseline, for background information.</p> <p>NLCAs will not be considered as landscape receptors. This is to avoid duplication in the assessment as the assessment of effects on landscape character will be based on LCAs.</p> <p>Cross reference will be made between the assessment of effects on LCAs and corresponding NLCAs for clarity.</p>	No
Gwynedd Landscape Character Areas (LCAs)	<p>The published LCAs for Gwynedd will be reviewed and outlined in the baseline.</p> <p>LCAs are proposed to form the basis of the assessment of effects on landscape character and as such</p>	Yes

⁴ Isle of Anglesey County Council and Gwynedd Council (2014). Joint Local Development Plan Background Paper, Isle of Anglesey, Gwynedd and Snowdonia National Park Landscape Sensitivity and Capacity Study (2014); and Snowdonia National Park Authority (October 2016). Supplementary Planning Guidance 13, Landscape Sensitivity and Capacity Assessment

Potential Landscape Receptor	Approach to assessment	Proposed to be taken forward as a Landscape Receptor in the LVIA
	will be considered as landscape receptors in the assessment.	
Snowdonia National Park LCAs	<p>The published LCAs for Gwynedd will be reviewed and outlined in the baseline.</p> <p>LCAs are proposed to form the basis of the assessment of effects on landscape character and as such will be considered as landscape receptors in the assessment.</p>	Yes
LANDMAP Visual and Sensory Aspect Areas (VSAA)	<p>The published LANDMAP VSAA's will be reviewed and outlined in the baseline, for background information.</p> <p>VSAA's will not be considered as landscape receptors. This is to avoid duplication in the assessment as the assessment of effects on landscape character will be based on LCAs.</p> <p>Cross reference will be made between the assessment of effects on LCAs and corresponding VSAA's for clarity.</p>	No
National Marine Character Areas (MCA)	<p>National Marine Character Areas (MCAs) will be reviewed and outlined in the baseline, for background information.</p> <p>MCAs will be excluded from the landscape assessment as the landward parts of these areas overlap with the LCAs which will be considered as landscape receptors in the assessment.</p>	No
Local Seascape Character Areas (SCA)	<p>Local Seascape Character Areas (SCAs) will be reviewed and outlined in the baseline for background information.</p> <p>SCAs will be excluded from the landscape assessment as the landward parts of these areas overlap with the LCAs which will be considered as landscape receptors in the assessment.</p>	No

Potential Landscape Receptor	Approach to assessment	Proposed to be taken forward as a Landscape Receptor in the LVIA
Snowdonia National Park	Snowdonia National Park will be considered as a landscape receptor in the assessment. Assessments of effects on the setting of the National Park will also be considered.	Yes
Glaslyn & Dwyryd Estuary Landscapes Special Landscape Area ⁵ (SLA)	Glaslyn and Dwyryd Estuary Landscapes SLA will be considered as a landscape receptor in the assessment.	Yes
Porthmadog and Tremadog Bay SLA	Porthmadog and Tremadog Bay SLA will be considered as a landscape receptor in the assessment.	Yes
Registered Parks and Gardens (RPG)	<p>The LVIA will consider RPGs as part of the baseline, in terms of the contribution they may make to landscape character and in relation to judgements of the value and susceptibility of the underlying LCA in which they fall.</p> <p>It is proposed that RPG are excluded from the landscape assessment on the grounds that those which are most likely to be affected will be assessed in the Historic Environment chapter.</p> <p>RPGs will therefore not be assessed as landscape receptors in their own right.</p> <p>Effects on the visual amenity of visitors to RPGs (for instance visitors to Portmeirion) will be considered as part of the visual assessment of the LVIA.</p>	No

Visual Receptors

4.49 The approach to the identification of visual receptors is broadly outlined below.

⁵ A Special Landscape Area (SLA) is a non-statutory conservation designation used by local government to categorise sensitive landscapes which are of high landscape importance for their intrinsic physical, environmental, visual, cultural and historical value, and are either legally or as a matter of policy, protected from development or other man-made influences.

- 4.50 The different groups of people or visual receptors that will be considered in the assessment are as follows:
- People living in the area;
 - People visiting and/ or taking part in recreational activities within the area; and
 - People travelling through the area.
- 4.51 The starting point for the identification of visual receptors will involve desk-based research on access and recreation, including footpaths, bridleways and public land, on tourism including popular vantage points, and on the distribution of the different groups of visual receptor. This will be considered alongside a desk-based analysis of ZTV maps which will represent the worst-case scenario in terms of potential visibility of the Proposed Project.
- 4.52 The next step will be to verify the ZTV on site to determine whether any localised landform, vegetation or built form restricts views. Site visits will also review and confirm the baseline in terms of visual amenity.
- 4.53 Initial desk top studies and site visits to date have identified a number of proposed viewpoints which are intended to be used to support the visual assessment. It is important to note the visual assessment will not be reliant on viewpoint analysis; however, the viewpoints will be used to describe baseline views and describe potential changes in visual amenity. These viewpoints are representative and do not identify every location with a potential view of the Proposed Project. The range of viewpoints proposed have been chosen to represent views experienced by a range of receptors in the Study Area (see Appendix 4.1). Where possible they have been selected in places where they would represent a number of different receptor groups. It is important that these viewpoints are reviewed and agreed with SNPA and Gwynedd Council prior to commencement of the LVIA to ensure that the most appropriate locations have been selected. The timing of photographic surveys will also be discussed with statutory stakeholders
- 4.54 At each viewpoint the value of the view and the scale of the likely effect on the view will be assessed. The viewpoints will be recorded on maps with accompanying text explaining why each has been chosen, which groups of receptors it represents etc. Visualisations will be produced for a small number of viewpoints to illustrate the anticipated effect on visual amenity from these locations. These locations will also be agreed with SNPA and Gwynedd Council.

Assessing Effects

- 4.55 In accordance with GLVIA3, the LVIA will identify and describe:
- *'Effects on the landscape as a resource (the landscape effects); and*
 - *Effects on view and visual amenity as experienced by people (the visual effects).'*
- 4.56 The LVIA will consider the likely significant effects including direct, consequential or indirect effects for both the temporary (construction) and long-term (operational) effects on landscape character and visual amenity.
- 4.57 The assessment will establish the sensitivity of the receptors (with sensitivity made up of judgements about the value attached to the receptor the susceptibility of the receptor to the type of change proposed) and the magnitude of effects (made up of judgements about the size/ scale of predicted effect, the geographical extent of the area affected, the duration of the effect and its reversibility). Sensitivity and magnitude will be combined using professional judgement to determine the importance or significance of the overall effect.
- 4.58 The main objectives of the assessment are:
- To describe, classify and evaluate the existing landscape and visual resource likely to be affected by the different components of the Proposed Project within the LVIA Study Area during the construction and operational phases;

- To identify visual receptors with views of the Proposed Project; and
- To assess the significance of the effect on the landscape character and visual amenity, taking into account the measures proposed to mitigate any of the effects evaluated.

Determining Overall Significance of Landscape and Visual Effects

- 4.59 Landscape and visual effects can be either beneficial or adverse. Removal of the existing VIP subsection will have a significant permanent beneficial effect, whilst the effects of removing the pylons and construction and operation of the Proposed Project are likely to result in some adverse effects albeit that they are more likely to be localised and less significant.
- 4.60 To determine the overall significance of each landscape or visual effect, the separate judgements about the sensitivity of the receptor and the magnitude of effect are combined to allow a final judgement to be made about whether or not the effect is considered significant.
- 4.61 The relationship between receptors and effects is not generally a linear one and there are no hard or fast rules about what makes an effect significant. Judgements are therefore supported by qualitative text to draw out the key issues, describe the effects and explain the underlying rationale.
- 4.62 In terms of landscape effects, paragraph 5.56 of GLVIA3 (paragraph 5.56) notes that at opposite ends of the spectrum:
- *‘Major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance; and*
 - *Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspect that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant.’*
- 4.63 In terms of visual effects, paragraph 6.44 of GLVIA3 notes that:
- *‘Effects on people who are particularly sensitive to changes in views and visually amenity are more likely to be significant;*
 - *Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant; and*
 - *Large scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present in the view.’*
- 4.64 Paragraph 3.33 of GLVIA3 states:
- ‘It is not essential to establish a series of thresholds for different levels of significance of landscape and visual effects, provided that it is made clear whether or not they are considered significant. If however, more distinction between levels of significance is required a word scale for degrees of significance can be used (for example a four point scale of major/ moderate/ minor/ negligible).’*
- 4.65 For the purposes of the assessment, effects will be categorised as major, moderate, minor and negligible. Each of the four categories covers a broad range of effects and represents a continuum or sliding scale.
- 4.66 It is worth noting that effects which are judged to be major are those which should typically be given the greatest weight in decision making. They usually concern the immediate area around a site and close views from sensitive locations. Moderate levels of effect are of progressively reducing importance but are still considered significant. Effects judged to be

minor are those which the decision maker should be aware of, as they constitute noticeable changes in views, but are unlikely to warrant as much weight in the decision-making process.

Cumulative Effects

- 4.67 The LVIA will also include potential cumulative effects of the Proposed Project and other developments. The assessment will broadly follow the approach for the LVIA set out above. A more detailed scope will be provided for agreement at a later stage when more information is known about projects to be scoped in/ out of the cumulative assessment.
- 4.68 The LVIA will input into the assessment of two types of cumulative effects. These are inter-project effects and intra-project effects.

Reporting

- 4.69 The landscape, visual and associated cumulative assessment will be reported in the same chapter of the Environmental Assessment Report and will be supported by figures, photographs and photomontage views as appropriate. The chapter will summarise the likely effects and will refer to tables included in an appendix which will detail the information recorded for each individual receptor or representative receptor.

Proposed Mitigation Measures

- 4.70 Mitigation to address the adverse effects on landscape and views in relation to both below and above ground infrastructure will be considered in the assessment. These measures will include the design and micro-siting of infrastructure and temporary working areas, and on-site and off-site planting proposals to minimise landscape and visual effects. In addition, opportunities for landscape enhancement will be explored. Detailed mitigation proposals will be described in the Environmental Assessment Report and will be factored into the assessment. The assessment of the Proposed Project will be undertaken at the year of commission (Year 0). Where differences are anticipated following the establishment of mitigation planting this will be reported as of Year 15.
- 4.71 The most effective mitigation measures are ones which are integral to the proposed development. A distinction is therefore made between landscape measures designed as an intrinsic part of the Proposed Project (primary or 'embedded' measures) and those which are intended to specifically counter any residual negative effects of the Proposed Project (secondary measures).
- 4.72 Residual effects are those effects which remain after mitigation. The significance of these will be assessed using the methods outlined above.

Issues to be Scoped Out

- 4.73 The LVIA will not assess the effects of the Proposed Project on any landscape or visual receptors that are located outside the LVIA Study Area unless they are particularly sensitive receptors, which have been highlighted either through the ZTVs or through discussion with stakeholders and interested parties. LCA which are principally located outside the Study Area will be scoped out of the assessment.
- 4.74 The LVIA will not assess the effects of the Proposed Project on landscape or visual receptors that are located wholly outside the ZTV.
- 4.75 Landscape receptors that will not be assessed in their own right include the following (as explained in Table 4.1):
- Landscape elements (i.e. tree cover, field boundaries, landform, water courses)
 - National Landscape Character Areas (NLCAs);

- National Marine Character Areas (MCA);
 - Local Seascape Character Areas (SCA);
 - LANDMAP Visual and Sensory Aspect Areas (VSAA); and
 - Registered Parks and Gardens.
- 4.76 Effects on residential receptors outside of public spaces are not included because in law, private individuals do not have a right to a view (as established in the Lavender case⁶) and impacts on living conditions are usually dealt with through a separate residential visual amenity assessment, if required. In this case, such an assessment is not considered to be required because the Proposed Project is not likely to be so overbearing or dominating as experienced from any individual property, as a result in unacceptable living conditions.

Overview of the Likely Significance of Effect

- 4.77 The potential for significant landscape and visual effects is limited to potential localised significant visual effects on people using a PRoW to the east of the Dwyrdd Estuary. These may result from the introduction of the SEC and Tunnel Head House in relatively close proximity to the PRoW; albeit this path runs adjacent to the existing OHL, some of which would be removed. Overall, the Proposed Project as a whole is likely to bring about a beneficial impact on the area.

⁶ Lavender v Mackenzie Test (2009) (Enifer Downs & Langdon) Public Inquiry (APP/X2220/A/08/2071880)