



SP MANWEB

The North Wales Wind Farms Connection Project

Environmental Statement Chapter 7 - Landscape and Visual

Application reference: EN020014

March 2015



Regulation reference: The Infrastructure Planning
(Applications: Prescribed Forms and Procedure)
Regulations 2009 Regulation 5(2)(a)

Document reference 6.7

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Document Reference: 6.7

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations
2009 Regulation 5(2)(a)

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The Planning Act 2008

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Environmental Statement

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Document Reference No.	6.7
Regulation No.	Regulation 5(2)(a)
Author	Gillespies
Date	March 2015
Version	01
Planning Inspectorate Reference No.	EN020015

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Environmental Statement Documents

Volume 6: Environmental Statement		
Document Reference	Chapter	Document
6.1	1	Introduction
6.2	2	Description of the Proposed Development
6.3	3	Alternatives and Design Evolution
6.4	4	EIA Methodology
6.5	5	Planning Policy Considerations
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6.16		Environmental Statement Figures
6.17 – 6.26		Appendices
6.27		Glossary
6.28		Non-Technical Summary

This Chapter includes the following Appendices:

DCO Document Reference	Appendix	Document
6.20	7.1	Residential Visual Amenity Assessment
6.20	7.2	Holford Rules
6.20	7.3	Viewpoint Assessment and Photomontages
6.20	7.4	Effects on Landscape Character
6.20	7.5	Photographs, Wireframes and Photomontages
6.20	7.6	Outline Landscape Management Plan

Reference is also made to the following documents:

DCO Document Reference	Document
2.6.1 – 2.6	Landscape Plans
6.17	Proposed Works at St Asaph Substation (Appendix 1.1 to this ES)
	Proposed Underground Cable; St Asaph Substation to the Terminal Point (Appendix 1.2 to this ES)
	Proposed Collector Substation; Clocaenog Forest; Environmental Report (Appendix 1.3 to this ES)
	Lower Voltage Diversions (Appendix 1.4 to this ES)
	Potential Connection Routes for the Derwydd Bach, Nant Bach and Brenig Wind Farms (Appendix 1.5 to this ES)
6.18	Construction Environmental Management Plan (Appendix 2.1 to this ES)
6.19	Technical Appendices to Chapter 6 (Ecology and Biodiversity)
6.29	North Wales Wind Farm Connections Project; Scoping Report, (January 2014)

DCO Document Reference	Document
6.30	Planning Inspectorate: North Wales Wind Farm Connections Project; Scoping Opinion: (February 2014)
7.1	Design and Construction Report
7.3	Strategic Options Report
7.4	Planning Statement
7.5	Appraisal of the North Wales Wind Farms Connection Project Against National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) In Relation to Undergrounding (Appendix 1 to the Planning Statement)

7 LANDSCAPE AND VISUAL

7.1 Introduction

7.1.1 This Chapter assesses the likely significant environmental effects of the Proposed Development on landscape and visual considerations. In particular it considers the potential effects of the Proposed Development on key landscape elements, landscape character, views and residential visual amenity, and cumulative landscape and visual effects.

7.1.2 The Chapter describes the methods used to assess the landscape and visual effects, the baseline conditions which currently exist, the potential direct and indirect effects of the Proposed Development, the mitigation measures required to prevent, reduce, or offset the effects and the residual effects remaining after implementation of mitigation measures.

7.2 Legislation and Policy Background

7.2.1 Planning policy considerations are presented in Chapter 5 'Planning Policy Considerations' and include UK wide, national (Wales) and local development plan policies.

7.2.2 The local development plans are the Denbighshire Local Development Plan and the Conwy Local Development Plan.

UK-wide Planning Policies

7.2.3 National Policy Statements (NPSs) set out Government policy for the delivery of major energy infrastructure and are material considerations in decision making for Nationally Significant Infrastructure Projects (NSIPs). NPS EN-1 and NPS EN-5 are relevant to both the Proposed Development and landscape and visual considerations.

NPS EN-1 and NPS EN-5

7.2.4 Section 5.9 of NPS EN-1 recognises that major energy infrastructure projects are likely to result in landscape and visual effects and discusses generic issues relating to such effects and how these should be addressed with reference to compliance with guidance in the Third Edition of Guidelines for Landscape and Visual Impact Assessment (GLVIA3)¹.

¹ Landscape Institute/Institute of Environmental Management and Assessment, Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 2013

- 7.2.5 Section 2.8 of NPS EN-5 provides specific considerations for electricity networks infrastructure in relation to landscape and visual effects. Para 2.8.2 states that:

“...new above ground electricity lines, whether supported by lattice steel towers/pylons or wooden poles, can give rise to adverse landscape and visual impacts, dependent upon their scale, siting, degree of screening and the nature of the landscape and local environment through which they are routed. For the most part these impacts can be mitigated, however at particularly sensitive locations the potential adverse landscape and visual impacts of an overhead line proposal may make it unacceptable in planning terms, taking account of the specific local environment and context.”

- 7.2.6 Table 7.1 provides a summary of how the assessment has complied with the requirements of NPS EN-1 and NPS EN-5.

Table 7.1: Summary of Compliance with NPS EN-1 and EN-5 Requirements

Compliance with NPS EN-1 and EN-5 Requirements	
NPS EN-1 Paragraphs	Location in ES Chapter 7
Para 5.9.5 - Landscape assessment should be carried out in accordance with industry standards and include reference to existing landscape character assessments and policies relating to them.	Planning policy considerations are set out in Section 7.3. Methodology, including a list of guidance documents and industry standards is presented in Section 7.4.
Para 5.9.6 - Include assessment of effects on landscape character and its components during construction and operation.	A full assessment of effects on landscape character and its components during construction and operation is presented in Section 7.7.
Para 5.9.7 - Include the visibility and conspicuousness of the project during construction and operation and potential impacts on views and visual amenity.	Assessment of visual effects is presented in Section 7.7, which includes an assessment of the Proposed Development during both construction and operation. Chapter 3 ‘Alternatives and Design Evolution’ describes the development of the scheme and demonstrates that potential impacts on views and visual amenity were a driving factor when considering alternatives and routing options for the Proposed Development.

Compliance with NPS EN-1 and EN-5 Requirements	
<p>Para 5.9.8 - Projects should be carefully designed, taking account of the potential impacts on landscape, having regard to siting, operation and other constraints – so as to minimise the harm to the landscape and to provide reasonable mitigation where possible and appropriate.</p>	<p>Chapter 3 ‘Alternatives and Design Evolution’ describes the development of the Proposed Development and demonstrates that minimising harm to the landscape and providing reasonable mitigation through sensitive routeing and design was a major consideration during development of the Proposed Development. The design of the Proposed Development has had full regard to siting, operation and any other constraints.</p> <p>Section 7.8 presents additional mitigation for significant landscape and visual effects</p>
<p>Para 5.9.12 - For developments outside but close to nationally designated areas, avoid compromising the purposes of the designation.</p>	<p>An assessment of the effects on the landscape of Snowdonia National Park and the Clwydian Range and Dee Valley AONB is presented in Section 7.7, including consideration of whether the Proposed Development would compromise the purposes of these designations.</p>
<p>Para 5.9.14 - Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention.</p>	<p>An assessment of effects on locally designated landscapes including Special Landscape Areas is presented in Section 7.7.</p> <p>LANDMAP data was applied when considering alternatives and routeing options.</p> <p>Overall evaluations of the five LANDMAP layers are taken into consideration in the value judgements which are used to establish landscape sensitivity and inform the assessment of effects on landscape character in Section 7.7.</p> <p>An assessment of the effects on locally designated landscapes is presented in Section 7.7</p>

Compliance with NPS EN-1 and EN-5 Requirements	
<p>Para 5.9.18 - Effects on sensitive receptors, local residents, and visitors should be included in the landscape assessment.</p>	<p>Assessment of visual effects is presented in Section 7.7. This includes an assessment of any likely significant effects on sensitive receptors, local residents and visitors.</p> <p>An assessment of residential visual amenity effects is presented in Appendix 7.1.</p> <p>Chapter 3 'Alternatives and Design Evolution' describes the development of the scheme and demonstrates that sensitive visual receptors were a major factor when considering alternatives and routeing options.</p>
<p>Para 5.9.21 to 5.9.23 - Advise applicants to include appropriate measures to mitigate the landscape and visual effects of a project. Measures such as amending the design, using appropriate materials and landscaping, including off site measures such as filling gaps in existing tree and hedge lines, are all encouraged.</p>	<p>The approach to landscape and visual mitigation is presented in Section 7.4. This includes embedded mitigation built into the design of the Proposed Development as well as specific mitigation which is proposed in response to identified landscape or visual effects.</p> <p>Chapter 3 'Alternatives and Design Evolution' describes the development of the scheme and demonstrates that sensitive routeing and design was a factor in lessening the likely effects of the Proposed Development.</p> <p>Section 7.8 presents additional mitigation for significant landscape and visual effects.</p>
NPS EN-5 Paragraphs	
<p>Para 2.8.4 - Set out details of how consideration has been given to the potential costs and benefits of other feasible means of connection, including undergrounding, including where these have not been adopted on grounds of additional cost, how the costs of mitigation have been</p>	<p>DCO Document 7.5 'Appraisal of the North Wales Wind Farms Connection Project Against National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) In Relation to Undergrounding (Appendix 1 to the Planning Statement) explains how</p>

Compliance with NPS EN-1 and EN-5 Requirements	
calculated.	consideration has been given to alternative means of making the connection, including the costs and benefits of those alternatives.
Para 2.8.5 - The Holford Rules ² (see Appendix 7.2) should form the basis for the approach to routeing new overhead lines	Chapter 3 'Alternatives and Design Evolution' explains how consideration of the Holford Rules was a major factor when considering alternatives and routeing options. Section 7.4 explains that the Holford Rules were applied when making judgements on landscape susceptibility.
Para 2.8.10 - Demonstrate how consideration has been given to network reinforcement options and selection of the most suitable type and design of support structure in order to minimise visual impact.	Chapter 1 'Introduction' outlines the Strategic Options considered. The Strategic Options Report (DCO Document Ref 7.3) provides further information.
Para 2.8.11 - Outline specific measures which may be appropriate to mitigate adverse landscape and visual effects, including the use of suitable design, landscaping – comprising of offsite tree and hedgerow planting and screening – comprising of localised planting in the immediate vicinity of residential properties and principal viewpoints to screen or soften the visual effect.	The approach to mitigation is presented in Section 7.4. Section 7.8 presents specific mitigation proposals in response to significant landscape and visual effects. This includes localised planting within the Limits of Deviation.

² The Holford Rules are a series of guidelines for the routeing of new high voltage transmission lines which were first formulated in 1959 by Lord Holford. Whilst the Holford Rules relate specifically to high voltage lines supported on lattice steel towers, many of the principles can also be used as a guide to the routeing of lines supported on wood poles. The Holford Rules are regarded as industry standards and have been tested at public inquiries and at hearings under the Electricity Act 1989. NPS EN-5 states that the Holford Rules should form the basis for the approach to routeing new overhead lines (para 2.8.7).

Welsh National Planning Advice and Policies

7.2.7 As outlined in Chapter 5 ‘Planning Policy Considerations’, planning policy in Wales comprises both national and local policy documents.

Planning (Wales) Bill

7.2.8 The draft Planning (Wales) Bill³ and Consultation Document⁴ contain proposals put forward by the Welsh Government to modernise the planning system in Wales through changes to primary legislation, secondary legislation, policy and guidance. The Consultation Document identifies the need for culture change and a change in attitude away from regulating development towards encouraging and supporting development (forward by Carl Sargeant, Minister for Housing and Regeneration).

Planning Policy Wales

7.2.9 Planning Policy Wales⁵ (PPW) sets out the land use planning policies of the Welsh Government, including national planning policy in respect of promoting sustainability through good design in the built and natural environment. This is supported by the recently updated Technical Advice Note (TAN) 12: Design⁶, which provides advice for all those involved in the design of development on how good sustainable design can be facilitated through the planning system.

7.2.10 PPW confirms that the “natural heritage and valued landscapes of Wales are not confined to statutorily designated sites but extend across all of Wales - to urban areas, the countryside and the coast” (Para 5.1.1).

7.2.11 PPW states in Para 4.4.3 that planning policies and decisions should contribute to the protection and improvement of the environment including conservation of landscapes.

7.2.12 Para 4.7.8 states that development in the countryside should be located where it can be “best accommodated” in terms of landscape conservation (amongst other factors).

7.2.13 Para 4.11.8 clarifies that landscape considerations are an integral part of the design process and can make a positive contribution to environmental protection and improvement. This is supported by Para 4.11.10, which clarifies that in areas recognised for their landscape, townscape or historic value, the impact on character, scale and siting of new development and the use of appropriate building materials is particularly important.

³ Welsh Government, December 2013. Planning (Wales) Bill Draft.

⁴ Welsh Government, December 2013. Draft Planning (Wales) Bill and Positive Planning: proposals to reform the planning system in Wales.

⁵ Welsh Government, 2014. Planning Policy Wales Edition 7.

⁶ Welsh Government, August 2014. Technical Advice Note 12: Design

- 7.2.14 Para 5.1.2 outlines the Welsh Government's objectives for the conservation and improvement of natural heritage, which includes the conservation of landscapes and ensuring that statutorily designated sites are properly protected and managed.
- 7.2.15 Para 5.1.4 states that landscape considerations should be taken into account at an early stage when considering development. Para 5.2.9 classifies trees, woodlands and hedgerows as possessing great importance in terms of their contribution to landscape character and beauty – a characteristic which needs to be protected and enhanced.
- 7.2.16 Para 5.3.2 advises local planning authorities to consider international, national and local designations and the weight attached to them, while avoiding placing 'unnecessary constraints on development'.
- 7.2.17 Para 5.3.6 states the following:
“National Parks and AONBs are of equal status in terms of landscape and scenic beauty and both must be afforded the highest status of protection from inappropriate developments. In development plan policies and development management decisions National Parks and AONBs must be treated as of equivalent status. In National Parks and AONBs, development plan policies and development management decisions should give great weight to conserving and enhancing the natural beauty, wildlife and cultural heritage of these areas. “
- 7.2.18 Para 5.3.11 states the following:
“Non-statutory designations, such as Special Landscape Areas or Sites of Interest for Nature Conservation, should be soundly based on a formal scientific assessment of the nature conservation, landscape or geological value of the site. Local non-statutory sites can add value to the planning process particularly if such designations are informed by community participation and reflect community values. Local planning authorities should apply these designations to areas of substantive conservation value where there is good reason to believe that normal planning policies cannot provide the necessary protection. Such designations should not unduly restrict acceptable development. “
- 7.2.19 Para 5.5.1 clarifies that the effect of a proposal on the landscape of any area can be a material consideration and that it is important in such cases to balance the interests of sustainable development, nature conservation as well as the wider economic needs of local businesses and communities.

Technical Advice Notes

7.2.20 The Technical Advice Notes (TANs) provide technical advice to supplement the policy set out in PPW. The TAN most relevant to the landscape and visual considerations is TAN 12: Design⁷, which provides advice for all those involved in the design of development on how good sustainable design can be facilitated through the planning system.

7.2.21 In Para 5.5.2, TAN 12 notes that:

"In general terms, good design will almost always be dependent on working within the natural constraints and the historic character of the landscape and this should be the starting point from which the design of development evolves. The aim should be to achieve good design solutions which maximise the natural landscape assets and minimise environmental impact on the landscape."

7.2.22 In Para 4.7, TAN 12 supports the view that:

"an appraisal of an area's natural resources is a prerequisite to providing environmentally sustainable design solutions." This involves 'attention to topography; historic street patterns, archaeological features, waterways, hierarchy of development and spaces, prevalent materials in buildings or floorscape, architecture and historic quality, landscape character, field patterns and land use patterns, distinctive views (in and out of the site), skylines and vistas, prevailing uses and plan forms, boundary treatments, local biodiversity, natural and cultural resources and locally distinctive features and traditions (also known as vernacular elements)."

7.2.23 In 4.8, TAN12 continues:

"Appraisal of the landscape should focus on its quality in terms of geology and geomorphology, vegetation and habitats, visual and sensory quality and historic and cultural quality. "LANDMAP" is one method of assessment which has the potential to provide a framework and information base from which good design and management can be developed.....Historic Landscape Characterisation provides a more detailed level of assessment for the historic environment, and studies have been carried out for all of the areas included in the Register of Landscapes of Historic Interest in Wales. Further detailed site appraisals may also provide information on local hydrology, microclimate, soils, plant communities and features, and all visual qualities including views and vistas. "

Denbighshire County Council Local Development Plan

7.2.24 Denbighshire County Council (Denbighshire CC) formally adopted its Local Development Plan (LDP) in June 2014. The LDP includes a number of objectives, developed to address identified issues and needs within Denbighshire.

⁷ Welsh Government, August 2014. Technical Advice Note 12: Design

7.2.25 Objective 16 Areas of Protection states that:

“The Local Development Plan will seek to protect and enhance the natural and built heritage of the County including aspects such as landscape, biodiversity, geo-diversity, designated sites and buildings and protected species. “

7.2.26 The Plan also includes a number of other policies which are of relevance:

Policy VOE 1 – Key Areas of Importance:

“The following areas will be protected from development that would adversely affect them. Development proposals should maintain and, wherever possible, enhance these areas for their characteristics, local distinctiveness, and value to local communities in Denbighshire:-

- *Statutory designated sites for nature conservation;*
- *Local areas designated or identified because of their natural landscape or biodiversity value;*
- *Sites of built heritage; and*
- *Historic Landscape, Parks and Gardens. “*

Policy VOE 2 - Areas of Outstanding Natural Beauty and Areas of Outstanding Beauty:

“In determining development proposals within or affecting the Area of Outstanding Natural Beauty (AONB) and Area of Outstanding Beauty (AOB), development that would cause unacceptable harm to the character and appearance of the landscape and the reasons for designation will not be permitted.“

Conwy Local Development Plan

7.2.27 Conwy County Borough Council (Conwy CBC) formally adopted its Local Development Plan (LDP) in October 2013. The LDP includes a number of spatial policies of relevance to landscape and visual considerations. Policies include:-

Policy NTE/1 – The Natural Environment:

“In seeking to support the wider economic and social needs of the Plan Area, the Council will seek to regulate development so as to conserve and, where possible, enhance the Plan Area’s natural environment, countryside and coastline. This will be achieved by:

a) Safeguarding the Plan Area’s biodiversity, geology, habitats, history and landscapes through the protection and enhancement of sites of international, national, regional and local importance, in line with Policy DP/6 – National Planning Policy and Guidance’;

b) Using Green Wedges and settlement boundaries to control the identity of individual settlements, to prevent coalescence and to protect the immediate landscape surrounding urban areas in line with Policy NTE/2 – ‘Green Wedges and Meeting the Development Needs of the Community’;

- c) Where appropriate and necessary, improving the quality of statutory and non-statutory landscapes and areas of biodiversity value affected by development, through management agreements, habitat connectivity, improved planting, landscape and maintenance specifications, in line with the Development Principle Policies and Policy NTE/3 – ‘Biodiversity’;*
- d) Working with developers to safeguard protected species and enhance their habitats in line with Policies DP/6 and NTE/3;*
- e) Seeking to minimise the loss of Grade 2 and 3a agricultural land to new development, in particular, in the east of the Urban Development Strategy Area, in line with Policy DP/6;*
- f) Respecting, retaining or enhancing the local character and distinctiveness of the individual Special Landscape Areas in line with Policy NTE/4 – ‘The Landscape and Protecting Special Landscape Areas’ and as shown on the Proposals Map;*
- g) Protecting the Coastal Zone in line with Policy NTE/5 – ‘The Coastal Zone’;*
- h) Promoting energy efficiency and renewable technologies in development in line with Policy NTE/6 – ‘Energy Efficiency and Renewable Technologies in New Development’; and*
- i) Preventing, reducing or remedying all forms of pollution including air, light, noise, soil and water, in line with Policy DP/6”.*

Policy NTE/4 – The Landscape and Protecting Special Landscape Areas

“1. Special Landscape Areas are shown on the proposal map and designated in the following locations:

- a) Great Orme and Creuddyn Peninsula;*
- b) Conwy Valley;*
- c) Abergele hinterland;*
- d) Elwy and Aled Valleys;*
- e) Hiraethog; and*
- f) Cerrigydrudion and the A5 corridor.*

2. In order to conserve the attributes of the Special Landscape Areas development proposals will have to show particular regard to the character of each locality in order to minimise their impact. Development will only be permitted if it is shown to be capable of being satisfactorily integrated into the landscape. In appropriate cases planning applications should be accompanied by a Landscape and Visual Impact Assessment to assess the visual and landscape impacts of the development.

3. All proposals, both within and outside SLAs, will be considered against the Development Principles and other policies in the Plan designed to protect the environment and landscape character.”

Policy CTH/2 – Development Affecting Heritage Assets

“Development proposals which affect a heritage asset listed below (a-f), and/or its setting, shall preserve or, where appropriate, enhance that asset. Development proposals will be considered in line with Policy DP/6, where applicable and Policy DP/3.

- a) Conservation Areas;*
- b) Conwy World Heritage Site;*
- c) Historic Landscapes, Parks and Gardens;*
- d) Listed Buildings;*
- e) Scheduled Ancient Monuments; and*
- f) Sites of archaeological importance.”*

Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development⁸

- 7.2.28 The landscapes of Conwy and Denbighshire are experiencing an increasing number of planning applications for single and pairs of wind turbines (under 5MW) as well as larger wind energy schemes being progressed outside the SSA. This report which was commissioned by the Councils in response to this growing pressure provides an evidence-based assessment of the relative sensitivity and capacity of the landscape to wind energy development of varying scales. It focuses on smaller scale developments (typically up to a group of nine wind turbines and 80m maximum height to blade tip). The assessment does not generally consider larger wind energy developments (typically a group of ten turbines or more, over 80m in height to blade tip) as due to the high sensitivity of the landscapes of Conwy and Denbighshire these are generally deemed inappropriate outside Clocaenog Forest SSA.
- 7.2.29 This assessment will form part of the evidence base for the emerging SPG for Conwy and Denbighshire.

⁸ Conwy County Council and Denbighshire County Council, May 2013. Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development, Final Report

7.3 Consultation

- 7.3.1 In February 2014, SP Manweb received the Scoping Opinion from the Secretary of State (SoS), in respect of the Scoping Report⁹ submitted to the Planning Inspectorate (PINS) in January 2014 (see Chapter 4 ‘EIA Methodology’).
- 7.3.2 The Scoping Opinion¹⁰ identified some landscape and visual considerations where further investigation or clarification was required. Table 7.2 sets out these comments and where applicable provides a cross reference to the Section where they have been addressed.
- 7.3.3 In addition to the formal Scoping Opinion, a consultation meeting was held with NRW to discuss the landscape and visual assessment, in particular the proposed viewpoints and the use of LANDMAP¹¹ in the assessment, and the approach to cumulative assessment.

Table 7.2: Responses to Scoping Opinion

Issues Raised and Responses to the SoS Scoping Opinion	
Issue Raised by SoS	Response
Para 3.40 - The study area for the landscape and visual assessment should be clearly defined.	The definition of the Study Area is presented and clearly defined in Section 7.4.
Para 3.41 - A full assessment should be undertaken of the potential effects on the Clwydian Range and Dee Valley AONB.	The assessment of potential effects on the Clwydian Range and Dee Valley AONB is presented in Section 7.7.
Para 3.42 - Para 7.63 refers to five categories of significance, then lists only four.	This is a textual error. Section 7.4 refers to the four categories of significance – major, moderate,

⁹ SP Manweb, January 2014. North Wales Wind Farm Connections EIA Scoping Report

¹⁰ PINS, February 2014. Proposed North Wales Wind Farm Connections Scoping Opinion

¹¹ LANDMAP is a pan Wales GIS (Geographical Information System) based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent data set. LANDMAP comprises five spatially related datasets recording information about the physical, ecological, visual and sensory, historic and cultural influences on the landscape. The five datasets are known as Evaluated Aspects and are called Geological Landscape (GL), Landscape Habitats (LH), Visual & Sensory (VS), Historic Landscape (HS) and Cultural Landscape (CL). Each spatial layer can be viewed independently or overlaid by other Evaluated Aspects (or other compatible datasets) in order to interrogate the data to support analysis and decision-making. It is the use of all five layers of information that promotes sustainable landscape decision-making as what may be less important in one particular layer may be of high importance in another. Giving all five layers equal consideration ensures no aspect of the landscape is overlooked.

Issues Raised and Responses to the SoS Scoping Opinion	
	minor and negligible. This chapter explains that there are four categories of significance.
Para 3.43 - The SoS welcomes the applicant's intention to discuss and agree with the relevant local authorities, the developments to be included in the cumulative landscape and visual assessment.	The Local Authorities have provided comments on the developments included in the cumulative assessment in Section 7.9.
Para 3.44 - The SoS requests full information on the ZTV and how it has been prepared.	The information on the ZTV and how it has been prepared is presented in Section 7.4.
Para 3.44 - The SoS requests full information on the approach to the survey work which has been carried out.	The approach to the survey work carried out is presented in Section 7.4.
Para 3.44 - The SoS welcomes the applicant's intention to discuss and agree the selection of viewpoints with the relevant local authorities.	Viewpoint locations have been established in consultation with NRW and Conwy County Council ¹² as discussed in Sections 7.4 and 7.5.
Para 3.45 - The SoS requests clarity on whether any steel towers are included in the scheme design.	Chapter 2 describes the design of the Proposed Development and confirms that there are no steel towers proposed.
Para 3.46 - The SoS welcomes the reference to consideration of the interrelationship between this and other topics, and that assessment information will be shared.	Section 7.4 describes the inter-relationship between landscape and visual assessment and other Environmental Impact Assessment topics.
Issues Raised and Responses to Comments made by Denbighshire CC (as included in Appendix 2 of the Scoping Opinion)	Response
Para 5.20 - Request that existing, new and proposed electricity infrastructure projects are included in the cumulative assessment, in particular around St Asaph and	Section 7.9 presents the cumulative landscape and visual assessment, and includes developments around St Asaph and within the Clocaenog Forest

¹² Denbighshire County Council were asked to comment on viewpoints but didn't provide a response.

Issues Raised and Responses to the SoS Scoping Opinion	
Clocaenog Forest SSA A.	SSA A.
Para 7.0 - Reference should be made to the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development ¹³ which will form part of the emerging SPG evidence base.	This document is included in the list of guidance presented in Section 7.4. The description of the baseline landscape, the evaluation of landscape sensitivity and the cumulative assessment have all taken cognisance of this report.
Para 7.0 - The landscape and visual assessment should include a residential visual amenity impact assessment.	A residential visual amenity assessment is presented in Appendix 7.1 and is summarised in Section 7.7.
Issues Raised and Responses to Comments made by NRW (as included in Appendix 2 of the Scoping Opinion)	Response
9. Reference should be made to the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development ¹⁴ which will form part of the evidence base for the emerging SPG.	This document is included in the list of guidance presented in Section 7.4. The description of the baseline landscape, the evaluation of landscape sensitivity and the cumulative assessment have all taken cognisance of this report.
NRW welcome the approach to consider related development including the collector substation and undergrounding at the northern end of the scheme as part of the cumulative assessment.	This approach is provided in the cumulative landscape assessment in Section 7.9.

¹³ Conwy County Council and Denbighshire County Council, May 2013. Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development, Final Report

¹⁴ As footnote above

- 7.3.4 In response to the pre-application consultation under Section 42 of the Planning Act, Mr Gareth Lloyd on behalf of Snowdonia National Park stated that:

“.... given the distance of the proposed route from the National Park boundary – some 15km, I do not believe there will be any adverse landscape or visual impacts on the Park or its setting, or any loss of amenity to its residents or visitors to Snowdonia.”

- 7.3.5 The Clwydian Range and Dee Valley AONB Joint Advisory Committee’s response to the pre-application consultation under Section 42 of the Planning Act, stated that:

“The JAC welcomes recognition of the need to protect sensitive landscapes such as the Clwydian Range and Dee Valley AONB in selecting the proposed route alignment, and supports the decision to select the St Asaph substation as the favoured grid connection point rather than Legacy to avoid routing the line through the AONB. The JAC notes that the proposed alignment is some distance from the AONB which minimises the potential for any visual impact on the AONB, but generally favours an approach which maximises the use of undergrounding wherever possible and the use of less intrusive wooden pole structures rather than steel pylons.”

- 7.3.6 A consideration of potential undergrounding is provided in the ‘Appraisal of the North Wales Wind Farms Connection Project Against National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) In Relation to Undergrounding’ (Appendix 1 to the Planning Statement) (DCO Document Ref 7.5).

- 7.3.7 The 132 kV Overhead Line would be supported by heavy duty double wood pole structures rather than steel towers.

7.4 Methodology

Guidance

- 7.4.1 The assessment has been carried out in accordance with the Third Edition of Guidelines for Landscape and Visual Impact Assessment (GLVIA3) published by the Landscape Institute and IEMA. GLVIA3 is the established good practice guidance for landscape and visual impact assessment.

- 7.4.2 The Third Edition was published in April 2013 and takes account of changes since the Second Edition (published 2002). Since 2002 the UK has both signed and ratified the European Landscape Convention, which places new obligations on Government in dealing with landscape matters. Although the principles advocated are broadly similar to the Second Edition, there is recognition that the previous guidance overemphasised the use of matrices and single word descriptions when arriving at judgements of significance. The Third Edition recommends a step by step process of evaluation, supported by clear, well-reasoned narrative text to allow the identification of significant effects to be as transparent as possible.

7.4.3 In addition to GLVIA3, the following guidance and sources of information have also been taken into account in the preparation of the landscape and visual impact assessment:

- Cadw, *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, 1998*;
- Cadw, *Register of Landscapes of Special Historic Interest in Wales, 2001*;
- Cadw, *Register of Landscapes of Outstanding Historic Interest in Wales, 2001*;
- Cadw, *Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process, 2nd (revised) Edition, 2007*;
- Countryside Agency and Scottish Natural Heritage, *Landscape Character Assessment: Guidance for England and Scotland, 2002*;
- Countryside Council for Wales, *Landscape Character Map for Wales, 2010*;
- Countryside Council for Wales, *Wales Tranquil Areas Map, March 2009*;
- Conwy County Council and Denbighshire County Council, *Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development, Final Report, 2013*;
- Clwyd County Council, *Clwyd Landscape Assessment, 1995*;
- Denbighshire County Council, *Denbighshire Landscape Strategy, 2003*;
- Design Commission for Wales, *Designing Wind Farms in Wales, Updated 2014*;
- Entec, *Review of Guidance on the Assessment of Cumulative Effects of Onshore Windfarms Phase 1 Report, 2008*;
- Landscape Institute, *Photography and Photomontage in Landscape and Visual Impact Assessment: Advice Note 01/11, 2011*;
- Landscape Institute/ Institute of Environmental Management and Assessment, *Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 2013*;
- Natural Resources Wales, *LANDMAP*;
- Natural Resources Wales, *LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas, 2013*;
- Natural Resources Wales, *LANDMAP Guidance Note 3: Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines, 2013*;

- Natural Resources Wales, *LANDMAP Guidance Note 4: LANDMAP and the Cultural Landscape*, 2013;
- Natural Resources Wales, *LANDMAP Methodology: Guidance for Wales: Historic Landscape*, 2013;
- Scottish Natural Heritage and Countryside Agency, *Topic Paper 6. Techniques and Criteria for Judging Capacity and Sensitivity*, 2002;
- Scottish Natural Heritage, *Assessing the Cumulative Impact of onshore Wind Energy Projects*, 2012;
- Scottish Natural Heritage, *Siting and Designing wind Farms in the Landscape, Version 2, May 2014*;
- Scottish Natural Heritage, *Visual Representation of Wind Farms: Good Practice Guidance*, 2006;
- Scottish Natural Heritage, *Visual Representation of Wind Farms: Version 2, 2014*;
- *The Holford Rules Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes*¹⁵ (see Appendix 7.2);
- The Highland Council, *Visualisation Standards for Wind Energy Developments*, 2010;
- University of Newcastle, *Visual Assessment of Windfarms Best Practice. Scottish Natural Heritage Commissioned Report*, 2002;
- Welsh Government, *Technical Advice Note (TAN) 8: Renewable Energy*, 2005; and
- Welsh Government, *Technical Advice Note (TAN) 12: Renewable Energy*, 2014.

Surveys

- 7.4.4 Field surveys were carried out during several visits, under differing weather conditions, between 2011 and summer 2014. The findings of the field surveys were recorded by means of field notes and photographs.
- 7.4.5 To aid the assessment, a Zone of Theoretical Visibility (ZTV) was generated using a digital terrain model (DTM), to identify areas from where the 132 kV Overhead Line would potentially be visible. The ZTV shows theoretical visibility, based on a 'bare ground' terrain model.

¹⁵ The Holford Rules were formulated in 1959 by Sir William (later Lord) Holford. These have been reviewed and it has been concluded that they have stood the test of time, so they will continue to be used as a basis of the approach to overhead line routeing

Inter-Relationship between Landscape and Visual Assessment and Other EIA Topics

- 7.4.6 Landscape has a close relationship with the historic environment, ecology and socio-economic topics. The relationship between landscape and historic landscape matters is particularly close. The first is concerned with the landscape as it is today. The second is concerned with how the landscape came to be as it is. In recognition of this, the survey for the baseline landscape and visual assessment ensured that important above ground archaeological remains and cultural heritage sites such as hillforts which were likely to attract visitors were recorded and judgements made as to their contribution to the landscape from a landscape and visual perspective¹⁶. Use was made of historic environment information and there was liaison with the specialists undertaking the historic environment assessment which is presented in Chapter 8 'Historic Environment' (DCO Document Ref 6.8).
- 7.4.7 It is important to note the distinction between 'setting' in landscape/visual and cultural heritage terms. The latter is often expressed in visual terms and, although views of or from an asset will play an important part in defining its setting, the way in which a heritage asset is experienced in its setting is also influenced by other environmental factors such as noise, dust and vibration; by spatial associations; and by an understanding of the historic relationship between places. For example, buildings that are in close proximity but not visible from each other may have a historic or aesthetic connection that amplifies the experience of the significance of each and would be considered to be within one another's setting. Whilst information on habitats, particularly woodlands, trees and hedgerows is fully assessed in Chapter 6 'Ecology and Biodiversity' (DCO Document Ref 6.6), changes to these habitats can have significant implications for landscape and visual interests. Information was therefore shared and exchanged with the specialists undertaking the biodiversity and ecological assessment. Where tree removal may affect the landscape or views, this was assessed and illustrated within the relevant sections of this chapter.

Assessment Scope

- 7.4.8 Overhead lines by their nature, can adversely affect both the landscape and the views experienced by people. It is therefore important to understand what these effects are so that wherever possible they can be designed-out, or appropriate mitigation identified.
- 7.4.9 Four types of effects have been assessed: effects on landscape elements and landscape character; effects on visual receptors; effects on residential visual amenity and cumulative effects on landscape and visual receptors. These are explained in turn below.

¹⁶ The historic environment chapter utilises the LVIA assessment in order to make conclusions in relation to contribution to setting and effects on historic sites and features.

Landscape Effects

- 7.4.10 Effects on the landscape includes direct physical change to those parts of the landscape that may have to be removed or altered as a result of the Proposed Development, for example, woodlands, trees and hedgerows. These physical changes may also result in indirect changes to the distinctive character of the landscape and other surrounding landscapes and how they are experienced. In landscapes designated or valued for their scenic or landscape quality, such changes can affect the purpose of the designation or perceived value of the landscape.

Visual Effects

- 7.4.11 The assessment of visual effects addresses potential changes in peoples' views or visual amenity caused by the appearance and prominence of the Proposed Development in those views. In accordance with GLVIA3, the assessment focusses on publicly accessible rather than private viewpoints, and on those receptor groups who are likely to be most sensitive to the effects of an overhead line and its associated infrastructure. Receptor groups which were assessed include communities, where views contribute to the wider landscape setting enjoyed by residents in the area, road users, and residents or visitors using recreational routes, features and attractions.

Residential Visual Amenity Effects

- 7.4.12 Residential visual amenity assessment is the assessment of the effects on views from private properties which lie close to the Proposed Development. Residential visual amenity means the general outlook experienced by occupiers of residential properties including their gardens. Assessment of effects on residential visual amenity is different to the assessment of effects on views from properties and it is important to note that a significant effect on a view from a property does not necessarily means that the Proposed Development would materially harm residential amenity or living conditions.
- 7.4.13 The residential visual amenity assessment, including the approach and methodology, is included at Appendix 7.1, whilst the cumulative residential visual amenity assessment is presented in Section 7.9 as noted below.

Cumulative Landscape and Visual Effects

- 7.4.14 Cumulative effects may occur where the Proposed Development is seen in conjunction with other proposed developments in the area, in this instance the wind farms, the Collector Substation, other overhead lines, smaller wind turbines and any other large scale developments. A cumulative assessment is necessary because the combined effects of a number of developments concentrated in one area, although potentially insignificant individually, together may result in significant effects. The cumulative landscape and visual assessment and residential visual amenity assessment including the two stage approach adopted and detailed methodology is presented in Section 7.9.

Study Area

- 7.4.15 The Study Area for the landscape and visual impact assessment (LVIA) is the area within which likely significant landscape and visual effects may occur; in this instance this is defined by a 2km buffer from the centreline of the Limits of Deviation. The extent of the Study Area has been informed by field assessment of the existing Kinmel Bay to Moelfre 132 kV overhead line and visibility studies undertaken for SP Manweb's consented and proposed wood pole overhead lines elsewhere in Wales. Site appraisal work during the preceding routeing stages of the North Wales Wind Farm Connection Project has also been used as the basis for determining its extents. This work has determined that significant landscape and visual effects are most likely to occur up to 2km from an overhead line supported on wood pole structures and this is where attention has been focussed, whilst being alert to the potential for significant effects to occur at greater distances. Overhead lines supported on wood pole structures may be visible up to 5km away, but they are unlikely to be prominent features, particularly if seen against a backdrop of landform or vegetation.

Qualifications and Assumptions

- 7.4.16 As is common for major infrastructure projects it is necessary for a limited degree of flexibility to be included within the application for development consent, by way of defining both lateral and vertical limits of deviation, which will allow the Proposed Development to take place within those limits. The reasons why limits of deviation are required are included in Chapter 2 'Description of the Proposed Development.
- 7.4.17 As explained in Chapter 4 'EIA Methodology' the Limits of Deviation (LoD) identify a maximum distance or measurement of variation within which all the permanent works must be sited.
- 7.4.18 The lateral LoD are 20m wide in areas of good ground conditions, with some areas widened to 40m, due to poor ground conditions, or to accommodate changes in direction. The extent of the lateral LoD are shown on the Works Plans (DCO Document Ref 2.3).
- 7.4.19 The vertical LoD are designed to take account of standard 132 kV wood pole design. The double wood pole design varies from 10.8m above ground height to 16.4m above ground height with the average height of the structures being 13m. The vertical LoD is +4m based on the average height of 13m. As with the lateral LoD the variation in height between adjacent structure positions is generally limited to 2m as this would greatly impact on the uplift force at adjacent poles.
- 7.4.20 The LVIA has assessed the indicative pole positions and heights. If following detailed design, a pole were to be located near the edge of the LoD and this would affect the category of significance of effect, this has been stated in the assessment. This approach has been adopted as it is necessary to identify all of the receptors that could potentially be affected by the Proposed Development, should the pole positions or heights change. The alternative would be to consider the effects of all permutations of pole positions within the Limits of Deviation, which is not

feasible. In undertaking the assessment, changes within the vertical limits of deviation have been considered. No locations were identified where it was considered that a change in the vertical LoD would lead to a change in the magnitude or significance of effect.

- 7.4.21 It was not considered that changes would lead to s considered that changes within the vertical limits of deviation would not change the outcome of the assessment. It was considered that the

Assessment of Significance

- 7.4.22 For the purposes of the assessment, effects which are predicted to be major or moderate significance by virtue of more sensitive receptors and the greater magnitude of effects, are generally considered to be significant. Those falling outside the major or moderate categories are generally considered to be not significant.

- 7.4.23 Whilst effects can be adverse or beneficial, the appearance of the Proposed Development and the nature of the landscape in which it is located means that its effects are likely to be perceived as adverse. Even with mitigation and any additional enhancement measures in place, the proposed infrastructure is likely to be regarded as a potentially discordant feature. For this reason, all effects identified in this chapter are considered adverse unless specifically stated otherwise.

Duration and Reversibility of Landscape and Visual Effects

- 7.4.24 Duration and reversibility are separate but linked considerations and both are recorded separately in the assessment of effects. 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 after the end of construction due to the effect of mitigation measures, and no longer felt after 15 years; and
- Long term – effects still felt 15 years after construction, and no longer declining.

- 7.4.25 Reversibility is a judgement about whether the particular effect is reversible in the long term.

- 7.4.26 Duration and reversibility can sometimes be considered together - for example, the design life of the electricity distribution infrastructure is 40 years. Decommissioning would take place once the infrastructure is no longer required. The operational effects of the Proposed Development are therefore be described as long term but potentially reversible.

Assessment Years

- 7.4.27 To comply with the general approach to the assessment of a reasonable worst case scenario, visual effects of the Proposed Development are considered during operation at the opening year and include for implementation of embedded mitigation planting.

- 7.4.28 Residual visual effects of the Proposed Development are considered when any specific mitigation planting proposals would have established fifteen years after the opening year.

Seasonal Changes

- 7.4.29 The magnitude of both landscape and visual effects is affected by seasonal change in terms of the baseline visibility, which in turn is affected by the weather and the screening effects of deciduous vegetation. The photographs presented in the ES were taken during the winter months which represents the realistic worst-case scenario in terms of visibility, i.e. when deciduous trees have lost their leaves.

Lower Voltage Lines

- 7.4.30 Existing lower voltage lines which cross or run near to the Proposed Development may be locally diverted. Information is provided in Appendix 1.4 'Lower Voltage Diversions' (DCO Document Ref 6.17). It is important to note that in terms of existing lower voltage lines it is the worst case scenario which has been used to inform the assessments, i.e. the assumption is that existing low voltage lines would not be diverted underground as these possible diversions do not form part of the Proposed Development. However, the potential benefits of these possible underground diversions have been taken into consideration in the assessment section of this chapter.

General Framework

- 7.4.31 LVIA requires judgements to be made about the relative importance of the landscape and visual effects identified. The approach is based on the framework set out in GLVIA3, which consist of two broad steps:

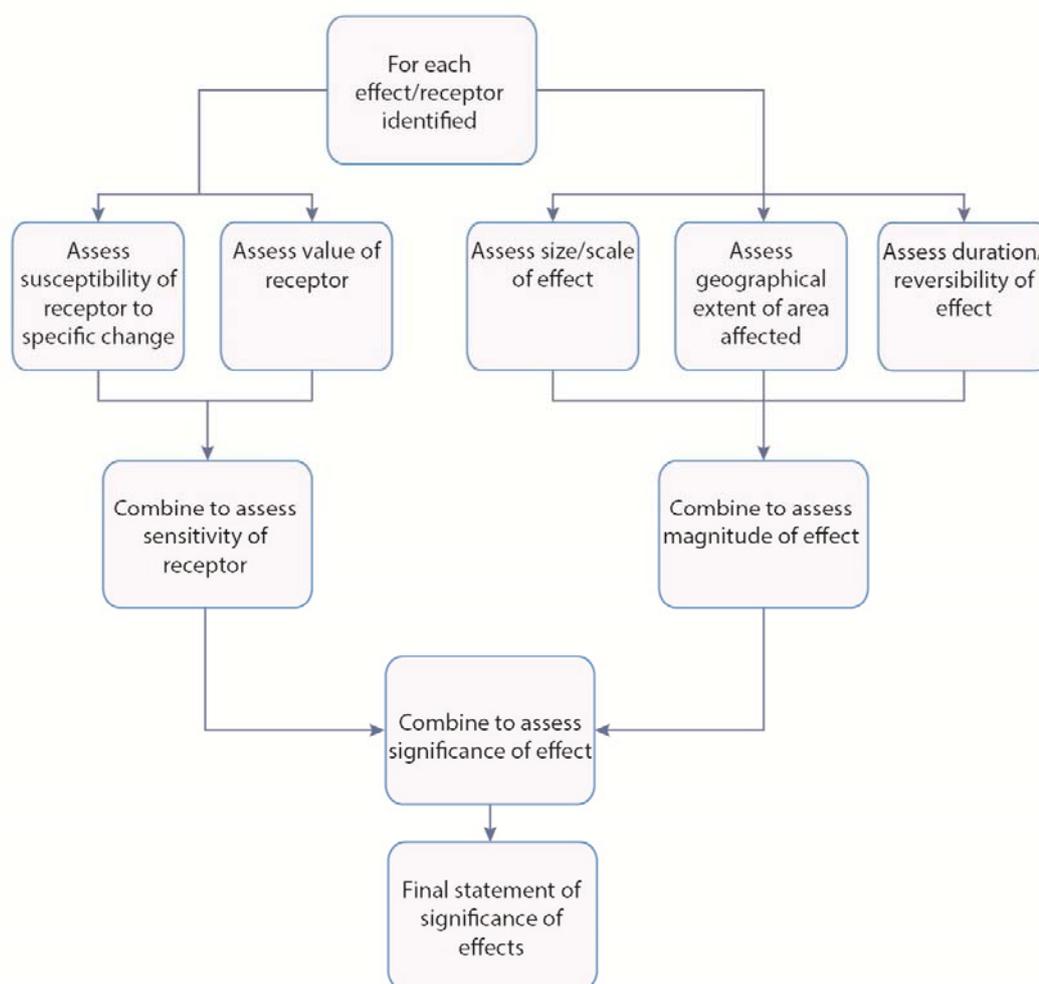
Step 1: Assess against Criteria

- 7.4.32 Judgements are made about each identified landscape and visual effect in terms of four criteria:
- the susceptibility of the receptor to the specific effects of the proposed Overhead 132 kV Line;
 - the value of the receptor affected;
 - the size or scale of the effect; and
 - the geographical extent of the effect.

Step 2: Combining the Judgements

- 7.4.33 Judgements made against each of the above criteria are combined to arrive at an overall assessment of the significance of the landscape and visual effects. This is done by sequentially combining the judgements about susceptibility to change and value into an assessment of sensitivity for each receptor and combining size/ scale, and geographic extent into an assessment of the magnitude of effect. The resulting judgements about sensitivity and magnitude were then combined to give an assessment of the overall significance of effect. This is illustrated in the flow chart below which is taken from GLVIA3.

- 7.4.34 At each step of the process, the required judgements as to the likely significance of an effect were determined by a combination of quantitative and qualitative assessment, informed by professional judgement supported by a clearly explained rationale.
- 7.4.35 The more detailed methodology which follows sets out the meanings of the four criteria considered in judging significance and the way that they have been applied in assessing firstly landscape and then visual effects. Where a range of different factors contribute to the judgements made against the four criteria, these are explained in the tables.



LVIA flow chart taken from GLVIA3

Flow Chart showing Approach to Assessing Landscape and Visual Effects
(taken from GLVIA3)

Assessing Landscape Effects

7.4.36 The assessment of landscape effects is concerned with how the Proposed Development would affect the elements that make up the landscape, its aesthetic and perceptual aspects and its overall character.

7.4.37 Landscape effects typically result from the following:

- direct physical changes to landscape elements or features (such as removal of trees to facilitate construction);
- changes to how the landscape is experienced, particularly those arising from the introduction of man-made elements into a landscape perceived as unspoilt, tranquil or remote;
- changes to the overall character, sense of place, quality and condition of the landscape resulting from changes to its particular combination of elements, and aesthetic and perceptual aspects; and
- changes to valued landscapes including those that are statutorily designated or landscapes of recognised value, for example Registered Historic Landscapes, Historic Landscapes and Historic Parks and Gardens on the registers compiled by Cadw/ NRW and the International Council on Monuments and Sites (ICOMOS) UK and regionally/ nationally promoted tourism/ recreation sites and routes.

7.4.38 The first step was to identify and describe the individual elements and aesthetic and perceptual aspects of the existing landscape, emphasising the key characteristics, which contribute to its distinctive character or sense of place. The next step was to identify those components of the landscape that could be affected by the Proposed Development (often referred to as landscape receptors). The effect of the changes arising from the Proposed Development on the identified landscape receptors was then predicted and a judgement made about the level of significance of those changes based on consideration of the sensitivity of the receptor and the magnitude of change likely to be experienced. This is explained in more detail below.

Assessing the Sensitivity of Landscape Receptors

7.4.39 The sensitivity of the landscape was assessed by combining a judgement about its susceptibility to change caused by the Proposed Development with a judgement about the value attached to the landscape. A range of individual factors which contribute to the judgements made against each criteria were identified based on work undertaken previously by Gillespies, most recently in conjunction with Land Use Consultants (LUC) and Carys Swanwick.

7.4.40 In making judgements against the criteria and factors identified for both assessment of susceptibility and value, a sliding scale from higher to lower was applied.

Landscape Susceptibility

- 7.4.41 Susceptibility of the landscape is defined in GLVIA3 (Para 5.40) as:
“the ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.”
- 7.4.42 Judgement of susceptibility is particular to the specific characteristics of the development and the ability of a particular landscape or feature to accommodate the type of change proposed.
- 7.4.43 A key step in the assessment of susceptibility was to identify and understand the landscape characteristics which are more likely to be affected by the Proposed Development, as it is these characteristics which influence susceptibility and judgements on how well the 132 kV Overhead Line would be accommodated in the landscape.
- 7.4.44 Factors which contribute to landscape character and may be affected by the Proposed Development are set out in Table 7.3 together with an explanation as to how the factors were applied to indicate higher or lower susceptibility. Table 7.3 also identifies which of the Holford Rules and LANDMAP datasets can be applied to each of the factors.
- 7.4.45 The landscape receptors were systematically assessed against each of these and susceptibility judgements were made on a sliding scale indicating higher or lower susceptibility.
- 7.4.46 The judgements were also informed by information from other data sources, including OS plans, Google Earth, and the Wales Tranquil Areas Map. Further field survey was also undertaken.

Table 7.3: Assessing the Susceptibility of the Landscape

Factors used to judge susceptibility	Definition		
	Lower susceptibility	↔	Higher susceptibility
Landform (Holford Rules 4 and 5)	Steep, dramatic or elevated landforms are generally more susceptible to overhead lines. This is because they are often prominent and distinctive in character and can also lead to skylining of overhead lines. Valleys and low rolling hills are generally less susceptible because they have greater potential to provide backclothing and enclosure, limiting the perceptibility of the overhead line. Flat landforms may be more susceptible where there is an absence of surrounding higher landform to provide a backcloth.		
	LANDMAP data source: VS4 Topographic Form, VS Classification Level 2		

Factors used to judge susceptibility	Definition		
	Lower susceptibility		Higher susceptibility
	<p>The 132 kV Overhead Line e may be accommodated well into the landform.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Valleys and low rolling hills • Simple landform • Flat and uniform landform 		<p>The 132 kV Overhead Line may conflict with prominent and distinctive landforms.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Rugged hills • Irregular complex landform • Steep and elevated landforms • Prominent or distinctive landforms
Landcover (Holford Rules 5 and 6)	<p>Landscapes with a high density of characteristic or sensitive landscape features, e.g. trees, native woodland, hedgerows or traditional/ historic field patterns, which may be lost due to overhead line routeing, are more susceptible than landscapes with a low density of characteristic landscape features, or where such patterns have been obscured. Conversely woodlands and trees can provide screening opportunities.</p>		
	<p>LANDMAP data source: VS5: Landcover Pattern, VS Classification Level 3</p>		
	<p>The 132 kV Overhead Line may be accommodated well within land cover.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Low density of sensitive landscape features • Lowland farmland 		<p>The 132 kV Overhead Line may interrupt distinctive landcover patterns.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • High density of sensitive landscape features • Open hillsides
Scale	<p>Medium scale landscapes are generally able to accommodate overhead lines on wood pole supports as they are of a similar scale to mature trees. Therefore</p>		

Factors used to judge susceptibility	Definition		
	Lower susceptibility		Higher susceptibility
	medium scale landscapes are considered less susceptible than large or small scale landscapes.		
	LANDMAP data source: VS8: Scale		
	<p>The 132 kV Overhead Line may be accommodated well within the scale of the landscape.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Medium scale landscapes 		<p>The 132 kV Overhead Line may appear out of scale within the landscape.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Large or small scale landscapes
Skylines (Holford Rule 4)	Landscapes with strong visual features and focal points such as skylines, elevated vantage points, landmarks or prominent settings for settlement, are likely to be more visible from surrounding areas and therefore have increased susceptibility. Landscapes which do not form a distinctive skyline or backdrop are typically less susceptible to overhead lines than those in which open, uninterrupted skylines are a distinctive feature.		
	<p>Skylines are not considered prominent and therefore are less susceptible. There would be no conflicts with strong visual features and focal points/ landmarks and/ or prominent settings.</p>		<p>There are strong visual features and focal points/ landmarks and/ or prominent settings which may be highly susceptible to overhead line development. The 132 kV Overhead Line may overwhelm these features.</p>
Human influence	The amount of human influence on the landscape (including nature of settlement and land use) may influence its susceptibility to overhead lines. If there are no conflicts with other structures, landscapes exhibiting a high degree of human influence, such as industrial areas, road or rail infrastructure or those already affected by modern built structures, are less susceptible than rural		

Factors used to judge susceptibility	Definition		
	Lower susceptibility		Higher susceptibility
	landscapes with more limited human influence. Commercial forestry introduces human influence into upland landscapes and can decrease their susceptibility.		
	LANDMAP data source: VS6: Settlement Pattern, VS27: Condition		
	<p>The landscape includes overt man-made structures or land use and the 132 kV Overhead Line would be relatively unobtrusive.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Contemporary structures • Major infrastructure/ modern settlements • Commercial forestry 		<p>The landscape does not include overt man-made structures or land use and the 132 kV Overhead Line may form a substantial intrusion.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Sparsely settled/ unpopulated areas • Presence of historic buildings/ structures or settlement
Perceptual aspects and tranquillity (Holford Rules 1 and 2)	<p>Areas which are relatively remote and have a wild and/ or tranquil character (due to lack of disturbance, remoteness and factors such as perceived naturalness or openness), tend to be of increased susceptibility to overhead line development. The introduction of a line can diminish the perceptions of wildness and tranquillity and can be a detracting influence on the landscape.</p> <p>Landscapes that provide opportunities to experience a sense of relative wilderness, remoteness and/ or relative tranquillity, including a lack of overt man-made structures, freedom from visual and audible factors such as openness, and perceived naturalness may be more susceptible to overhead lines than landscapes that lack these qualities.</p>		
	LANDMAP data source: VS24: Perceptual and Sensory		

Factors used to judge susceptibility	Definition		
	Lower susceptibility		Higher susceptibility
	Qualities		
	<p>The 132 kV Overhead Line would not particularly alter the perception of the landscape or sense of place nor erode tranquillity.</p> <p>Indicators:</p> <ul style="list-style-type: none"> The landscape includes overt man-made structures and is not perceived to be particularly remote and/ or tranquil. 		<p>The 132 kV Overhead Line introduces man-made structures into the landscape which is otherwise remote, wild or tranquil, substantially eroding these perceptions.</p> <p>Indicators:</p> <ul style="list-style-type: none"> Landscape's which are remote, wild or tranquil.

Landscape Value

- 7.4.47 A landscape may be valued for many reasons, including its landscape quality, scenic beauty, tranquillity or remoteness, for its recreation opportunities, nature conservation or its historic and cultural associations. Development will not necessarily be incompatible with valued qualities of a landscape; this will depend on the nature of the proposal and the characteristics of the landscape. Nevertheless, whilst value does not necessarily equate with suitability or lack of suitability for a proposed development, it does help inform the wider judgments from which this evaluation can be derived.
- 7.4.48 The relative value of the landscape in a local, regional, national or international context is a key contributing factor in determining the sensitivity of landscape receptors. Landscape and scenic value is recognised at national and local levels through development plan policies and designations such as National Parks, Areas of Outstanding Natural Beauty (AONBs) or local landscape designations including Special Landscape Areas (SLA) and Conservation Areas.

- 7.4.49 The quality of a valued landscape is often explained in a citation for a designation, but where this isn't available, value can be assessed through the application of a criteria based comparative landscape approach. This is in line with the European Landscape Convention which promotes an 'all-landscapes approach', founded on the recognition of value in all landscapes.
- 7.4.50 In this case, the assessment began by overlaying the LANDMAP overall evaluations for each of the five evaluated aspects in order to identify concentrations of Outstanding and High evaluation scores which are indicative of highly valued landscapes. The LANDMAP Overall Evaluations are recorded in the following datasets:-
- Geological Landscape – GL33: Overall Evaluation
 - Landscape Habitats – LH45: Overall Evaluation
 - Visual and Sensory – VS50: Overall Evaluation
 - Historic Landscapes – HL40: Overall Evaluation
 - Cultural Landscapes – CL40: Overall Evaluation
- 7.4.51 In judging comparative landscape value, consideration was given to all of the LANDMAP overall evaluations (low – outstanding) for each of the five evaluated aspects. Areas which have been evaluated by LANDMAP as Outstanding or High in terms of their overall evaluation are likely to be more sensitive to the Proposed Development, especially where a number of these areas overlap.
- 7.4.52 This information was supplemented by a review of other LANDMAP datasets which were used to inform the judgements on value as set out in Table 7.4. As with the susceptibility factors, these have been identified as indicators of relative landscape value. Table 7.4 also includes a note as to which of the criteria are relevant to consideration of the Holford Rules.
- 7.4.53 The landscape was systematically assessed against each of the value factors and judgements were made on a sliding scale indicating a lower or higher value.

Table 7.4: Assessing the Relative Value of the Landscape

Factors used to judge value	Definition		
	Lower value		Higher value
LANDMAP overall evaluations	GL33: Geological Landscape Overall Evaluation LH45: Landscape Habitats Overall Evaluation VS50: Visual and Sensory Overall Evaluation HL40: Historic Landscapes Overall Evaluation CL40: Cultural Landscapes Overall Evaluation		
	Indicators: <ul style="list-style-type: none"> • Low to moderate LANDMAP evaluation 		Indicators: <ul style="list-style-type: none"> • High to outstanding LANDMAP evaluation
Landscape quality (condition)	Intactness of the landscape is demonstrated by, amongst other things: presence of characteristic natural and man-made elements, which are generally in good condition; and absence of significant incongruous or detractive elements.		
	LANDMAP data source: VS27: Condition, VS47: Integrity		
	The landscape has relatively low landscape quality Indicators: <ul style="list-style-type: none"> • Poor condition 		The landscape has relatively high landscape quality Indicators: <ul style="list-style-type: none"> • Good condition
Scenic quality	General appeal of the landscape to the senses through, for example, combinations of some of the following: distinctive, dramatic or striking landform or patterns of land cover; strong aesthetic qualities which appeal to the senses, such as scale, form, colour and texture; or visual diversity which contributes to the appreciation of the landscape.		
	LANDMAP data source: VS46: Scenic Quality		
	The area of landscape under consideration has relatively low scenic quality Indicators: <ul style="list-style-type: none"> • Poor condition 		The area of landscape under consideration has relatively high scenic quality Indicators:

Factors used to judge value	Definition		
	Lower value		Higher value
			<ul style="list-style-type: none"> • Good condition
Rarity	<p>The presence of rare elements or features in the landscape or the presence of a rare landscape character type is indicative of a highly valued landscape.</p> <p>LANDMAP data source: GL31: Rarity/uniqueness, CL33: Rarity, HL38: Rarity, VS25: Local distinctiveness, VS49: Rarity</p>		
	<p>Indicators:</p> <ul style="list-style-type: none"> • Low to moderate LANDMAP evaluation 		<p>Indicators:</p> <ul style="list-style-type: none"> • High to outstanding LANDMAP evaluation
Conservation interests	<p>The presence of nationally designated historic landscape assets: Registered Parks and Gardens; and Registered Historic Landscapes. The presence of internationally or nationally designated heritage assets: World Heritage Sites; Scheduled (Ancient) Monuments. The presence of internationally or nationally designated natural heritage assets: Ramsar sites; SACs; SPAs; SSSIs; and National Nature Reserves and ancient woodland.</p>		
	<p>The area of landscape under consideration has few or no designated sites</p>		<p>The area of landscape under consideration has a high density of designated sites</p>
Recreation value	<p>The extent to which experience of the landscape makes an important contribution to recreational use and enjoyment of an area. Indicated by the presence of Country Parks, promoted viewpoints, visitor facilities such as car parks, and density of the local public rights of way network.</p>		
	<p>The area of landscape under consideration has low recreational value.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Low density of recreational features including 		<p>The area of landscape under consideration has relatively high recreational value.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • High density of recreational

Factors used to judge value	Definition		
	Lower value		Higher value
	rights of way, open access land, visitor attractions where an appreciation of the landscape is integral to the visitor experience		features including rights of way, open access land, visitor attractions where an appreciation of the landscape is integral to the visitor experience
Perceptual aspects & tranquillity	The extent to which the landscape provides opportunities to experience a sense of relative wildness, remoteness and/ or relative tranquillity. This may be influenced by presence or lack of overt man-made structures, visual and audible intrusions, or perceived naturalness.		
	LANDMAP data source: VS24: Perceptual and Sensory Qualities		
	The landscape has a low relative wildness, remoteness and/ or tranquillity, with overt man-made structures and/ or visual and audible intrusion. Indicators: <ul style="list-style-type: none"> Noisy, threatening, unattractive 		The landscape has a high relative wildness, remoteness and/ or relative tranquillity, including a lack of overt man-made structures, freedom from visual and audible intrusion and a perceived naturalness. Indicators: <ul style="list-style-type: none"> Remote, tranquil, wild, attractive

7.4.54 The susceptibility and value of each receptor were then combined into an assessment of sensitivity. Informed professional assessment drawing on guidance in GLVIA3 was applied and sensitivity was graded into one of five broad categories – high, medium-high, medium, low-medium and low. Informed professional assessment of the profile of factors for both susceptibility and value determined the judgement of sensitivity.

- 7.4.55 Para 5.46 GLVIA3 states that the relationship between the value attached to a landscape and its susceptibility to development can be complex, which is important when considering change in, or close to, designated landscapes and provides the following examples:

“An internationally, nationally or locally valued landscape does not automatically, or by definition, have high susceptibility to all types of change.

It is possible for an internationally, nationally or locally valued landscape to have relatively low sensitivity to change resulting from the particular type of development in question, by virtue of both the characteristics of the landscape and the nature of the proposal.

The particular type of landscape change or development proposed may not compromise the specific basis for the value attached to the landscape.”

Assessing the Magnitude of Landscape Effects

- 7.4.56 Once the sensitivity of the landscape receptor was established, the nature or magnitude of change likely to occur was predicted. This is the degree to which the Proposed Development is likely to conflict with or override the key characteristics of the landscape and whether this in turn would affect its overall character, the reasons for its designation and how it is experienced. This was assessed by combining a judgement about the likely size/scale of the change with the geographical extent of the area likely to be affected.

Size/ Scale of Effect

- 7.4.57 Informed professional assessment drawing on guidance in GLVIA3 was applied and the size/ scale of effect was graded into one of four broad categories - large, medium, small and negligible.
- 7.4.58 The likely size/ scale of an effect was judged in accordance with guidance in Table 7.5.

Table 7.5: Judging the Size/ Scale of Effect on the Landscape

Smaller Scale	↔	Larger Scale
The development would be accommodated satisfactorily within the landscape context (i.e. it fits into the landscape) and would not alter the perception of the landscape. It would not affect the key characteristics of the landscape.	↔	The development would have a strong influence on perception of the landscape and would conflict with or override its key characteristics.

Geographical Extent

- 7.4.59 This is distinct from consideration of size/ scale and relates to the extent of the area over which the effects are likely to be felt. Whilst this is partly indicated by the ZTV it also requires consideration in the field.
- 7.4.60 Informed professional assessment drawing on guidance in GLVIA3 was applied and the geographical extent of the effect was graded into one of four broad categories - large, medium, small and negligible. The likely geographical extent of an effect was judged in accordance with guidance in Table 7.6.

Table 7.6: Judging the Geographical Extent of Effect on the Landscape

Smaller Geographical Extent	↔	Larger Geographical Extent
The development would be seen only locally, with limited effect on wider landscape character.	↔	The development would have a widespread influence on perception of the landscape.

Magnitude

- 7.4.61 The size/ scale of effect and geographical extent were then combined into an assessment of magnitude. Informed professional assessment drawing on guidance in GLVIA3 was applied and magnitude was graded into one of four broad categories - large, medium, small, and negligible as guided by Table 7.7.

Table 7.7: Judging the Magnitude of Landscape Effect

Smaller magnitude	↔	Larger magnitude
The development would cause a very minor loss or alteration to one or more key elements/ features/ characteristics of the baseline landscape and/ or introduction of elements that are not uncharacteristic of the landscape in which they are located, and the development would be seen only locally, with limited effect on wider landscape character.	↔	The development would cause the total loss or alteration to key elements/ features/ characteristics of the baseline landscape and/ or introduction of elements considered to be totally uncharacteristic of the landscape in which they are located and have a widespread influence on perception of the landscape.

Judging the Overall Significance of Landscape Effects

- 7.4.62 The judgements on sensitivity and magnitude were then combined to give an overall assessment of the likely effects on the landscape. Informed professional assessment, drawing on guidance in GLVIA3, was used to categorise the effects on the landscape into one of four categories - major, moderate, minor and negligible (note: effects judged to be moderate or major are considered to be significant). In addition, a final statement summarising the significant landscape effects has been provided. This includes a statement on the duration and reversibility of likely effects.
- 7.4.63 Table 7.8 provides guidance on judging the relative significance of effect on the landscape.

Table 7.8: Judging Significance of the Effect on the Landscape

Less likely to be significant	↔	More likely to be significant
The development would be accommodated within the landscape and would not conflict with its key characteristics. It would not substantially undermine the valued characteristics of the landscape. The effects would be small in scale and limited in its geographical extent.	↔	The development would conflict with the character of the landscape, forming an intrusive feature which substantially erodes the valued characteristics. The effects would be large in scale and would be perceived across a wide geographical area.

- 7.4.64 GLVIA3 emphasises that there are no hard and fast rules about what makes an effect significant and therefore there cannot be a standard or matrix approach since circumstances vary depending on the locations, landscape context and type of development. At opposite ends of the spectrum GLVIA3 notes that:

“Major loss of 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;

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; and

Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached.”

7.4.65 A landscape will not necessarily be significantly adversely affected if the proposed change can be accommodated (e.g. if it can be comfortably set into the landform and pattern of the landscape), and/ or mitigation appropriate to its character can be effectively applied to blend the Proposed Development into the landscape. Conversely, effects may be more significant in a landscape where overhead lines cannot be readily accommodated or where mitigation and integration are more difficult. In general, more significance is likely to be placed on large scale, long term or permanent changes, particularly in combination with a highly sensitive landscape, than small changes, short-term temporary changes or changes involving features already present within the view.

Assessing Visual Effects

7.4.66 Visual receptors are people who potentially would have a view of the Proposed Development or who would have their general visual amenity affected. The sensitivity of a visual receptor depends on the susceptibility of the visual receptor to change and the value of the view or general visual amenity¹⁷.

7.4.67 The assessment of the likely significant visual effects of the Proposed Development has been prepared in accordance with the guidelines at Paras 6.30 to 6.45 of GLVIA3. The assessment adopts a two stage process following selection of a series of representative viewpoints chosen to represent the experience of sensitive visual receptors, and at each location the value of the view and the scale and significance of effect were judged.

- Susceptibility of the receptor was in each case assessed and a judgement made about the relative numbers of the different types of people who may be affected in each case; and
- The magnitude of effect on each receptor group at each viewpoint was assessed by combining a judgement about the size/ scale and geographical extent of the effect.

¹⁷ GLVIA3 describes visual amenity as 'The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.'

Mapping Visibility

- 7.4.68 Land that may potentially be visually connected with the Proposed Development was identified and mapped at the outset in accordance with Para 6.6 of GLVIA3. A Zone of Theoretical Visibility (ZTV) map was produced based on the Final Route Alignment to identify areas from where the Proposed Development may theoretically be visible. Two ZTV plans were produced, the first using 5km buffers from the proposed wood poles and the second using 2km buffers; these are shown in Figures 7.1 and 7.2 respectively. These were generated by computer from a Digital Terrain Model (DTM) representing the bare ground topography overlaid on a map base. Bare ground modelling presents the realistic worst case scenario in terms of potential visibility.
- 7.4.69 The selection of a 5km cut-off followed field assessment of existing 132 kV Overhead Lines to consider their visibility at increased distances. Extensive visibility field surveys were undertaken as part of the route development and continued throughout the EIA process. Field survey work for the visual assessment was carried out at the same time as the landscape assessment and was used as the basis for defining the area from where the 132 kV Overhead Line would potentially be visible.
- 7.4.70 The ZTVs at 5km and 2km were based on pole positions along the Final Route Alignment and identified the likely numbers of poles visible from areas within these distances (see Figures 7.1 and 7.2). The 5km ZTV illustrates areas within 5km where up to 126 poles may theoretically be visible, whereas within 2km the maximum number of poles visible from any location would be 49. Comparing the 5km and 2km ZTV plans, there are fewer areas within the 2km ZTV buffer where more than 16 poles would potentially be seen together.
- 7.4.71 The ZTV does not include information about above ground features, which may help screen views (trees, buildings, woodland blocks) and therefore represents a realistic worst-case scenario. Predicted visibility within the ZTV is much more extensive than would actually be the case. At approximately 15m high, the proposed wood pole structures and conductors (wires) would lie below the height of many of the mature trees, which would therefore serve as an effective screen. The ZTV also gives no indication of the effects of distance, which can substantially reduce the perceptibility of an overhead line especially when combined with poor visibility or the backclothing effects of landform or vegetation.

Field Survey

- 7.4.72 Site surveys of the Proposed Development involved visits to the area by car and on foot, and views were considered from publicly accessible locations. Where views from private properties were considered, the assessment was based on the nearest publicly accessible viewpoint.

Selecting Viewpoints

- 7.4.73 Viewpoints play two roles in LVIA. Firstly they are selected to represent views which are experienced by the specific visual receptors. Secondly they contribute to an understanding of the more general effects on visual amenity experienced by people moving around the area.
- 7.4.74 The selection of viewpoints was informed by the ZTV analysis, and by field and desk based assessment.
- 7.4.75 The aim was to identify a range of representative viewpoints, which would cover the different receptor groups and available views and which would help to demonstrate the likely significant effects of the Proposed Development.
- 7.4.76 In this respect viewpoints were selected to provide:
- a balance of viewpoints either side and at varying distances from the Final Route Alignment;
 - a proportion looking along the Final Route Alignment (where a number of wood poles would be seen 'stacking' behind each other) as well as across to the line (where only one wood pole may be visible);
 - views from communities - usually on the edge of settlements nearest the Proposed Development. Views from within the settlements are usually further from the Proposed Development and generally obscured by built form.
 - views from key recreational resources (nationally designated and regionally promoted sites or routes) and landscapes of particularly noteworthy visual and/ or recreational amenity including landscapes with statutory landscape designations;
 - important historic or cultural sites where people are likely to appreciate the wider landscape setting; and
 - locations where cumulative views may be experienced.
- 7.4.77 It was not the intention to identify every possible location which would have a view of the 132 kV Overhead Line. Where possible viewpoints were selected in places where they represent a number of different receptor groups (e.g. the edge of a settlement where a number of local footpaths converge or a car park on a National Trail).
- 7.4.78 In accordance with guidance at Paras 6.18 and 6.19 of GLVIA3, parameters for selecting viewpoints for inclusion in the assessment and for illustration of the visual effects were identified through discussions with the Conwy Borough Council and NRW. Denbighshire County Council were provided with the viewpoints but were unable to provide a response.

- 7.4.79 Viewpoint locations are illustrated in Figure 7.3 and described in Appendix 7.3. Because the viewpoints were selected through consultation and on site review from an initial draft schedule, it is apparent that as viewpoints were added or omitted, the remaining viewpoints are not numbered consecutively.
- 7.4.80 For each viewpoint, photographs were taken in the field to record the views present. In some cases, the position of the viewpoint was revised slightly to achieve a clearer view or reflect minor changes in development of the Final Route Alignment.
- 7.4.81 At each viewpoint, a record was made of the viewpoint location, general direction and angle of view, optimum viewing distance and reasons for its selection. The value of the view and scale of effect was recorded on each viewpoint survey sheet. The sheet was also used to record broad judgements on the number of people likely to be affected and the geographical extent over which the effects are likely to occur. The reasoning behind these judgements was documented.
- 7.4.82 Viewpoints were taken in the winter to illustrate the worst case scenario in terms of potential visibility (i.e. no leaves on the trees).

Assessing the Sensitivity of Visual Receptors

- 7.4.83 Visual sensitivity was determined by combining an assessment of the susceptibility of the visual receptor to change arising from the Proposed Development with a professional judgement about the value which society attaches to that view.

Visual Susceptibility

- 7.4.84 The susceptibility of different visual receptors to potential changes in views and visual amenity receptor relates to the viewer's expectations of a particular view and is mainly a function of:
- the occupation or activity of people experiencing the view at particular locations; and
 - the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.
- 7.4.85 The land use planning system considers that public views are of greater value than views from private property. Visual assessment as part of an LVIA gives equal weight to the assessment of public views and private views.
- 7.4.86 Views from public viewpoints, include areas of land providing public access and roads and places where people work have been assessed. Private views from residential properties have been assessed as part of the residential visual amenity assessment which is presented at Appendix 7.1.

7.4.87 In accordance with Para 6.33 of GLVIA3 the visual receptors most susceptible to change (other than occupiers of residential properties) typically include:

- communities where views contribute to the landscape setting enjoyed by residents in the area;
- people, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way (PRoW), whose attention or interest is likely to be focused on the landscape and on particular views. This group includes:
 - users of nationally designated or regionally promoted public rights of way, cycle routes and bridleways
 - Users of the local public rights of way network including locally promoted routes
 - visitors to publicly accessible sites including gardens and designed landscapes, historic sites and other visitor attractions or outdoor recreational facilities where the landscape is an important part of the experience
 - tourists staying at caravan parks and other accommodation where the landscape may be an important part of the visitor experience.
- residents and visitors using the road network, including users of A-class roads and railways (none present in this Study Area), as well as those using the minor road network. Users of transport routes tend to fall into an intermediate category of medium susceptibility to change. Where travel involves recognised scenic routes such as rural lanes and tourist routes, awareness of views is likely to be higher. Where travel involves main roads or motorways awareness of views is likely to be lower.

7.4.88 In accordance with Para 6.34 of GLVIA3 visual receptors likely to be less sensitive to change include:

- people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and
- people at their place of work whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life (although there may on occasion be cases where views are an important contributor to the setting and to the quality of working life).

7.4.89 In accordance with Para 6.35 of GLVIA3:

“Each project needs to consider the nature of the groups of people who will be affected and the extent to which their attention is likely to be focused on views and visual amenity. Judgements about the susceptibility of visual receptors to change should be recorded on a scale (for example high, medium or low) but the basis for this must be clear, and linked back to evidence from the baseline study.”

7.4.90 For this assessment susceptibility to change has been assigned to receptors as shown in Table 7.9.

Table 7.9: Susceptibility of Visual Receptors to Change

Receptor	Susceptibility to Change
Communities (settlements and villages ¹⁸) where landscape setting is important and views contribute to the visual amenity or enjoyed by residents in the area	High
Users of PRoW and other recreation routes	High
Users of public open space or visitors to attractions where views of the surrounding landscape are important to the experience (including historic sites)	High
Motorists and passengers on rural lanes and tourist routes	Medium-High
Users of golf courses	Medium
Workers where landscape setting is important to quality of working life	Medium
Rail passengers (none in the study area)	Medium
Motorists and passengers on main roads	Low-Medium
People at work where landscape setting not important to quality of working life	Low
Users of Sports Pitches	Low

¹⁸ The assessment has considered views from villages and settlements - views from individual properties have been considered in the residential visual amenity assessment presented in Appendix 7.1.

Value of the View

- 7.4.91 In accordance with GLVIA3, judgements about the value attached to the views experienced have been assessed by reference to:
- national planning designations specific to the landscape or view, such as a National Park or AONB;
 - local planning designations specific to the landscape or view, such as a Special Landscape Area;
 - views which are recorded as important in relation to the special qualities of a designated landscape;
 - views which are recorded as important in relation to heritage assets (such as designed views recorded in citations of Registered Parks and Gardens and Registered Historic Landscapes);
 - views which are referred to in guide books, tourist maps or have provisions for visitor enjoyment such as e.g. seating, parking and picnic facilities; and
 - judgements about the relative quality of the view including the presence of detracting features.
- 7.4.92 Views are valued more highly (considered to be more important) if they are to or from valued landscapes, heritage assets, edge of settlement, designated or recognised recreational sites, or from locations which represent the views of many receptors. Views that are not to or from a valued location, and that will not be experienced by many receptors, are generally considered less important.
- 7.4.93 The value of the view was judged as being of high, moderate or low value based on the scale in Table 7.10.

Table 7.10: Judging Value of the View

Lower Value	↔	Higher Value
Views which are not formally recognised or promoted, or are not associated with designated historic landscape assets or visitor facilities, but which may nevertheless be valued at a local community level.	↔	Views which are of recognised importance, including:- <ul style="list-style-type: none"> • Views to or from designated landscapes, recognised or promoted views or scenic routes, advertised with road signs or highlighted on OS maps and/ or in tourist information • Views recognised or protected in relation to nationally designated historic landscape assets.

Making Judgements

- 7.4.94 At each viewpoint the susceptibility to change and the value of the view was combined into an assessment of receptor visual sensitivity. Informed professional assessment, drawing on guidance in GLVIA3, was applied to determine and categorise the sensitivity of people at each viewpoint into one of three broad categories - high, medium and low.

Assessing the Magnitude of Visual Effects

- 7.4.95 In accordance with Paras 6.38 to 6.41 of GLVIA3, the magnitude of visual effects on a receptor is determined by combining a judgement about the likely size/ scale of the change with the geographical extent of the area likely to be affected. More weight is usually given to effects that are greater in scale and long-term in duration. In assessing the duration of the effect, consideration was given to the effectiveness of the specific mitigation measures, particularly where planting is proposed as part of the works and which over time may lessen the scale of visual effect.

Size/ Scale of Effects

- 7.4.96 Judgements about the size/ scale of effects experienced by visual receptors took account of:
- the design of the 132 kV Overhead Line (including height and whether the wood pole structure would be intermediate, angle or terminal poles);
 - the number of wood poles in the view, including the proportion of view which they would occupy, their proximity to the viewer, and whether views would be full, partial or glimpsed;
 - the proportion of each wood pole which would be visible and the screening/ backclothing effects of existing buildings, vegetation and landform;
 - whether wood pole structures would be seen individually or would appear to be 'stacked' against one another;
 - whether the 132 kV Overhead Line would be looked down on, looked up to or whether it would be viewed on a level. Views up to a development are generally considered to be of greater magnitude due to the enhanced verticality of the structures than views down to a development where the apparent height appears reduced;
 - the presence of other similar vertical developments;
 - the length of time the view would be experienced;
 - the contrast in colour between the wood pole and its background with varied background colours or patterns being most effective in helping the wood pole structure blend in with its surroundings; and
 - the overall degree of 'landscape fit' or how well the Proposed Development would be accommodated in the landscape.

7.4.97 Taking account of these factors, the scale of effect was judged to be high, moderate or low based as guided by Table 7.11.

Table 7.11: Judging the Size/ Scale of the Visual Effect

Smaller Scale	↔	Larger Scale
The development would not be a prominent feature within the view or is reasonably well accommodated into its surroundings. The overhead line would be seen at a distance or be glimpsed. The view of the overhead line would be transient and brief.	↔	The development would be close to the viewer, directly in the line of vision, or affecting a large part of the view. The overhead line would be prominent within or contrast with its surroundings and detract from wider visual amenity. The view of the overhead line would be prolonged.

Geographic Extent

7.4.98 The geographical extent of visual effects varies depending on the viewpoint and reflects aspects such as:

- the angle of view with changes to direct views generally considered to be of greater importance than changes in oblique or indirect views;
- the proportion of view affected, with a change to a large proportion of the view generally having a greater effect than a change to a small proportion; and
- the distance between the receptor and the Proposed Development is important with the magnitude generally decreasing with distance.

7.4.99 A broad non-quantitative judgement was made on the likely geographical extent over which the effect would occur and the number of people likely to be affected at a viewpoint and, drawing on map information and field observation. The judgements on the geographical extent of the effect was guided by the scale in Table 7.12.

Table 7.12: Judging the Geographical Extent of the Visual Effect

Smaller Geographical Extent	↔	Larger Geographical Extent
The development would be seen by relatively few viewers and/ or across a relatively small part of the view, it would be distant in the view and/ or possibly away from the main focus of the view (in relation to the main activity of the viewer).	↔	The development would be seen by a large number of viewers and/ or across a wide part of the view, it would be in close proximity and affect the main focus of the view (in relation to the main activity of the viewer).

Magnitude

- 7.4.100 The size/ scale of effect and geographical extent was then combined into an assessment of magnitude of visual effect at each viewpoint. Informed professional assessment, drawing on guidance in GLVIA3, was applied to determine and categorise the effect into one of four broad categories of magnitude - large, medium, small, and negligible as guided by Table 7.13.

Table 7.13: Judging the Magnitude of Visual Effect

Smaller Magnitude	↔	Larger Magnitude
The development would be barely visible (blurred, indistinct) and would appear as a small feature belonging to a distant landscape or view and/ or the effects would be perceived over a very small geographical area and/ or by relatively few receptors.	↔	The development would dominate and become the main focus in the view and/ or the effects would be perceived over a wide geographical area by a large number of receptors.

Judging the Significance of Visual Effects at a Viewpoint

- 7.4.101 In accordance with Para 6.42 of GLVIA3:

“to draw final conclusions about significance the separate judgements about the sensitivity of the visual receptors and the magnitude of the visual effects need to be combined, to allow a final judgement about whether each different effect is significant or not”. “Significance of visual effects is not absolute and can only be defined in relation to each development and its specific location.”

- 7.4.102 Large-scale changes which introduce new, discordant or intrusive elements into the view of a sensitive receptor are likely to be more significant than small changes or changes involving features already present in the view or changes in the views of less sensitive receptors. Changes in views from recognised and important viewpoints, such as Scheduled Monuments or outdoor tourist attractions, or from important amenity routes, such as long distance footpaths or national cycle routes, are likely to be more significant.
- 7.4.103 The judgements on sensitivity and magnitude were combined to give an overall assessment of the likely effects on the visual receptors at each viewpoint. Informed professional assessment, drawing on guidance in GLVIA3, was used to categorise effects on the landscape into one of four broad categories - major, moderate, minor and negligible (note: effects judged to be moderate or major are considered to be significant). In addition, a final statement summarising the significant landscape effects has been provided. This includes a statement on the duration and reversibility of likely effects.
- 7.4.104 Table 7.14 provides guidance on judging the significance of the visual effects.

Table 7.14: Scale for Judging the Significance of Effect at a Viewpoint

Less Likely to be Significant	↔	More Likely to be Significant
The development would be accommodated within the view and/ or would be a small feature within a view that does not have recognised value and/ or a view that is experienced by less sensitive receptors.	↔	The development would be prominent or contrasting within the view, and/ or would be a large feature within a highly valued view and/ or a view that is experienced by more sensitive receptors.

Residential Visual Amenity Effects

- 7.4.105 Residential visual amenity assessment is the assessment of the effects on views from private properties which lie close to the Proposed Development. Residential visual amenity means the visual amenity experienced by occupiers of residential properties, including their gardens. Residents are typically highly susceptible to changes in their views. The residential visual amenity assessment is included in Appendix 7.1 and results summarised in Section 7.7.

Mitigation

SP Manweb's Statutory Duties

- 7.4.106 SP Manweb's statutory mitigation duty ensures that it reinstates vegetation, trees, hedgerows, soils and other environmental resources which are unavoidably removed or displaced during construction operations, in order to further reduce effects of the Proposed Development. Any hedgerows which have to be removed for construction would be replaced, and trees would be replaced on a two-for-one basis (excluding plantation conifers). This reinstatement of vegetation would be within the Order Limits where possible (in which case its implementation would be guaranteed). This has been included in the assessment as mitigation. Any planting outside the Order Limits would be by agreement with landowners and has not been included within the assessment as their delivery cannot be guaranteed.
- 7.4.107 Mitigation measures typically fall into one of two categories, embedded mitigation and specific mitigation. Embedded mitigation includes:
- primary mitigation measures which have been developed through the iterative design process and have become integrated mainstream components of the project's design (for example, sensitive routeing and avoidance of features); and
 - standard construction practices identified in the Construction Environmental Management Plan (CEMP) (DCO Document Ref 6.18) for avoiding and minimising environmental effects. This includes tree protection and replacement of trees and hedgerows removed to facilitate construction. Hedgerows would either be lifted

and replanted in situ within 48 hours, or would be replanted as part of the reinstatement after construction works were completed. Replanting of trees would be partially undertaken as secondary mitigation (see below) and partially by agreement with landowners (see Section 7.6).

7.4.108 Mitigation also includes:

- specific mitigation measures which are designed to address any significant adverse effects remaining after primary measures have been incorporated into the scheme. This includes replanting of trees in locations where likely significant landscape and visual effects have been identified through the assessment process.

7.4.109 Embedded mitigation measures were considered during the assessment process as they form part of the Proposed Development. They are described in Section 7.6. Secondary (or specific) mitigation measures identified during the assessment process are described in Section 7.8.

7.4.110 SP Manweb has, in addition, committed to discretionary planting, which is intended to enhance the wider environment along the route and which would be delivered through negotiation with landowners. This is in recognition of SP Manweb's duty of care to the environment and their view that projects should go beyond those mitigation measures designed to lessen identified effects and should also seek to bring about positive improvements to the environment. Measures may include replanting of gaps in hedgerows, planting of hedgerow trees and field corners or implementation of specific hedgerow management regimes to act as a screen or enhance the general amenity of the area. They would be likely to include some of the trees which were being replaced on a two-for-one basis, where such tree planting could not be identified as part of the specific mitigation proposals. As these proposals require landowner agreement, rather than being secured through the DCO process, they have not been included in the assessment as their delivery cannot be guaranteed.

Residual Effects

7.4.111 Residual effects are those effects which will potentially remain even with the specific mitigation measures in place.

7.5 Baseline Context

- 7.5.1 This section sets out baseline information with a view to identifying the key landscape and visual issues relating to the Proposed Development.

Route Description

Background

- 7.5.2 A full description of the Final Route Alignment and how the Proposed Development will be constructed can be found in Chapter 2 'Project Description'.
- 7.5.3 The 132 kV Overhead Line exits the proposed Collector Substation, and runs north through the edge of the upland managed forestry, crossing open grazing land on the ridge of Tir Mostyn (400m Above Ordnance Datum (AOD), north east of the existing Tir Mostyn and Foel Goch Wind Farm. It then drops slightly down the western flank of the ridge to 380m AOD and turns north east as it enters the Denbigh and Derwen Hills, running along the upper Lliwen valley slopes, parallel and above the B4501, a landscape of small pastoral fields enclosed by hedgerows. After crossing the B5435 (290m AOD) the 132 kV Overhead Line turns northwards and drops down to cross a watercourse (235m AOD) before rising up to a local ridge near Bryn Foel. It then turns north near Bryn Foel and continues north over the minor road near Tan yr Allt (280m AOD).
- 7.5.4 It crosses the ridge (east of Foel Gasyth at approximately 280m AOD) between blocks of coniferous and deciduous woodland, and then continues down a localised valley as it runs past College Farm to the east of Peniel village, before rising up again to cross the B4501 (200m AOD) near Plas Captain. To the north of the B4501 past Segrwyd, the Final Route Alignment turns north west, and heads down towards the lowland areas of the Afon Ystrad and Pandy Wood. It passes through an open, medium scale, undulating pastoral landscape bounded by hedgerows with scattered mature trees, before descending to cross the wooded river valley of the Afon Ystrad at Pandy (120m AOD). Continuing north west and crossing a minor road, the 132 kV Overhead Line turns north at Bodeiliog Uchaf (170m AOD), and continues through a relatively low-lying, open pastoral landscape, bounded by hedgerows with scattered mature trees and small woodland copses. It then crosses the A543 and enters the landscape to the east of Eriviat Hall in proximity to the Henllan limestone ridge and the Llanefydd Lowlands. From here it turns slightly to the north east as it skirts the base of Beacon Hill at 150m AOD, through a shallow valley past the blocks of woodland and scattered mature trees at Coed-Wern-ddu.

- 7.5.5 The 132 kV Overhead Line then turns and runs broadly north west from Coed Wern-ddu towards Hafod Wood (180m AOD) heading into rising land, before turning to the north to pass to the west of Berain. It then runs across undulating land of the Llanefydd Lowlands as it rises from the valley to the west of Henllan towards Moel Fodiar, crossing farmland with hedgerows with mature trees bisected by two well-wooded river valleys (near Eriviat Bach Isaf and Hafod) which are both tributaries of the Afon Elwy. The 132 kV Overhead Line then runs north across more open larger scale pastures as it heads towards Berain, before skirting to the west of Berain (160m AOD).
- 7.5.6 Immediately north of Berain, the 132 kV Overhead Line continues north west between Tyddyn Bartley and Croen Llwm Mawr (130m AOD) before turning north towards Bod-ysgawen Isaf where it crosses the western ridge of the Elwy Valley (140m AOD). The 132 kV Overhead Line then drops down the valley sides of the Afon Elwy (60m AOD) which contains scattered blocks of deciduous woodland. It then crosses the narrow and well-wooded valley bottom near Coed y Fadir before turning north east and continuing to rise up the valley side to Plas Hafod (125m AOD) with a local concentration of attractive mature trees within the fields and hedgerows. The 132 kV Overhead Line continues past Coed Plas-newydd where there are a number of scattered properties before crossing the Cefn Meiriadog ridge (140m AOD). At a point just south of Glascoed Road and Groesffordd Marli (110m AOD on the Cefn Meiriadog) the 132 kV Overhead Line would terminate and continue as an underground cable.
- 7.5.7 Further information on the proposed route for the underground cable is included in Appendix 1.2 to this ES (DCO Document Ref 6.17).

Landscape Baseline

- 7.5.8 The information relating to the landscape baseline of the Study Area is provided under the following sub-headings:
- designations;
 - Statutory landscape designations
 - Other designated and undesignated features (which have a landscape aspect).
 - landscape Context;
 - Landform and drainage
 - Landcover and landscape pattern
 - Settlement and infrastructure
 - Woodlands and trees
 - Landscape scale and enclosure
 - Historic landscapes
 - pressures for change.

Designations

- 7.5.9 Information regarding the baseline landscape conditions including designations and landscape elements and features is discussed below and shown on Figure 7.4. This background information has been used to inform judgements about landscape value as well as to provide context.

Statutory Landscape Designations

- 7.5.10 There are no nationally designated landscapes within the Study Area. The nearest designated landscapes to the Proposed Development are:
- Snowdonia National Park which at its closest point lies (on the edge of the Park) approximately 17km to the west; and
 - The Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) which at its closest point (on the edge of the AONB) lies approximately 7km to the east.

Other Designated and Undesignated Features (which have a Landscape Aspect)

- 7.5.11 Other designated and undesignated features which add to the character and value of the landscape or are evidence that the landscape is valued for recreational activity where experience of the landscape is important include the following (most typically within the Study Area):
- High and Outstanding LANDMAP Aspect Areas – the LANDMAP classification across the Study Area includes limited aspect areas which are classified as Outstanding. These include Outstanding Cultural Landscape to the north of the Afon Elwy, Outstanding Landscape Habitats locally to Plas Buckley, Bod-ysgawen isaf and Afon Elwy and Outstanding Geological landscapes in the vicinity of the Afon Elwy. Elsewhere Cultural Landscape is classified as High throughout, both Geological Landscape and Historic Landscape are high with the exception of the far north of the Study Area, Visual and Sensory Aspect Areas are high in the south and north. However Landscape Habitats seldom show as high or outstanding;
 - Y Berwyn Area of Outstanding Beauty (AOB), designated by Denbighshire County Council (approximately 17km to the south of the Proposed Development);
 - Special Landscape Areas (SLAs) as designated by Conwy County Borough Council;
 - SLA 2 – Rhyd-y-Foel to Abergele (approximately 2.2km to the north west of the Proposed Development)
 - SLA 3 – Elwy and Aled Valleys (approximately 1.8km to the west of the Proposed Development)
 - SLA 4 – Hiraethog (approximately 4.7km to the south west of the Proposed Development).

- Conservation Areas;
 - Henllan Conservation Area, designated by Denbighshire County Council (approximately 1.4km to the east of the Proposed Development)
 - Bodelwyddan (approximately 2.2km to the north of the Proposed Development)
 - Nantglyn (approximately 2.6km to the west of the Proposed Development)
 - St Asaph (approximately 2.6km to the northeast of the Proposed Development).
- Open Access Areas identified under the Countryside and Rights of Way Act (CRoW 2000);
 - Land at Llyn Brenig (approximately 2.3km to the west of the Proposed Development)
 - Clocaenog Public Forest (the Order Limits pass through the outer edge of this area)
 - Land at Moel Ytta (approximately 550m to the east of the Proposed Development)
 - Land at Foel Gasyth (approximately 650m to the west of the Proposed Development)
 - Land at and around Moel Fodiar (approximately 1.7km to the west of the Proposed Development)
 - Land at Mynydd y Gaer (approximately 2.2km to the west of the Proposed Development).
- there are no National trails or cycle routes within the Study Area; however, the Proposed Development oversails the Clwydian Way Regional Trail and the North Wales Pilgrim's Way long distance footpath which are both regionally valued and promoted;
- Registered Welsh Registered Historic Landscapes included within Part 2 of the Register of Landscapes, Parks and Gardens of Historic Interest in Wales¹⁹;
 - The Denbigh Moors Registered Historic Landscape of special historic interest (approximately 2km to the south west of the southern end of the Proposed Development)
 - The Vale of Clwyd Registered Historic Landscape of outstanding historic interest (approximately 2km to the east of the Proposed Development)

¹⁹ Although not formally designated, these are considered by many cultural heritage specialists to be of national value. They have been considered within the cultural heritage assessment at Chapter 8, and have also been included as valued receptors within the LVIA.

- The Lower Elwy Valley Registered Historic Landscape of special historic interest (much of which lies within the Study Area, the closest point being approximately 350m from the Proposed Development).
- Registered Parks and Gardens included within Part 2 of the Register of Landscapes, Parks and Gardens of Historic Interest in Wales and England²⁰;
 - Gwaenynog Hall Gardens (approximately 1.2km to the east of the Proposed Development)
 - Foxhall Newydd (approximately 1.3km to the east of the Proposed Development)
 - Plas Heaton (approximately 2km to the east of the Proposed Development)
 - Bodelwyddan Castle (approximately 720m to the north of the Proposed Development)
 - Kinmel Park (approximately 1.5km to the north west of the Proposed Development).
- Scheduled (Ancient) Monuments where the landscape is likely to form an important part of the experience of that site (views to and from);
 - Mynydd y Gaer Hillfort (just outside of the Study Area, to the north west near Llanefydd, approximately 2.5km from the Proposed Development)
 - Denbigh Castle (approximately 3.5km east of the Proposed Development).
- Ancient or Semi-Natural Woodland, the data is taken from the Ancient Woodland Inventory Wales, 2011 as compiled by the Forestry Commission and CCW (now NRW) and is categorised into a number of types, the definitions of which follow; and
 - Ancient Semi Natural Woodland (ASNW) - Broadleaf woodlands comprising mainly native tree and shrub species which are believed to have been in existence for over 400 years.
 - Plantation on Ancient Woodland Site (PAWS) - sites that are believed to have been continuously wooded for over 400 years and currently have a canopy cover of more than 50% non-native conifer tree species.

²⁰ As previous footnote

- Restored Ancient Woodland Site (RAWS) - woodlands that are predominately broadleaves now and are believed to have been continually wooded for over 400 years. They will have gone through a phase when canopy cover will have been more than 50% non-native conifer tree species and now have a canopy cover of more than 50% broadleaf. The use of the term 'restored ancient woodland' describes woodland which appears using remote sensing techniques to have returned to a more natural condition. The inventory designation does not mean that the woodland is fully restored or that it is in good ecological condition.

7.5.12 Areas of ancient or semi-natural woodland found close to the Proposed Development are listed in Table 7.15 and illustrated in Figure 7.5.

Table 7.15: Ancient Woodland

(N.B. Measures are approximate and rounded to nearest 5m)

No on map	Location/ Nearest OS Reference (approximate grid reference in brackets)	Type (ASNW, PAWS, RAWS,)	Distance from Order Limits	Distance from LOD ²¹
1	Brynbach Scout Camp (SJ0207859047)	ASNW	610m	640m
2	Soar (SJ0079060325)	ASNW	710m	730m
3	Drws-y-buddel (SJ0233259774)	ASNW	535m	610m
4	Pen-y-caeau-mawr (SJ0306661032)	RAWS	210m	225m
5	Bryn Foel (SJ0327661526)	ASNW	85m	95m
6	Coed y Foel / Garnedd-Uchaf (near Peniel) (SJ0321062663)	RAWS	20m	30m
7	Coed Segrwyd (SJ0232963274)	ASNW	490m	500m
8	Pen-y-bryn (SJ0431463017)	ASNW	600m	910m
9	Segrwyd Ucha (SJ0393463625)	ASNW	390m	670m

²¹ Limits of Deviation

No on map	Location/ Nearest OS Reference (approximate grid reference in brackets)	Type (ASNW, PAWS, RAWS,)	Distance from Order Limits	Distance from LOD ²¹
10	Pandy wood (SJ0249464198)	PAWS / RAWS	0	0
10a	Pandy wood (SJ0218464021)	PAWS	105m	105m
10b	Pandy (SJ0231963976)	ASNW	85m	85m
10c	Pen-y-bryn (SJ0274664436)	PAWS	340m	355m
11	Nant-yr-hengoed (SJ0108363923)	ASNW/PAWS	645m	685m
12	Goppa Farm (SJ0244965056)	ASNW	510m	530m
13	Coed Mawr Jocelyn (SJ0145465632)	PAWS	190m	250m
13a	Coed Mawr Jocelyn (SJ0134965613)	ASNW	315m	375
14	Eriviat Hall (SJ0163265952)	RAWS	95m	115m
15	The Dingle (SJ0116465922)	PAWS / RAWS	425m	480m
16	Broadleys Covert (SJ0312665757)	ASNW	80m	1200m
17	Coed Wern Du (SJ0185466447)	RAWS	25m	35m
17a	Eriviat Park (SJ0162066353)	RAWS	220m	230m
17b	Eriviat Park (SJ0128866346)	RAWS	360m	370m
18	Coed y Wern (SJ0243266985)	RAWS	480m	495m
19	Coed Mawr to Pandy farm – near Eriviat Bach-isaf/ Coed Salusbury (SJ0140867414)	PAWS	0m	0m

No on map	Location/ Nearest OS Reference (approximate grid reference in brackets)	Type (ASNW, PAWS, RAWS,)	Distance from Order Limits	Distance from LOD ²¹
19a	Coed Mawr to Pandy farm – near Eriuiat bach-isaf (SJ0117767226)	ASNW	25m	30m
19b	Coed Mawr to Pandy farm – near Eriuiat Bach-isaf (SJ0067667026)	PAWS / RAWS / ASNW	530m	540m
20	Coed Mawr to Pandy farm – near Fron-haul (SJ0139667673)	RAWS	95m	100m
21	Pandy Farm (SJ0186667814)	ASNW	440m	460m
22	Pen Parc Llwyd (SJ0030067765)	ASNW	350m	380m
23	Hafod Dingle (SJ0093468474)	RAWS	0m	0m
24	Hafod Wood (SJ0011968751)	PAWS / RAWS	280m	290m
25	Llechryd (SJ0111069063)	ASNW	350m	360m
26	Coed y Trap (SJ0212769814)	RAWS/PAWS	665m	670m
27	Berain (SJ0052269712)	ASNW	5m	15m
28	Bryn-isaf Dingle (SJ0013070043)	ASNW	50m	70m
29	Plas Buckley - Coed Bont Newydd (SJ0040870431)	ASNW	0m	0m
29a	Heth - Coed Bont Newydd (SJ0026670901)	PAWS	20m	30m
30	Nant Ysgawen (SH9968671195)	PAWS / ASNW	55m	90m
31	Bôd-ysgawen-isaf - Coed Nant-y-graig (SJ0029071328)	ASNW	0m	0m
31a	Bôd-ysgawen-isaf - Coed	ASNW	70m	100m

No on map	Location/ Nearest OS Reference (approximate grid reference in brackets)	Type (ASNW, PAWS, RAWS,)	Distance from Order Limits	Distance from LOD ²¹
	Nant-y-graig (SJ0010971482)			
31b	Bôd-ysgawen-isaf -Coed Nant-y-graig (SJ0028271536)	ASNW	165m	180m
32	Coed Wig (SH9975972181)	PAWS / RAWS	0m	0m
32a	Coed Wig (SH9970271998)	RAWS / PAWS	0m	25m
32b	Coed Wig (SH9954772268)	RAWS / PAWS / ASNW	85m	95m
33	Coed y Fadir (SH9977472482)	ASNW	50m	70m
33a	Coed y Fadir (SJ0006772212)	ASNW	105m	115m
33b	Coed y Ddol (SH9947472893)	ASNW / PAWS	200m	230m
34	Plas newydd (SH9994672968)	ASNW	200m	245m
35	Coed Plas-newydd (SJ0008173172)	ASNW	30m	60m
35a	Plas-newydd (SH9967473226)	ASNW	530m	580m
36	Bryn Meiriadog (SJ0089872412)	ASNW	470m	510m
37	Coed yr Odyn (SJ0083272857)	RAWS	300m	310m

Landscape Context

- 7.5.13 The landscape of the area, in which the Proposed Development is sited, ranges from exposed and afforested uplands of the Clocaenog Forest in the south, through the rolling farmland of the Rhos Hills, and on to distinctive river valleys near St Asaph.

Landform and Drainage

LANDMAP VS4: Topographic Form

Much of the Study Area is classified as rolling/ undulating with sections of hills/ valleys associated with the Elwy Valley to the north.

LANDMAP GL33: Overall Geological Evaluation

Much of the geological landscape through which the Proposed Development runs is classified as being of Moderate to High value, with the exception of the Elwy Valley which is classified as Outstanding value.

- 7.5.14 The landform and drainage of the Study Area and wider landscape is shown in Figure 7.6.
- 7.5.15 At the southern end of the Proposed Development the landscape comprises high afforested land and moorland upland fringe, lying around 400m AOD and occasionally interrupted with incised river valleys. The landform drops away to the north where it transitions from rolling and undulating hills and valleys lying around 300m AOD to more gently sloping and undulating lowland lying around 150m AOD. The northern end of the Study Area is characterised by the V-shaped Elwy Valley, which has moderate to steep slopes that drop sharply from 100m AOD to around 60m AOD. Levels then rise back up to 150m AOD as the 132 kV Overhead Line passes over the Cefn Meiriadog ridgeline.
- 7.5.16 The Study Area is drained by the Avon Elwy and the Afon Clwyd and their large tributaries, including the Ystrad and Meirchion and many smaller streams all of which strongly influence topography.

*Landcover and Landscape Pattern***LANDMAP VS5: Landcover Pattern**

Other than the well wooded Elwy Valley to the far north and the coniferous plantations of Clocaenog Forest in the far south, most of the Study Area is classified as field pattern/ mosaic which is consistent with its rural situation.

LANDMAP VS7: Boundary Type

Much of the Study Area has a recognisable agricultural field system bounded by hedgerows with trees. The exception is Clocaenog Forest.

LANDMAP VS16: Pattern

Much of the landscape of the Study Area is classified as 'organised', that is, the landscape elements and characteristics, which make up the landscape have a purposeful relationship with each other. To the far south of the Study Area, Clocaenog Forest is classified as 'regular' in that landscape elements are ordered and regular. To the far north Bodelwyddan Park is classified as 'formal'.

- 7.5.17 The landscape of the Study Area comprises a mosaic of farmland and woodland.
- 7.5.18 To the south of the Study Area, aside from Clocaenog Forest, there is a traditional field pattern with some open hill tops on higher ground, most notably Foel Gasyth. Field patterns are usually relatively well-defined with mature hedgerows displaying a good variety of hedgerow trees and small wooded copses/ woodland blocks. There is a mixture of arable, pasture and livestock farming.
- 7.5.19 Towards the central part of the Study Area there are irregular medium sized pastures with low cut hedges with trees. Woodland strips lie along watercourses, on steep slopes and in occasional small copses. Estate and parkland character is evident at Eriviat Park with its estate fencing, lime avenue and holly hedges.
- 7.5.20 To the north, the river valley of the Afon Elwy is strongly influenced by the well-defined mixed woodland structure that delineates the underlying topography. The valley slopes are often clad in coniferous and deciduous woodland with a strong pattern of trees, linear strips of woodland and small irregular shaped fields enclosed by hedgerows with hedgerow trees.

*Settlement and Infrastructure***LANDMAP VS6: Settlement Pattern**

In the south the Proposed Development passes through a landscape in which the settlement pattern is characterised by villages with few scattered properties. A mixed pattern of rural settlement characterises the central part of the Study Area and to the north there is a scattered rural/ farm pattern.

- 7.5.21 As shown in Figure 7.7, outside the main settlements of the historic market town of Denbigh (approximately 3.5 km to the east of the Proposed Development) and city of St Asaph (approximately 3 km to the north east of the Proposed Development), which are both situated along the A525, there is a hierarchy of settlements ranging from isolated farmsteads and rural properties through to small hamlets and both large and small villages. The relatively large village of Henllan is located approximately midway up/ along the Study Area, with the edge of the settlement approximately 1km to the east of the Proposed Development.
- 7.5.22 The settlement pattern typically varies from larger settlements in the lower lying areas to dispersed individual properties in the uplands and more undulating areas.
- 7.5.23 The main transport and communication routes broadly follow north to south and east to west alignments. The north to south alignment is represented by the A525 which connects St Asaph to Denbigh and beyond (this road lies approximately 4.5 km to the east of the 132 kV Overhead Line). East to west connections include the A55 which runs past St Asaph to the north of the Study Area (the A55 is approximately 1.8 km north of the Proposed Development) and the A543 which links to the A525 in the central section of the Study Area. The 132 kV Overhead Line over sails the A543 just east of Groes)
- 7.5.24 Tir Mostyn and Foel Goch is the only wind farm currently located within the Study Area. Situated to the south, it consists of 25 turbines at a height of 75m to tip, the nearest turbine being approximately 250 m to the west of the Proposed Development.
- 7.5.25 There are a further two wind farms with consent which would also be located within the southern extent of the Study Area; namely Clocaenog Forest (32 turbines, 145m to tip – approximately 460 m to the south of the Proposed Development) and Brenig (16 turbines, 100m to tip - approximately 1.3 km to the west of the Proposed Development). Further to the south and outside the Study Area, are the sites of the consented windfarms of Derwydd Bach (10 turbines, 120.5m to tip - approximately 8.5 km to the south of the Proposed Development) and Nant Bach (11 turbines, 100m to tip - approximately 11 km to the south of the Proposed Development). The Wind Farms are discussed in more detail in the cumulative assessment in Section 7.9.
- 7.5.26 In addition to these existing and consented windfarms, there are a number of developers who are in discussion with SP Manweb but who are at different stages in the planning process and without signed connection agreements.

- 7.5.27 There are also an increasing number of single turbines (typically up to 55m to tip) appearing in the landscape, mostly associated with villages or farms.

Woodland and Trees

LANDMAP VS5: Landcover Pattern

Two relatively small parts of the Study Area are classified by LANDMAP on the basis of woodland cover (>70% woodland). These include parts of Clocaenog Forest (DNBGHVS068) and the Limestone Valley - Cefn (DNBGHVS037) aspect areas which are dominated by coniferous woodland, and mixed woodland, respectively.

LANDMAP VS7: Boundary Type

Much of the Study Area has a recognisable agricultural field system bounded by hedgerows with trees. The exception is Clocaenog Forest.

- 7.5.28 As shown in Figure 7.8 there are many woodlands and trees scattered throughout the Study Area; these include some notable areas of ancient semi-natural woodland, particularly within the northern half of the area (as shown on Figure 7.5). Many of the valleys are lined with small linear broadleaved and mixed woodlands. The woodlands together with a high prevalence of mature hedgerow trees, shelter belts and small copses give an overall well-treed appearance to much of the landscape.

Landscape Scale and Enclosure

LANDMAP VS8: Scale

LANDMAP classifies much of the Study Area as medium scale. Clocaenog Forest (DNBGHVS068) is classed as large scale and the Afon Elwy Valley - East (CNWVS069) is classified as small scale.

LANDMAP VS9: Sense of Enclosure

With the exception of Clocaenog Forest, which is confined to the higher ground at the southern end of the Study Area, much of the Study Area to the south is classified as open. In contrast the landscape to the north is more enclosed, with views constrained by topography and vegetation. The Elwy Valley to the far north is classified as confined due to the steep sided nature of the valley that contains views within the valley.

- 7.5.29 The southern part of the Proposed Development passes through a relatively open and medium scale landscape which affords some long distance views, whilst the northern section passes through a predominantly enclosed, medium scale landscape with mainly short distance views. To the far north towards the Elwy Valley the landscape is much smaller in scale and within the valley itself views are contained by landform.

*Historic Landscapes***LANDMAP HL40: Overall Historic Landscape Evaluation**

Much of the historic landscape through which the 132 kV Overhead Line passes is classified as Moderate to High value, with a small section of low value in the south.

LANDMAP CL40: Overall Cultural Evaluation

The landscape of the Study Area is valued nationally or regionally for its cultural landscape and is classified as being High or Outstanding value. The one cultural aspect area that has particularly strong associations is the Vale of Clwyd (DNBGHCL012).

- 7.5.30 Whilst an assessment of the historic environment is included in Chapter 8 'Historic Environment' (DCO Document Ref 6.8), the relationship between landscape and historic matters is close and the two disciplines are complementary. The history of the landscape, its landscape character, how people have changed it over time and the surviving features and their settings are relevant to LVIA as well as to cultural heritage.
- 7.5.31 Some parts of the Study Area have a particularly high concentration of archaeological sites, buildings and designed landscapes, which contribute an important historic dimension to the landscape. In particular the landscape around the lower Elwy Valley displays a long time depth; the importance of this landscape is recognised by its inclusion within the Lower Elwy Valley Registered Historic Landscape of special historic interest.
- 7.5.32 A survey of historic parks and gardens in Wales was initiated by Cadw in 1992 and completed ten years later. Those considered to be of exceptional (Grade I), great (Grade II*) and special interest (Grade II) were published in seven volumes, which together form Part 1 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, which is compiled and maintained by Cadw, NRW and the International Council of Monuments and Sites (ICOMOS). The Register is advisory and the inclusion of a particular park or garden does not signify a statutory designation. However, as stated in PPW, the Welsh Government considers that the effect of a proposed development on a registered park or garden or its setting may be a material consideration in the determination of a planning application.
- 7.5.33 Some historic landscapes in Wales are considered particularly significant and/ or well preserved. These have been recorded in a Register of Landscapes of Historic Interest in Wales. Classed as either of outstanding or special historic interest, these have been published in two volumes, which form Part 2 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales published in 1998 and 2001. Again, this part of the Register is advisory and non-statutory, but historic landscapes on the Register need to be taken into account when considering the implications of the Proposed Development.

7.5.34 Effects on cultural heritage features including landscapes, parks and gardens on the Register are assessed in Chapter 8 'Historic Environment'. However, because cultural heritage sites and the historic environment make an important contribution to the landscape and many are also important visitor attractions, a brief outline of the main historic sites is included here.

Registered Historic Landscapes

7.5.35 The Lower Elwy Valley (HLW (C) 4) in the northern part of the Study Area is included in Part 2 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.

7.5.36 This contained landscape is closely defined by the gorge of the Afon Elwy as it rounds Cefn Meiriadog, a low ridge on the eastern fringes of the Rhos Hills in north Denbighshire. The valley was probably formed by the glacial diversion of the Afon Elwy. Several sheer limestone cliffs occur along the side of the valley and the area around Cefn includes one of the most important groups of Palaeolithic and later caves and rock shelters in Britain, containing Quaternary geological and archaeological deposits of international significance. The valley today presents a landscape of historic interest which, although small, is very complete.

7.5.37 The Denbigh Moors Registered Historic Landscape of special historic interest lies approximately 2km to the southern end of the Proposed Development.

7.5.38 The Vale of Clwyd Registered Historic Landscape of outstanding historic interest lies approximately 2km to the east of the Proposed Development.

7.5.39 Further information on these landscapes, including an assessment of the significance of impacts of the Proposed Development on the historic landscapes, is included in Chapter 8 'Historic Environment' (DCO Document Ref 6.8).

Registered Parks and Gardens

7.5.40 Within the Study Area, there are a number of historic parks and gardens that are included in Part 1 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.

- Gwaenynog Hall Gardens lies towards the outer eastern extents of the Study Area near to Denbigh (approximately 1.2km from the Proposed Development). This park and garden belonged to Beatrix Potter's uncle in the 19th century. Her sketches of the kitchen garden were the basis for some of her books. The garden is purportedly open to the public.
- Foxhall Newydd lies approximately 1.3km to the east of the Proposed Development. Also known as New Foxhall, Foxhall Newydd has the earthwork remains of a 17th-century formal garden and a walled garden with a dovecote attached to it. The garden remains are associated with the shell of a 17th-century house that was never completed and which stands in semi-natural woodland and pasture. The garden is not open to the public.

- Plas Heaton (also known as Plas Newydd) lies approximately 2km east of the Proposed Development and some of its essential setting lies within the Study Area. It is a very old site with an early-19th-century park and woodland gardens. These gardens have a woodland circuit walk probably contemporary with the remodelling of the house in the 1860s. The start of the walk is marked by a circle of yews, and ends on a terrace with views to the Clwydian Hills and the Irish Sea. The garden is not open to the public.
- Bodelwyddan Castle lies approximately 720m to the north of the Proposed Development. It has a well-preserved landscape park that originated in the 18th century. There are high boundary walls and lodges, added in the 19th century. Part of the walled garden contains an early-20th-century garden in the Arts and Crafts style by Thomas Mawson. A separate part of the site operates as a hotel and the castle itself is a regional outlet for the National Portrait Gallery. The park is open to the public.
- Kinmel Park (also known as Kinmel Hall and Clarendon School) lies approximately 1.5km to the northwest of the Proposed Development. The 19th-century house at Kinmel Park sits prominently in its landscape park which was a deer park in the 17th century. There is a well-preserved late 19th-century formal garden, probably designed by William Nesfield. A walled garden, associated with the 17th-century house, Old Kinmel, acted as an extension of the pleasure garden in the 19th century. The park is not open to the public.

Pressures for Change

- 7.5.41 Current pressures which are being exerted on the landscape primarily include pressure related to wind farm development, in particular in association with TAN 8 SSA A, in and around Clocaenog Forest. A number of wind farms have been consented or are in the planning system and more applications are likely to be made.
- 7.5.42 There is also a growing pressure on the wider landscape relating to the introduction of dispersed, smaller scale wind energy developments, typically single turbines around and below 50m - 55m to blade tip.
- 7.5.43 To the far north of the Study Area there are pressures relating to extensions of St Asaph Business Park and other urban fringe developments around St Asaph and Bodelwyddan. These include new electrical infrastructure to support recent developments includes the Burbo Bank Substation and the NGET Substation.

Visual Baseline

General Visual Context (existing conditions)

- 7.5.44 Much of the Study Area consists of undulating or sloping pastureland bound by hedgerows, post and wire fences and mature hedgerow trees interspersed with mixed woodland blocks and strips, and includes scattered residential properties, small hamlets, farmsteads, and small settlements, incised with wooded stream and river valleys, and upland ridges to the south of the Final Route Alignment. There is a network of transport routes (lanes and roads) and footpaths, and there are leisure and recreational facilities.
- 7.5.45 In places the layering effect of field boundaries, gentle undulations in the landform, woodland blocks and strips of trees along stream/ river valleys screen views along and across the landscapes. Distant upland areas and local ridges frequently form the horizon in these views. Localised ridges and valley slopes confine some views, particularly near Saron in the south, and the Elwy Valley in the north.
- 7.5.46 Land rises to the south (towards the Clocaenog and the Llyn Brenig Moorland Forest), south east (towards the Foel Gasyth ridge in the Denbigh and Derwen Hills), north west (as the Llanefydd Lowlands near Hafod and Berain slope towards the upland areas west of Llanefydd) and in the north as the Final Route Alignment crosses into the Elwy Valley and runs over the Cefn Meiriadog ridge. Views generally become more expansive in these locations and extend over much of the landscape within the Study Area, although landform and landcover break up the visual continuity of linear features such as roads. These distinctive upland areas form the horizon of many views from within the Study Area.
- 7.5.47 The Clwydian Range forms a distant horizon in many views to the east. Some upland areas, particularly to the south towards the Denbigh Moors, have less tree cover and therefore offer longer views with limited intervening vegetation. The Cefn Meiriadog ridge to the north forms a visual barrier between much of the Study Area and the landscape to the north, including St Asaph and the North Wales coastline.
- 7.5.48 Hedgerows are generally 1 to 2m in height and occasionally set on banks, thus affecting views and visibility from the road and footpath network. Incised wooded river and stream valleys often with no views in or out, include the river valley along the southern base of the Foel Gasyth ridge, the Afon Ystrad, the stream in the vicinity of Eriviat Bach Isaf, Hafod Dingle, and the Afon Elwy.
- 7.5.49 Settlements such as Saron, Peniel, Groes, Henllan, Cefn Berain, Llanefydd and Groesffordd Marli are visible in longer views from upland areas. Views from settlements on upper slopes tend to be more expansive than those in the lower valley areas.
- 7.5.50 Denbigh Castle is visible in views from the upland areas around Peniel, but generally cannot be seen from lower lying areas due to intervening topography and vegetation.

- 7.5.51 Registered Parks and Gardens are present within the Study Area, but trees and woodland blocks generally enclose their settings and views in and out, although, upland areas are sometimes visible in the distance, on the horizon.
- 7.5.52 There is a network of narrow tracks, local lanes, minor rural roads, B-class roads and one A-class road (A543). These afford varying degrees of enclosure and visibility, though the A543 tends to have wider views over the landscape, and views are generally more expansive the greater the elevation of the road. The A55 is on the boundary of the Study Area, but views to the south west (in the direction of the Study Area) are generally contained by roadside vegetation with views of distant upland ridges occasionally forming the horizon.
- 7.5.53 A network of public footpaths crosses the landscape. There are no National trails or cycle routes within the Study Area; however, the Final Route Alignment crosses the Clwydian Way Regional Trail, a 122 mile circular long distance footpath, created to celebrate the Millennium and the North Wales Pilgrim's Way long distance footpath, both of which are regionally valued and promoted.
- 7.5.54 There are two caravan parks near Saron, with views over the Study Area, and one caravan park at Henfryn, south of Groes, with views south east towards Segrwyd and Foel Gasyth.
- 7.5.55 Individual turbines at Gwaenynog Bach (near Denbigh) and Pentre du Isaf (north of Henllan) can be seen from a number of locations along the valley slopes within and surrounding the Study Area.
- 7.5.56 The Tir Mostyn and Foel Goch Wind Farm is visible from the southern upland part of the Study Area on the Tir Mostyn ridge, adjacent to Clocaenog Forest.

Identified Receptors for the 132 kV Overhead Line

- 7.5.57 Utilising information from the Preliminary Environmental Impact Report, consultation feedback and additional field and desk-based investigations, the following potential receptors have been identified as part of the baseline for consideration during the assessment. These receptors are illustrated in Figure 7.9 (sheets 1 to 4).

Local Community (Settlements)

- 7.5.58 From the south to the north:
- Saron (approximately 270m west of the Proposed Development);
 - Peniel (approximately 270m west of the Proposed Development);
 - Nantglyn (approximately 2.6km west of the Proposed Development);
 - Segrwyd (approximately 725m west of the Proposed Development);
 - Groes (approximately 750m west of the Proposed Development);
 - Henllan (approximately 1.4 km east of the Proposed Development);

- Cefn Berain (approximately 800m west of the Proposed Development);
- Llanefydd (approximately 1.9km west of the Proposed Development);
- Groesffordd Marli (approximately 400m west of the Proposed Development); and
- St Asaph (approximately 2.6km northeast of the Proposed Development).

7.5.59 In addition, dispersed residential properties close to the Proposed Development were also considered.

Road Users (motorists and cyclists)

7.5.60 From the south to the north the following have been identified:

- the single carriageway A543 which runs north east from Groes towards Denbigh through the lower/ central part of the Study Area (the 132 kV Overhead Line oversails this road to the east of Groes);
- the B4501 which runs north east from Llyn Brenig to Denbigh, following the southern section of the Proposed Development;
- the B5435 which runs south east from Nantglyn to Saron across the southern section of the Study Area;
- the B5428 which runs north east from Groes to Henllan, crossing the centre of the Study Area to the south of Henllan;
- the B5382 which runs east to west from Henllan to the upland area around Moel Fodiari, across the centre of the Study Area;
- the B5381 Glascoed Road which runs east to west from St Asaph towards Bodelwyddan Park and Kinmel Park, across the northern tip of the Study Area; and
- a network of minor rural roads, country lanes and tracks which provide good interconnectivity across the Study Area particularly to the centre of the area around Peniel, Groes, Segrwyd, Groes, west of Henllan and Cefn Berain.

People Engaged in Outdoor Recreation

7.5.61 Users of the public rights of way network, including:

- Clocaenog Public Forest and the Clwydian Way Regional Trail ;
- a public footpath network around Saron, leading west to Soar and Nantglyn, and east to Moel Prion, and south to Moel Ytta;
- a public footpath network around Peniel with connections to the north, south, east and west;
- a public footpath network around Segrwyd, Pandy and Bodeiliog Uchaf, which connects into Gwaenynog to the northeast, and Foel Gasyth to the south;

- a public footpath network around Eriviat with connections to Denbigh and Gwaenynog in the east, Henllan in the north, and Moel Tywysog in the west;
- The Clwydian Way Regional Trail through Hafod, leading to Moel Fodiar via the Llanefydd Lowlands in the west, and Henllan, Foxhall Newydd and Denbigh in the east;
- The North Wales Pilgrim's Way long distance footpath near Croen Llwm Mawr, from the Elwy Valley in the north east and across the Llanefydd Lowlands in the west;
- a public footpath network around Bodysgawen Isaf which connects the Elwy Valley in the east with Llanefydd in the west;
- a public footpath along the northern slopes of the Elwy Valley near Plas Hafod; and
- a public footpath north of the Cefn Meiriadog, near Pentre Mawr.

7.5.62 People using Open Access Land, as designated under the Countryside and Rights of Way Act 2000. These areas are open to the public by permission of the owners, often the Forestry Commission (now NRW in Wales), the National Trust, or Woodland Trust. It consists of public forest, open country, registered common land and other statutory access land. Several areas of open access land lie on the high hills tops found along the southern and western edges of the Study Area, and include:

- land at Llyn Brenig (approximately 2.3km to the west of the Proposed Development);
- Clocaenog Public Forest (the Proposed Development passes through the outer edge of this area);
- land at Moel Ytta (approximately 550m to the east of the Proposed Development);
- land at Foel Gasyth (approximately 650m to the west of the Proposed Development);
- land at and around Moel Fodiar (approximately 1.7km to the west of the Proposed Development); and
- land at Mynydd y Gaer (approximately 2.2km to the west of the Proposed Development).

7.5.63 Visitors to Historic Landscapes include;

- the Denbigh Moors Registered Historic Landscape of special historic interest;
- the Vale of Clwyd Registered Historic Landscape of outstanding historic interest; and
- The Lower Elwy Valley Registered Historic Landscape of special historic interest.

7.5.64 Visitors to Scheduled (Ancient) Monuments (SAMs) including:

- Mynydd y Gaer Hillfort (also a promoted viewpoint); and
- Denbigh Castle (outside of the Study Area, but has views to and from), a 13th century fortress perched on a rocky promontory above the town of Denbigh, under the care of Cadw.

7.5.65 Visitors to Historic Parks and Gardens include:

- Gwaenynog Park and Garden, a member of the Historic Houses Association, offers occasional open days for garden visits.
- Foxhall Newydd;
- Plas Heaton;
- Bodelwyddan Castle and gardens, a historic house and museum set in parkland with formal gardens and natural woodland, with a museum and gallery. The Castle is a partner of the National Portrait Gallery and is run by an independent charitable trust; and
- Kinmel Manor and Park, a large estate which provides many recreational opportunities within its grounds including shooting, fishing, horse riding, paintballing, golf course and driving range.

7.5.66 Tourists and people staying at caravan parks, including:

- Caer Mynydd Caravan and Camping Park (part of Group Visual receptor 14 at Saron village); and
- Bryn Glas Caravan Park, west of Saron and identified as ID 16 on Figure 7.9 (sheet 1 of 4); and
- Henfryn Caravan Club (ID 190) at Henfryn farm, south of Groes.

7.5.67 People participating in other outdoor recreation:

- Hiraethog, the Denbigh Moors, located just beyond the southern end of the Study Area, provides recreational opportunities related to the reservoirs, rivers, forests and moorlands that make up this area. Activities include sailing, walking, mountain biking, karting, fly fishing, white water rafting, red squirrel and bird spotting. The area is focused around the Llyn Brenig Visitor Centre located on the edge of Llyn Brenig (beyond of the Study Area boundary);
- Open Door Adventure Outdoor pursuits centre on the banks of the Afon Elwy at Bont Newydd;
- local angling/ fishing clubs on the Afon Elwy;
- Denbigh Golf Course, on the north western edge of Denbigh, and on the very edge of the Study Area; and
- Kinmel Park Golf Course, within the Kinmel Park Estate.

7.5.68 People visiting promoted viewpoints (promoted on OS maps or by signage) including:

- Foel Gasyth - high hill top designated as Open Access Land between Clocaenog Forest and Denbigh;
- Moel Fodiar – (just outside the Study Area) high hill top designated as Open Access Land lying to the west of Denbigh; and
- Mynydd y Gaer – (just outside the Study Area) hillfort designated as Open Access Land found south of the Afon Elwy Valley which is at the eastern edge of the Study Area.

7.5.69 As previously discussed, due to the scale of the wood poles, viewpoints located more than 5km from the overhead line have been omitted in consultation with NRW and Conwy Council. These include viewpoints on the Clwydian Range (more than 10km from the Study Area) from the summit of Moel Famau. Similarly, viewpoints were not considered from within Snowdonia National Park or Y Berwyn Area of Outstanding Beauty (AOB); both being approximately 17km away from the Proposed Development.

7.6 Embedded Mitigation and Standard Construction Practices

Embedded Measures

- 7.6.1 Embedded or primary mitigation measures are an integral part of the overall design strategy of a development.
- 7.6.2 One of the principle aims in the selection and development of an overhead line is to avoid the most environmentally sensitive areas, to limit any significant impacts and so avoid the need for mitigation. In this respect, the design of the Order Limits for the Proposed Development sought to avoid as far as possible, for example, designated landscapes, areas of high population, or cultural and recreational areas, which are of national significance.
- 7.6.3 In addition, the Final Route Alignment was designed to minimise effects on residential properties, locally important landscapes, local footpaths and other sites of local value identified through desktop study, field based survey, and consultation.
- 7.6.4 The design of the scheme was back-checked and reviewed throughout its development and evolution in response to consultation feedback.
- 7.6.5 SP Manweb has adopted a positive and pro-active approach, and a high degree of primary mitigation has been designed into the Proposed Development; this includes:
- the decision to route to the St Asaph substation rather than the Legacy Substation near Wrexham;
 - the selection of a double wood pole rather than a steel tower;
 - sensitive routeing in accordance with the Holford Rules;
 - the development of an alternative route option to the west of Henllan in response to consultation; and
 - refinement of the route alignment sought to avoid areas where significant effects had been identified during preliminary assessment, including re-alignment of the route at Tan Yr Allt, Pandy and Hafod to minimise the overall magnitude of effects. Careful balancing of effects along the ridge line at Tan Yr Allt, also helped reduce potential effects on receptors in closer proximity to the ridge.

7.6.6 Where avoidance of specific landscape and visual constraints was not possible, the routing process sought to lessen likely significant effects. Such measures typically included:

- minimising the need to remove areas of established broadleaved woodland;
- optimising the opportunities for backclothing (by following the edge of woodland or field boundaries with mature trees) to help reduce the visibility of the above ground components of the Proposed Development, particularly the wood pole structures, which would be the most visible aspect; and
- following as straight an alignment as possible where the Proposed Development crosses through more open parts of the landscape in order to minimise angle poles and stays.

7.6.7 In addition, potential visual effects arising from the presence of existing overhead lines were avoided or minimised by crossing at right angles where possible, avoiding running in parallel for any great distance and by diversion and undergrounding of lower voltage overhead lines. A summary is provided in Chapter 2 'Description of the Proposed Development' (DCO Document Ref 6.2).

Standard Construction Practices

7.6.8 These are measures which would be employed to reduce construction effects and include:

- tree protection in and around working areas (in accordance with B5837: 2012);
- good working practice for the storage and transport of plants;
- replacement of hedgerows, which have to be removed, and replanting with appropriate native species;
- avoidance of tree removal (coppicing or pollarding to be used if possible and appropriate); and
- replacing any lost trees on a two-for-one basis with the same species (with the exception of ash).

7.6.9 Where hedgerows need to be removed hedgerow replacement/ replanting is classed as a standard construction practice. Where hedgerows have to be removed to allow a pole to be positioned, these would be lifted and replaced within 48 hours using specialist lifting equipment. Where it would not be possible to replant within 48 hours (e.g. where hedges have to be removed for access), replanting within with locally sourced species would take place as soon as possible. Where tree removal is required these would be replaced by new tree planting on a two-for-one basis. This would be undertaken as part of the specific mitigation planting as described in Section 7.8, with the remainder by agreement with landowners.

7.7 Assessment of Effects

Sources of Likely Effects

7.7.1 Table 7.16 outlines the sources of likely impacts and their corresponding effects on landscape and visual resources. Measures to reduce or further mitigate likely effects are discussed later in this Chapter.

Table 7.16: Source of Impact and Likely Effects on Landscape and Visual Resources

Source of Impact	Likely Effects
Felling and Construction	
Felling of trees for wayleave.	<p>Physical loss of landscape elements (forest/ woodland, open moorland, commercial forestry, field boundary features including hedges and hedgerow trees).</p> <p>Physical and perceptual change to landscape character through the creation of cleared, straight edged wayleaves through plantations.</p> <p>The removal or alteration of attributes of the landscape for which it was designated.</p>
Site clearance/ preparation works.	<p>Physical loss of landscape elements (e.g. removal of further vegetation in addition to that cleared for wayleaves).</p> <p>Physical and perceptual change to landscape character.</p> <p>The removal or alteration of attributes of the landscape for which it was designated.</p>
Erection of fencing, and construction of access tracks, working and pulling areas.	<p>Addition of new man-made landscape elements.</p> <p>Physical and perceptual change to landscape character, from a largely rural area (with some forestry and agricultural activities) to an area affected by construction activities.</p> <p>The removal or alteration of attributes of the landscape for which it was designated.</p>
Movement of lorries, cranes, personnel, introduction of	Addition of new landscape elements.

Source of Impact	Likely Effects
lighting.	Physical and perceptual change to landscape character (as above). The removal or alteration of attributes of the landscape for which it was designated.
Operation and Maintenance	
Introduction of wood poles and underground cables, plus associated fencing and signage.	Addition of new man-made landscape elements. Physical and perceptual change in landscape character from a rural area to one including more man-made elements. The removal or alteration of attributes of the landscape for which it was designated.
Introduction of new planting.	Addition of new landscape elements (hedgerows and woodland). Physical and perceptual change in landscape character (as above).
Introduction of upgraded access tracks and of vehicular and pedestrian movements associated with operation and maintenance.	Addition of new man-made landscape elements Physical and perceptual change in landscape character (as above). The removal or alteration of attributes of the landscape for which it was designated.

Assessment of Construction and Decommissioning Effects

- 7.7.2 Construction of the Proposed Development would take approximately 15 months and it is anticipated that this would be phased across the 17km length of the Final Route Alignment.
- 7.7.3 The most immediate effects arising from the construction of the Proposed Development would be those associated with access and clearance works within the Order Limits. Landscape pattern and visual amenity can be affected by the felling of individual mature trees, woodland, shelterbelts or screen planting as these often provide the landscape with a distinctive character or local identity. Woodland cover also has an important role in defining landscape spaces and scale. The removal of tree cover may cause the opening up of landscape spaces by reducing the sense of

enclosure provided by woodland and allowing views into other landscape spaces beyond. Cleared corridors are required when an overhead line passes through a wooded area and the straight and linear nature of these can be visually intrusive, particularly in relation to conifer plantations.

Likely Effects of Tree and Hedgerow Removal

7.7.4 Analysis of the Design and Construction Report (DCO Document Ref 7.1) and the Arboricultural Survey Report and the Impacts Maps (Appendix 6.9 and 6.11 respectively - DCO Document Ref 6.19) indicates that construction of the Proposed Development would require the felling (or partially felled in terms of the groups) of 110 individual trees and 11 woodland blocks (6 of which are within Local Wildlife Sites), and 641m of hedgerows²². Important hedgerows would be subject to a lift and replace regime. The tree groups which would be affected vary in size from a small cluster of trees to some larger wooded areas. In addition, where the Proposed Development passes in close proximity to hedgerow trees and tree groups on the edge of woodland blocks works such as reduction in height, crown reduction or side pruning could be necessary. The locations of trees to be felled are shown in Chapter 6, Appendix 6.11 Impact Maps.

7.7.5 The species composition of the 110 mature trees that would need to be felled are as follows:

- Ash 8
- Oak 32
- Sycamore 2
- Hazel 1
- Lime 5
- Hawthorn 1
- no data 61

7.7.6 In cases where there is 'no data', the Ecology and Biodiversity assessment has assumed that one tree species from a group of trees would require felling. Whilst all of the species comprising the group are known the actual tree to be felled is not.

²² This includes a maximum of 400m for field access (although likely to be significantly less than this), 106m for highway access points, and a further 135m where poles are close to hedgerows.

- 7.7.7 1.10 ha of ancient or semi natural woodland and 0.05 ha of broad-leaved woodland are likely to be affected within Local Wildlife Sites, in the following locations (see Figure 7.5 Ancient Woodland):
- Coed Nant-y-graig Ancient Semi Natural Woodland (Location 31): 0.07ha
 - Coed Bont Newydd Ancient Semi Natural Woodland (Location 29): 0.12ha
 - Hafod Dingle Restored Ancient Woodland (Location 23): 0.27ha
 - Coed Mawr/ Pandy Plantation on Ancient Woodland (Location 19): 0.31ha
 - Bryn Foel/ Cefn-maen-uchaf Broad-leaved Woodland (Location 5): 0.05ha
 - Coed Wig Plantation on Ancient Woodland (Location 32): 0.33ha
- 7.7.8 0.67ha of broadleaved and plantation on Ancient Woodland (not within Local Wildlife Sites) would be affected, as detailed in Chapter 6 'Ecology and Biodiversity' (DCO Document Ref 6.6), 'Assessment of Effects; "*In total, excluding woodlands in Local Wildlife Sites, five tracts of broad-leaved and plantation on ancient woodland will be crossed by the Proposed Development.*"
- 7.7.9 Trees and hedgerows are well represented in the local landscape and their removal would be unlikely to give rise to significant landscape effects. There may be some localised effects on views (as described in the assessment of visual effects in Section 7.7 of this Chapter). The overall effect on the landscape is predicted to be **minor** at most before mitigation.
- Likely Effects of Access Tracks*
- 7.7.10 Access tracks for construction generally seek to follow existing tracks and gateways and this is not expected to result in significant adverse effects on landscape or visual receptors with effects predicted to be negligible. There are no requirements for any permanent access tracks and new temporary tracks would be restored or replanted on completion of the works. Further information is provided in the Design and Construction Report (DCO Document Ref 7.1) and the CEMP (Appendix 2.1 to this ES, DCO Document Ref 6.18).
- 7.7.11 Numbers of vehicle movements would be low, therefore this is not considered to be a significant issue in landscape and visual terms. The effect is predicted to be **negligible**. Further information on construction traffic is provided in Chapter 12 'Traffic and Transport' (DCO Document Ref 6.12).

Likely Effects of Construction Compound and Temporary Storage Areas

- 7.7.12 A site at Broadleys Farm, on the A453, has been identified as a construction compound for the works. In addition at convenient places along the route, temporary storage or 'laydown areas' would be required. Typically these areas would measure a minimum of 50m x 50m and would be level so that lorries could be safely unloaded. It is also intended that the existing St Asaph substation and the proposed Collector Substation would be utilised as temporary storage areas. These areas would be restored or replanted on completion of the works; the effects on the landscape are predicted to be **negligible**.

Aspects of the Project Likely to Generate Landscape and Visual Effects during Decommissioning

- 7.7.13 The most noticeable effect of decommissioning would be the removal of the redundant wood pole line, resulting in the immediate elimination of residual landscape effects. Wayleave corridors may remain visible in the landscape for a longer period until any restoration planting and/ or natural regeneration had become established. A **negligible** to **minor** effect may occur should existing accesses prove to be inadequate for the dismantling process. This could involve some tree pruning and/ or the removal of some trees and short sections of hedgerow as described under construction. These areas would be restored or replanted on completion of the works.

Summary of Construction and Decommissioning Landscape and Visual Effects

- 7.7.14 Creation of new access tracks, temporary site compounds, storage areas and hard standings may affect local landscape character and visual amenity, although in most instances such effects would be temporary as tracks and compounds would be reinstated upon completion of the construction.

- 7.7.15 The landscape of the Study Area typically has a high prevalence of trees and small woodlands. Although a number of trees are identified for removal it is considered unlikely that these would fundamentally modify the defining characteristics of the landscape and therefore have an effect on the overall landscape character. Any landscape or visual effects arising from tree removal would be localised and are addressed in the relevant landscape character or viewpoint assessment later in this Chapter.
- 7.7.16 Due to the nature and scale of the Proposed Development, the effect of construction and decommissioning on the landscape is considered **minor** and therefore not significant.

Assessment of Operational Landscape Effects

- 7.7.17 Within this section, and as has been described in detail within Section 7.4 'Methodology', potential effects on landscape receptors are evaluated to determine whether the Proposed Development is likely to result in significant effects.

Aspects of the Proposed Development Likely to Generate Landscape Effects during Operation

- 7.7.18 The main effects of the Proposed Development during its operational life would be the presence of additional, modern man-made structures within the countryside, in this case 218 double wood pole structures and overhead lines. Once constructed, there would be no moving parts or lighting and the Proposed Development would require only occasional visits for maintenance and repair.
- 7.7.19 Whilst the structural cross bracing, supports and conductors would be visible; the main features of the Proposed Development that would give rise to landscape effects would be the wood poles, their appearance, height and spacing. As with any external material, wood poles are susceptible to weathering and consequent weather variations. The colour of the poles at the time of construction would be dark brown but this would fade over time to be a noticeably lighter silver-grey. The rate of colour change would depend on weather conditions and to some degree the type of timber and timber treatment used. Over time, these changes would reduce the perceptibility of elements viewed above the skyline, but may increase the visibility of structures when viewed against a dark background such as a conifer plantation. The metal bracing and the conductors would be constructed from aluminium, which is initially shiny but tends to dull over time to dark matt silver.

Effects on Landscape or Landscape Related Designations

Statutory Landscape Designations

- 7.7.20 As has been described within Section 7.5 'Baseline Context', there are no nationally designated landscapes within the immediate Study Area. Snowdonia National Park is approximately 17km away to the east and the Clwydian Range and Dee Valley AONB is approximately 7km away to the west. Whilst these landscapes are typically highly sensitive to overhead line development, in view of the scale and location of this development, the distances involved and the effect of intervening topography and vegetation, it is considered that the 132 kV Overhead Line would have no direct or indirect effects on these designated landscapes at any time during construction, operation or decommissioning. The overall significance of landscape effects on the National Park and AONB is predicted to be **negligible**. Snowdonia National Park Authority has confirmed that they do not anticipate any adverse effects on Snowdonia National Park. Similarly, although the AONB would prefer undergrounding of the connection, they recognise that due to the intervening distance the effects should be minimised.

Other Designated and Undesignated Features (which have a Landscape Aspect).

High and Outstanding LANDMAP Aspect Areas

- 7.7.21 The Proposed Development crosses small areas of overall outstanding LANDMAP evaluations to the far north of the Study Area; most notably in the vicinity of the Afon Elwy Valley, as follows:
- Cultural Landscape: Vale of Clwyd (DNBGHCL012);
 - Geological Landscape: Elwy Gorge (DNBGHGL032);
 - Landscape Habitats: Elwy Valley Woodland Mosaic (DNBGHLH028); and
 - Landscape Habitats: Elwy Valley Woodlands (CNWLH064).
- 7.7.22 One Outstanding Historic Landscape Aspect Area (Evolved/Mixed Fieldscapes DNBGHHL021) lies within approximately 300m of the Proposed Development. Elsewhere the LANDMAP classification is High. The high value of these areas has been taken into account in the assessment of the effects on landscape character considered later in this Chapter.

Areas of Outstanding Beauty (AOBs) (Denbighshire County Council)

- 7.7.23 Whilst the remote and vast scale landscape of the Y Berwyn AOB is highly sensitive to overhead line development, in view of the scale and location of Proposed Development (approximately 17km away), the distance involved and the effect of intervening topography and vegetation, it is considered that the Proposed Development would have no effect on this landscape during operation. The overall significance of landscape effects on the AOB is therefore predicted to be **negligible**.

Special Landscape Areas (SLAs) (Conwy County Borough Council)

- 7.7.24 Rhyd-y-Foel to Abergele (SLA) lies approximately 2.2km north west of the Proposed Development, and Hiraethog (SLA) lies approximately 4.7km to the south west. Whilst these landscapes are typically more sensitive to overhead line development, in view of the scale and location of the Proposed Development, the distances involved and the effect of intervening topography and vegetation, it is considered that the Proposed Development would have no direct or indirect effects on these locally designated landscapes during operation. The overall significance of landscape effects on the SLAs is therefore predicted to be **negligible**.
- 7.7.25 At its closest point the Elwy and Aled Valleys SLA lies approximately 1.8km to the west of the Proposed Development. This SLA stretches from the Elwy Valley in the north to Bylchau in the south (Bylchau is approximately 3km north west of Nantglyn). Although parts of this SLA lie within the fringes of the Study Area, the Proposed Development would not cause loss or alteration to any elements of this landscape, nor would it alter the perception of the landscape. The Proposed Development would be barely perceptible due to distance. The overall significance of landscape effects on the SLA is therefore predicted to be **negligible**.

Conservation Areas

- 7.7.26 The Proposed Development does not affect the locally valued Conservation Areas of Nantglyn, Bodelwyddan and St Asaph, or their setting, which lie within, or just beyond, the Study Area. The screening effects of intervening landform and vegetation and distance from the Proposed Development means that the overall significance of landscape effects on Conservation Areas is **negligible**.
- 7.7.27 Henllan Conservation Area lies approximately 1km from the Proposed Development. Intervening topography, distance and vegetation, combined with the scale and nature of the Proposed Development (i.e., wood poles of approximately 15m in height) greatly limit the extent of the development that is likely to be visible from Henllan, and thus limit the potential effects of the development such that they are predicted to be **negligible**.
- 7.7.28 This reflects the findings of the assessment of the Historic Environment (see Chapter 6) that concludes the effects of the Proposed Development on the Conservation Area at Henllan would be **negligible**.

Open Access Areas (Land)

- 7.7.29 The Proposed Development would have a direct impact on the outer northern fringe of Clocaenog Forest where removal of some young commercial coniferous trees would be required. However, due to the presence of wind turbines and commercial forestry, the susceptibility of the landscape to this tree removal is considered low. The value of the public forest is also considered relatively low; therefore overall sensitivity is judged to be low. The predicted scale of effect and geographical extent of the effect are small at most as the line would only be perceived locally and would not alter the perception of the wider landscape character of the forest. Taking into consideration the small magnitude of change and low sensitivity, overall significance of landscape effect is predicted to be **minor**.
- 7.7.30 The Proposed Development lies close to distinctive areas of open access areas at Moel Ytta and Foel Gasyth; both areas are located towards the south of the Study Area. Although these open access areas may be highly sensitive to overhead line developments due to their medium value and high susceptibility to overhead line development, the scale of effect of the 132 kV Overhead Line is considered **negligible** due to distance and the fact that both of these areas are already influenced by nearby wind energy developments. The overall significance of landscape effects is therefore predicted to be **negligible**. The Proposed Development would have no significant effects on open access land at Llyn Brenig, Moel Fodiar and Mynydd y Gaer, due to intervening distance, the nature and scale of the Proposed Development (approximately 15m high double wood pole structures), and the screening effects of intervening landform and vegetation.

Registered Historic Landscapes

- 7.7.31 The Lower Elwy Valley Registered Historic Landscape of special historic interest lies within 200m to the east of the northern end of the Proposed Development. This is a visually contained landscape that covers an area less than 6 square kilometres, which is closely defined by the gorge of the Afon Elwy as it rounds the Cefn Meiriadog, a low ridge which lies south west of St Asaph. The landscape is well-wooded along the valley slopes, and hedgerows along field boundaries contain many mature oaks and trees that help to obscure views across the landscape. Whilst this landscape is highly sensitive to overhead line development due to its high value and susceptibility, in view of the scale and location of the 132 kV Overhead Line and the effect of intervening landform and vegetation, it is considered that the Proposed Development would have a small to moderate scale of effect on a small part of the north west fringe of the Historic Landscape. The overall significance of landscape effects on the Lower Elwy Valley Registered Historic Landscape is therefore predicted to be **minor**.

7.7.32 The Denbigh Moors Registered Historic Landscape of special historic interest lies approximately 1.6km south west of the Proposed Development and the Vale of Clwyd Registered Historic Landscape of outstanding historic interest lies 2.2km to the east. The Denbigh Moors comprise the upland parts of the large block of land lying between the two major river valleys of the Clwyd and Conwy. It is a remote and sparsely populated area of rolling moorland generally between 400m and 500m AOD, which is largely covered in managed heather moorland. The landscape covers an area of some 86 square kilometres. The Vale of Clwyd lies to the east of the Study Area and comprises the Afon Clwyd valley floor (that stretches from Ruthin to the coastal town at Rhyl), and the edge of the Clwydian Hills that rise steeply to about 300m above sea level and are over 10km from the Study Area. The landscape covers an area of some 148 square kilometres. Whilst these historic landscapes may be typically more sensitive to overhead line development, in view of the scale and location of this development, the distances involved and the effect of intervening landform and vegetation, it is considered that the Proposed Development would have no effects on these landscapes. The overall significance of landscape effects on the Denbigh Moors and Vale of Clwyd Registered Historic Landscape is therefore predicted to be **negligible**.

Registered Parks and Gardens

7.7.33 As described in the baseline, the following Registered Parks and Gardens lie either wholly or partly within the Study Area: Gwaenynog; Foxhall Newydd; Plas Heaton; Bodelwyddan Castle; and Kinmel Park. Whilst these registered parks and gardens may be typically more sensitive to overhead line development, in view of the scale and location of this development, the distances involved and the effect of intervening landform and vegetation and/ or boundary walls, it is considered that the Proposed Development would have no effects on these landscapes with the exception of minor effects on the landscape of Foxhall Newydd. Gwaenynog is contained within a localised shallow valley and is unlikely to have any visible interaction with the Proposed Development. Likewise, Plas Heaton is largely contained by mature trees to the west in the direction of the Proposed Development and is over 2km away. Bodelwyddan and Kinmel are contained by boundaries (including walls) and intervening blocks of vegetation within their own grounds, and have limited visible connectivity with the Proposed Development. The overall significance of landscape effects on the Registered Parks and Gardens is therefore predicted to be **minor**.

Scheduled (Ancient) Monuments

- 7.7.34 Mynydd y Gaer Hillfort lies approximately 2.5km west of the Proposed Development and Denbigh Castle approximately 3.5km to the east. Both are highly valued landscape features, which are locally prominent and susceptible to overhead line development. In view of the relatively small scale of the Development (approximately 15m in height), the nature of the development (wood poles), the location of this development (2.5km and 3.5km from the identified SAMs) and the screening effects of intervening landform and vegetation, it is considered that the effects of the Proposed Development on these landscape features would be **negligible**.

Ancient and Semi Natural Woodland

- 7.7.35 The Proposed Development would have a number of direct impacts on areas of ancient or semi natural woodland within the Study Area as discussed within the assessment of construction and decommissioning effects at the start of this chapter
- 7.7.36 The loss of these trees and areas of woodland would also have effects on the character of the landscape, which is discussed in Appendix 7.4.

Regional Trails and Long Distance Footpaths

- 7.7.37 The Proposed Development would oversail the Clwydian Way regional trail and the North Wales Pilgrim's Way long distance footpath but there would be no requirement for permanent diversions of these trails. Impacts on the visual amenity of users of the trails are discussed in the visual assessment later in this chapter.

Loss or Change to Landscape Elements and Features

- 7.7.38 There would be no long term loss or change to the following landscape features:
- agricultural land; and
 - Public Rights of Way (PRoW).

Landscape Effects Arising from Removal of Woodlands, Trees and Hedgerows

- 7.7.39 The Proposed Development would have an effect on woodlands, trees and hedgerows as discussed within the assessment of construction and decommissioning effects at the start of this chapter

Effects on Landscape Character

- 7.7.40 In the absence of a current and consistent landscape character assessment across Denbighshire and Conwy, the baseline landscape character, sensitivity, magnitude of effects and overall significance of effects in relation to the Proposed Development are described with reference to fourteen LANDMAP Visual and Sensory Aspect Areas (VSAA) which fall within the Study Area as shown on Figure 7.10 and outlined in Table 7.17.

Table 7.17 LANDMAP Visual and Sensory Aspect Areas (VSAAs)

Area	LANDMAP VSAA Name	VSAA UID
1	Clocaenog Forest	DNBGHVS068
2	Llyn Brenig Moorland/Forest	DNBGHVS069
3	Denbigh and Derwen Hills	DNBGHVS067
4	Central ridges and valleys	CNWVS011
5	Llanefydd Lowlands	CNWVS019
6	Limestone Plateau –Denbigh/Henllan	DNBGHVS039
7	Henllan	DNBGHVS110
8	Afon Elwy Valley – East	CNWVS069
9	Upper Elwy Valley	DNBGHVS038
10	Limestone Valley – Cefn	DNBGHVS037
11	Cefn Estate	DNBGHVS033
12	Kinmel Park Fringes	DNBGHVS036
13	Wooded Parkland and Parkland Remnants	DNBGHVS035
14	Area North and East of Bodelwyddan	DNBGHVS014

7.7.41 Appendix 7.4 presents the findings of the evaluation of each VSAA together with an assessment of the predicted effects of the 132 kV Overhead Line on landscape character (as per the methodology in Section 7.4), as follows:

- Evaluation of the sensitivity (value and susceptibility);
- Assessment of the magnitude of landscape effect (size/ scale of effect and geographical extent); and

7.7.42 Overall judgement of the significance of landscape effects.

Landscape Effects Summary Tables

7.7.43 Table 7.18, summarises the findings of the assessment of landscape sensitivity based on overall judgements of susceptibility and value of the landscape of each VSAA to the Proposed Development.

Table 7.18 Summary Findings of Assessment of the Sensitivity of VSAA

Area	Receptor (VSAA's)	Value	Susceptibility	Sensitivity
1	Clocaenog Forest	Low-medium	Low	Low
2	Llyn Brenig Moorland/Forest	Medium	Medium	Medium
3	Denbigh and Derwen Hills	Medium-high	Medium-high	Medium-high
4	Central Ridges and Valleys	Medium-high	Medium	Medium-high
5	Llanefydd Lowlands	Medium-high	Medium	Medium-high
6	Limestone Plateau – Denbigh/Henllan	Medium	Low-medium	Medium
7	Henllan	Medium	Medium	Medium
8	Afon Elwy Valley – East	Medium-high	Medium-high	Medium-High
9	Upper Elwy Valley	High	Medium-high	High
10	Limestone Valley – Cefn	High	Medium	Medium-high
11	Cefn Estate	Medium	Low-medium	Medium
12	Kinmel Park Fringes	Medium	Medium	Medium
13	Wooded Parkland and Parkland Remnants	High	Medium	Medium-high
14	Area North and East of Bodelwyddan	Low-medium	Low	Low-medium

7.7.44 Table 7.19 below presents a summary of the overall judgements of size/ scale of effect, geographical extent and overall magnitude of effect on the landscape of each VSAA.

Table 7.19: Summary Findings of Assessment of Magnitude of Effect

Area	VSAA	Size/ Scale of effect	Geographical extent	Overall Magnitude of landscape effect
1	Clocaenog Forest	Small	Small	Small
2	Llyn Brenig Moorland/Forest	Negligible	Small	Small
3	Denbigh and Derwen Hills	Medium	Small	Small-Medium
4	Central Ridges and Valleys	Negligible	Negligible	Negligible
5	Llanefydd Lowlands	Small-Medium	Small	Small-Medium
6	Limestone Plateau – Denbigh/Henllan	Small	Small	Small
7	Henllan	Negligible	Negligible	Negligible
8	Afon Elwy Valley – East	Medium-large	Small	Medium
9	Upper Elwy Valley	Medium-large	Small	Medium
10	Limestone Valley – Cefn	Small	Small-Medium	Small-Medium
11	Cefn Estate	Negligible	Negligible	Negligible
12	Kinmel Park Fringes	Negligible	Negligible	Negligible
13	Wooded Parkland and Parkland Remnants	Negligible	Negligible	Negligible
14	Area North and East of Bodelwyddan	Negligible	Negligible	Negligible

7.7.45 Table 7.20 below presents a summary of the overall effects of the Proposed Development on the landscape of the Study Area (based on the LANDMAP VSAs), together with an indication of where effects are likely to be significant.

Table 7.20: Summary Findings of Assessment of Effect on Landscape Character

Area	VSAA	Sensitivity	Magnitude of Effect	Overall Significance of Landscape Effects	Significant Landscape Effects
1	Clocaenog Forest	Low	Small	Minor	
2	Llyn Brenig Moorland/Forest	Medium	Small	Minor	
3	Denbigh and Derwen Hills	Medium-high	Small-Medium	Moderate	✓
4	Central Ridges and Valleys	Medium-high	Negligible	Negligible	
5	Llanefydd Lowlands	Medium-high	Small-Medium	Moderate	✓
6	Limestone Plateau – Denbigh/Henllan	Medium	Small	Minor	
7	Henllan	Medium	Negligible	Negligible	
8	Afon Elwy Valley – East	Medium-High	Medium	Moderate	✓
9	Upper Elwy Valley	High	Medium	Moderate	✓
10	Limestone Valley – Cefn	Medium-high	Small-Medium	Moderate	✓
11	Cefn Estate	Medium	Negligible	Negligible	
12	Kinmel Park Fringes	Medium	Negligible	Negligible	
13	Wooded Parkland and Parkland Remnants	Medium-high	Negligible	Negligible	

Area	VSAA	Sensitivity	Magnitude of Effect	Overall Significance of Landscape Effects	Significant Landscape Effects
14	Area North and East of Bodelwyddan	Low-medium	Negligible	Negligible	

Summary of Operational Landscape Effects

- 7.7.46 The Proposed Development would not result in any landscape effects on the designated landscapes of Snowdonia National Park or the Clwydian Range and Dee Valley AONB.
- 7.7.47 The Proposed Development would not result in any significant landscape effects on any other designated and undesignated features (which have a landscape aspect).
- 7.7.48 With respect to the landscape character along the route as identified through the assessment of the effects on LANDMAP Visual and Sensory Aspect Areas (VSAA) within the Study Area, significant landscape effects would potentially arise in the following areas:
- the landscape of the Denbigh and Derwen Hills, in particular the ridges to the north of Tir Mostyn and to the north of Peniel would experience a **moderate** effect;
 - the localised parkland character of parts of the landscape of the Llanefydd Lowlands would experience a **moderate** effect;
 - the landscape of the Afon Elwy Valley (Afon Elwy Valley – East and Upper Elwy Valley) would experience a **moderate** effect; and
 - the landscape of the Cefn Meiriadog Ridge (Limestone Valley – Cefn) would experience a **moderate** effect which would be significant, albeit on the low side of moderate.
- 7.7.49 Although significant, these effects were assessed as **moderate**; with none assessed as major.

Assessment of Operational Visual Effects

7.7.50 The assessment establishes how people at different locations may be affected by changes to their view or general outlook as a result of the Proposed Development.

7.7.51 Consideration is given to the likely significant visual effects of the Proposed Development on:

- views and visual amenity from specific viewpoints; and
- residential visual amenity of individual and groups of properties.

7.7.52 These assessments are based on the assumption that pole positions lie on the centreline of the Limits of Deviation (i.e. the Final Route Alignment) and all measurements are taken from this alignment. Where there is likely to be a change in the overall magnitude of the visual effect if the pole positions move (for example, closer to the viewpoint), this has been noted in the visual assessment presented in Appendix 7.3).

Aspects of the Proposed Development Likely to Generate Visual Effects during Operation

7.7.53 Table 7.16 (Section 7.7) sets out the potential sources of impact and likely effects on the landscape and on views.

7.7.54 The main visual effects of the Proposed Development during its operational life would be the presence of additional, modern man-made structures within the countryside, in this case 218 double wood pole structures and overhead lines. Once constructed, there would be no moving parts or lighting and the Proposed Development would require only occasional visits for maintenance and repair.

7.7.55 Whilst the structural cross bracing, supports and conductors would be visible, the main features of the Proposed Development that would give rise to visual effects would be the wood poles, their appearance, height and spacing. As with any external material, wood poles are susceptible to weathering and consequent weather variations. The colour of the poles at the time of construction would be dark brown but this would fade over time to be a noticeably lighter silver-grey. The rate of colour change would depend on weather conditions and to some degree the type of timber and timber treatment used. Over time, these changes would reduce the perceptibility of elements viewed above the skyline, but may increase the visibility of structures when viewed against a dark background such as a conifer plantation. The metal bracing and the conductors would be constructed from aluminium, which is initially shiny but tends to dull over time to dark matt silver.

Establishing the Nature of Existing Views & Extent of Potential Views

- 7.7.56 As described in Section 7.4, Methodology the assessment of the visual effects arising from the Proposed Development was undertaken in two stages and involved preparation of a Zone of Theoretical Visibility (ZTV). A large quantity of baseline data was acquired through desk and field study (ongoing since 2011) including the field and desk based 2012/3 Visibility Appraisal of the five route corridors, a visibility overview of the Preferred Route Corridor and its surroundings, including identification of key visual receptors in the Preliminary Environmental Information Report. Sensitive areas (residential areas, protected sites and recreation areas/ routes) and areas where a greater number of viewers may be present (main roads and edges of settlement) were identified for detailed visual assessment.
- 7.7.57 The ZTV indicates that, in general, visibility lessens considerably over 2km from the Final Route Alignment and supports the reasoning behind the 2km extent of the Study Area and selection of viewpoints. The ZTV indicates the potential for views from the south west in the direction of the Denbigh Moors, however, as this is an area of plantation forestry views would be restricted to the eastern edge of the plantation on the upper slopes of the Lliwen valley.
- 7.7.58 The ZTV indicates there would be little or no visibility from the south of the Study Area in the direction of Clocaenog Forest. Views would be restricted to the northern edge of the plantation forestry. North of the Study Area beyond Cefn Meiriadog, the ZTV indicates that a small number of poles would be visible, but it is anticipated that such views would be limited by intervening vegetation, which would further reduce the likely visibility of the 132 kV Overhead Line. These findings support the established baseline and the visual assessment.
- 7.7.59 Views of the Proposed Development would generally be experienced by users of the footpath network, local lanes, B-class roads, the A543, individual scattered residential properties, small hamlets and farmsteads, and from the edge of settlement at Saron, Peniel, and Groesffordd Marli.
- 7.7.60 Due to these limitations, the assessment of effects on views was undertaken through an analysis of topography, followed by extensive field survey both to identify features that may screen potential views, and to identify potential visual receptors. Field survey work for the visual assessment was carried out at the same time as the landscape assessment.

(Extent of) Visibility of the Proposed Development

7.7.61 Visibility of the Proposed Development is described from south (Clocaenog) to north (St Asaph), using identifiable elements such as settlements, roads and distinctive landscape features. The description is sub-divided into 4 sections (a, b, c, d) which are illustrated in Figure 7.9 (sheets 1 to 4). Reference is made to the LANDMAP area names as described in the landscape baseline, since the nature and the extent of views within and from a landscape form an important aspect of the character and quality of a landscape.

Clocaenog to Bwlch (Section A) See Figure 7.9 (sheet 1 of 4)

7.7.62 The Proposed Development originates at the proposed Collector Substation, located on the upland north eastern edge of the Clocaenog Forest (close to the existing Tir Mostyn and Foel Goch wind farm) within the managed coniferous forest. Clocaenog Forest forms the transition from the Denbigh Moors (Mynydd Hiraethog) in the south and west, to the Denbigh and Derwen Hills in the north. The location of the Collector Substation is visually contained by the surrounding forestry and rising landform and is not visible from lowland areas. As such, the terminal pole is only likely to be visible only from the immediate forest area and the minor road, which runs close to the Collector Substation. Landform and intervening plantation would prevent recreational receptors having any views of the Proposed Development from the wider Clocaenog Forest area, including the Clwydian Way Regional Trail in the south and Llyn Brenig.

7.7.63 The Final Route Alignment crosses the minor road that accesses the existing wind farms, before heading north east along the exposed and elevated ridge near Tir Mostyn. From here there are views to the western slopes of the adjacent Lliwen valley, Foel Gasyth Open Country Area in the north, Nantglyn in the north west, with partial views stretching as far as the North Wales Coast to the north, and Clwydian Range to the east. The ridgeline which extends east from Foel Gasyth contains any views to the north, north east and north west.

7.7.64 There are two residential receptors (ID 18 and 19) located to the east of the minor road which lie close to the Final Route Alignment and more distant properties and settlements on the slopes of the Lliwen Valley to the west. A long section of the Proposed Development is likely to be visible in oblique views from one of these properties (Hafod Olygfa, ID19). The Proposed Development is likely to be visible, and in places skylined on the ridge, from some of the more distant (>1km) receptors to the west, including Nantglyn, scattered residential properties, footpaths and the minor road network on the western Lliwen valley slopes. Residential properties and users of footpaths/ the open country access area south and west of Foel Gasyth, are likely to have long views of the Proposed Development, at a distance of >700m from the Proposed Development.

- 7.7.65 Due to the topography of the Tir Mostyn ridge, road users and properties along the B4501 south of Saron, and the eastern slopes of the Lliwen valley, are unlikely to see the Proposed Development, although glimpses may be possible were there are variations in local topography. There are unlikely to be any views of the line from the south, from Llyn Brenig and the Denbigh Moors (Mynydd Hiraethog).
- 7.7.66 Long sections of the Proposed Development are likely to be visible from the footpath network which crosses through adjacent fields, from Bryn Golau (residential receptor ID 17, and Poultry Farm, which is one field away from the proposed 132 kV Overhead Line), and from residential receptors west of Saron. Users of the B4501 and B5435 and local lanes are likely to experience both glimpsed and more prolonged views of the Proposed Development depending on the continuity and heights of hedgerows and hedgerow trees. There would also be views of long sections of the Proposed Development from Foel Gasyth Open Country area (over 1km away), from the eastern edge of the Bryn Glas Caravan Park (but not from within the caravan park), and from the more distant scattered residential properties along the B4501 north of Saron and on the edge of settlement at Saron, including those on the slopes of Moel Ytta.
- 7.7.67 The Proposed Development is likely to remain visible as it crosses the B5435 west of Saron, passing within one or two fields from residential properties (Cefn Maen Isa ID 15 and 15a) on the edge of settlement, and would be visible from these properties and the road.
- 7.7.68 Views of the Proposed Development are likely to become more contained by local topography and vegetation as it crossed the undulating valley floor north of Saron. The Proposed Development is unlikely to be visible as it crosses the watercourse. As it rises steeply up the distinctive bracken covered ridge east of Foel Gasyth (near Bwlch) it is likely to be clearly visible from the footpath that runs between Bron Heulog and Bryn Foel, and stacked in views approximately 1km from the settlement at Saron, the recreational receptors using the footpath network between Saron and Tir Mostyn, the Caer Mynydd Caravan Park, and possibly in oblique glimpses from Bryn Glas Caravan Park. Scattered residential properties along the B4501 and on the slopes of the ridge are likely to have views as the overhead line ran up the ridge >400m away. Residential receptor Tan yr Allt is likely to have open views of the overhead line in close proximity. The Proposed Development may briefly skyline at this point since there would be some felling of the trees on this ridge however, the remaining woodland is likely to provide screening and minimise the extent of potential skylining.
- 7.7.69 Indicative viewpoints of Section A are:
- Viewpoint 2 (Saron);
 - Viewpoint 3 (Foel Gasyth);
 - Viewpoint 45 (Llyn Brenig);
 - Viewpoint 47 (Lliwen valley slopes); and
 - Viewpoint 42 (Nantglyn).

Bwlch to Eriviat (Section B) See Figure 7.9 (Sheet 2 of 4)

- 7.7.70 The Proposed Development continues north through the Denbigh and Derwen Hills and crosses the ridge east of Foel Gasyth. There are expansive views from this location extending to the Clwydian Range in the east, the upland areas such as Moel Fodiar to the west, and the limestone plateau that runs from Henllan to Denbigh to the north. It is unlikely that receptors at these locations would be able to see the Proposed Development or identify it as a major feature within views, due to its relatively low height and the extent of tree cover along this section of the Final Route Alignment. Some views of the Proposed Development are likely to be obscured by a coniferous woodland block and a deciduous woodland block which flank the route as it briefly skylines on the ridge, but it would be visible to the north and north east, particularly where it would appear in foreground views and from the edge of settlement at Peniel, from the B4501 and the local footpath network. The Proposed Development becomes less visible in the wider landscape as it passes through grazing land adjacent to wooded copses, then through a low and localised stream valley, before rising up again as it crosses the B4501 above Plas Captain. Users of the B4501 and scattered properties within a few hundred metres of the route would have views of the Proposed Development as it crosses a localised ridge above Plas Captain, and there are likely to be backclothed views of the line from more distant lower areas to the west, north and north east.
- 7.7.71 The Proposed Development would be visible from scattered residential properties and public footpaths near Peniel and Segrwyd, and from the northern slopes of Foel Gasyth Open Country Region (Open Access Land) as it runs down into the lower sections of the broad valley near Segrwyd, including the residential receptor at Ty Coch and the local lane. It would become largely obscured as it traverses the steep river valley where the Afon Ystrad cuts through Pandy.
- 7.7.72 Beyond Pandy, the Proposed Development would be visible from a minor road where there are scattered properties and from the adjacent pastureland near Bodeiliog Isaf and towards the A543. The Proposed Development is likely to become more visible to the east as it crosses the slightly elevated section of the A543 where there are longer views over the landscape to distant upland areas. Gwaenynog Registered Park and Garden is unlikely to experience views over the Proposed Development due to intervening vegetation (woodland blocks and hedgerow trees) and local landform undulations. The Proposed Development is not likely to be perceptible from the distant upland areas due to its relatively low height. The Proposed Development is not likely to be widely visible as it descends into the more formal parkland area around Eriviat Hall and skirts around Beacon Hill.

7.7.73 Indicative viewpoints of Section B are:

- Viewpoint 5 (B4501 Peniel);
- Viewpoint 6 (North of Foel Gasyth);
- Viewpoint 8 (Pandy/Segrwyd);
- Viewpoint 10 (Gwaenynog);
- Viewpoint 11 (A543 Eriviat);
- Viewpoint 13 (Denbigh Castle);
- Viewpoint 50 (East of Foel Gasyth); and
- Viewpoint 51 (Groes).

Eriviat to Plas Buckley via Hafod (Section C) See Figure 7.9 (Sheet 3 of 4)

- 7.7.74 From Eriviat, the Final Route Alignment turns to the north west, and the Proposed Development is likely to become more locally visible in views from scattered residential receptors and footpaths as it briefly skylines on the ridge adjacent to Coed Wern-ddu before running down and across the B5428 close to Eriviat Bach Isaf, which is presently well screened due to intervening vegetation on the perimeter of the property. Foxhall Newydd is unlikely to experience views due to intervening vegetation on the edge of the essential setting. Views from Henllan are likely to be backclothed.
- 7.7.75 There are unlikely to be views of the Proposed Development as it passes a steep sided, densely wooded valley and continues to head down the broad gently undulating valley between Eriviat and Hafod Wood. Scattered residential properties located within a few hundred metres of the Proposed Development are likely to have views of the line, particularly as it rises in the landscape on the approach to Hafod Wood, as the Final Route Alignment crosses (and is visible from) the B5382.
- 7.7.76 The Proposed Development is likely to be visible in the foreground of some views from the Clwydian Way Regional Trail as it crosses the narrow strip of ASNW (Ancient Semi Natural Woodland) at Hafod Dingle, before heading directly north. The ASNW is subject to some felling. The Proposed Development is likely to be visible from scattered residential properties (including Lechryd Bach, ID 432) and users of local roads, as it crosses the minor road near Hafod Wood.
- 7.7.77 The Final Route Alignment runs across a sloping section of the Llanefydd Lowland landscape that is relatively open. Long views of the Proposed Development (as it crosses the medium to large scale fields around Berain), are broken by mature hedgerow trees. Views are contained by the layering effect of vegetation within field boundaries and topography. This landscape may be visible from distant upland areas (including the Moel Fodiar Statutory Access Land), but the Proposed Development is likely to be imperceptible. The 132 kV Overhead Line is likely to be visible from local lanes close to Berain, and (as it skirts to the west of the hamlet) from the cluster of listed buildings at Berain. The Proposed Development would

be visible as it crosses a local lane on the approach to Tyddyn Bartley (which lies to the west).

7.7.78 Indicative viewpoints of Section C are:

- Viewpoint 12 (B5428 Eriviat);
- Viewpoint 14 (Footpath southeast of Henllan);
- Viewpoint 15 (B5382 Hafod);
- Viewpoint 17 (St Sawdwrn's Church, Henllan);
- Viewpoint 19 (Foxhall Registered Park and Garden);
- Viewpoint 26 (Berain); and
- Viewpoint 28 (Moel Fodiar).

Plas Buckley to Groesffordd Marli (Section D) See Figure 7.9 (Sheet 4 of 4)

7.7.79 The Proposed Development is likely to be visible in foreground views from the local lane, residential receptors near Croen Llwm Mawr and the North Wales Pilgrim's Way long distance trail, as it runs north west close to the minor road, into a shallow localised valley and through a block of coniferous plantation that is subject to some felling. The Proposed Development would remain visible in local views as it runs broadly north west through pastureland, across a minor road and onto higher ground on the western slopes of the Elwy Valley before heading towards the farmland east of Bod-ysgawen Isaf.

7.7.80 Views of the Proposed Development are likely in wider views across the Elwy Valley as it reaches the upper western slopes and heads towards the river. These views would typically be contained within the Elwy Valley with the potential for some poles to be visible as a small element in views from distant upland areas (including the Mynydd y Gaer Statutory Access Land), as the Final Route Alignment runs across the upper slopes. Scattered residential receptors, recreational receptors drawn to the Registered Historic Landscape of the Elwy and the users of the public footpath network are likely to have views of the overhead line although intervening vegetation, though the layering effect of field boundaries and backclothing would help screen some of these views. There are unlikely to be any views to the Elwy Valley Special Landscape Area due to intervening landform and proximity.

7.7.81 The Proposed Development is unlikely to be widely visible as it crosses the broad and steep sided river valley, although there is the potential for distant views of a very small section of the line along the river bed, from Glan-yf-Afon (ID 322) and recreational users of the Afon Elwy.

7.7.82 The Proposed Development is likely to become visible again as it continues north east, heading up the eastern slope of the Elwy Valley, through pastureland bounded with hedgerows and mature oak trees, which are a distinctive feature within this landscape.

- 7.7.83 Scattered properties close to the Cefn Meiriadog ridge (including IDs 339-342) and users of local lanes and footpaths are likely to experience views. The Proposed Development is unlikely to be visible in the wider Elwy Valley due to the scale of the wood poles within the well treed landscape, and the layered screening effect of field boundaries.
- 7.7.84 The Proposed Development would briefly skyline as it passes over the Cefn Meiriadog ridge where there are longer views towards St Asaph and in the direction Bodelwyddan Castle and the A55. These distant receptors are unlikely to perceive the 132 kV Overhead Line as a prominent element within views, due to the height of the poles and due to the small number of poles that would be visible on the ridge, and also due to intervening vegetation that screens views of the ridge. The Proposed Development is likely to be visible and stacked (approximately 3 poles, including the terminal pole) in views from the small cluster of properties at Groesffordd Marli, and the users of the local lane and public footpath. There is potential for one or two of these poles to be skylined. The remainder of the line is routed underground to avoid the existing 400kV infrastructure and minimise the potential increase in cumulative visual effects of the infrastructure which already exists in this area.
- 7.7.85 Indicative viewpoints of Section D are:
- Viewpoint 27 (Croen Llwm Mawr);
 - Viewpoint 29 (Mynydd y Gaer);
 - Viewpoint 31 (Llanefydd);
 - Viewpoint 32 (Plas Buckley);
 - Viewpoint 34 (Elwy Valley);
 - Viewpoint 37 (Plas Hafod, Elwy Valley);
 - Viewpoint 39 (Cefn Meiriadog);
 - Viewpoint 40 (B5381 Glascoed Rd, St Asaph);
 - Viewpoint 41 (Bodelwyddan); and
 - Viewpoint 48 (St Asaph Cathedral).

Effects on Visual Amenity

Statutory Landscape Designations

- 7.7.86 As has been described within Section 7.3, Mr Gareth Lloyd on behalf of Snowdonia National Park does not consider that there would be any adverse visual effects on its residents or visitors to Snowdonia.
- 7.7.87 The Clwydian Range and Dee Valley AONB lies approximately 7km to the west. In view of the scale and location of this development, the distances involved and the effect of intervening topography and vegetation, it is considered that there would be no adverse visual effects on residents or visitors to the AONB at any time during construction, operation or decommissioning.
- 7.7.88 The Clwydian Range and Dee Valley AONB Joint Advisory Committee requested that consideration be given to undergrounding and that wood pole support structures would be preferable to steel towers. Otherwise they considered that the intervening distance should minimise any impacts.

Effects on Viewpoints

- 7.7.89 A total of 30 viewpoints were assessed and the full results of the assessment are presented in Appendix 7.3 together with the viewpoint photographs, photomontage images and accompanying plans and wireframes. Photomontages were prepared for illustrative purposes and are based on current pole positions. Locations of viewpoints are illustrated in Figure 7.1. Appendix 7.5 describes the method used to take photographs and produces wireframes and photomontages.
- 7.7.90 The viewpoint assessment is based on the Final Route Alignment. Where positioning the wood poles in a different location within the Limits of Deviation would affect the assessment, this is reported.
- 7.7.91 During assessment of the viewpoints, consideration was given to existing low voltage overhead lines and to any proposed undergrounding and diversions to the lines (see Appendix 1.4 'Description of Proposed Development' (DCO Document Ref 6.17) for details of works to overhead line crossings).
- 7.7.92 Table 7.21 identifies the viewpoint locations which have been considered in the assessment, and gives a summary of the findings from the viewpoint assessment.
- 7.7.93 Table 7.21 contains a description of the views from selected viewpoints, together with an assessment of the sensitivity of the receptor, the value of the view, the predicted change in the view, overall magnitude of change and assessment of significance. Distances described in the Table may change slightly due to changes in pole positions within the Limits of Deviation as explained previously in this chapter.

Table 7.21: Summary of Viewpoint Assessment

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
02	From the B5435 on the western edge of Saron village. Approx. 290m AOD.	Approx. 294m to nearest wood pole. Distance to centreline of Limits of Deviation: 294m east of alignment. Distance to nearest edge of Limits of Deviation: 283m.	High	Medium	Moderate	Significant
03	From the junction of the B4501 east of Foel Gasyth near Bron Haul. Approx. 330m AOD.	Approx. 654m to nearest wood pole. Distance to centreline of Limits of Deviation: 654m west of alignment. Distance to nearest edge of Limits of Deviation: 625m.	High	Medium	Moderate	Significant
05	From the B4501 south of Plas Captain, heading to Peniel, approx. 190m AOD.	Approx. 91m to nearest wood pole. Distance to centreline of Limits of Deviation: 91m east of alignment.	High	Medium	Moderate	Significant

²³ Distances to receptors beyond the boundaries of the LoD have been calculated to the closest point along the boundary (although due to technical considerations, for example conductor swing and failure containment structures, it would never be possible to locate a pole along this boundary).

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
		Distance to nearest edge of Limits of Deviation: 70m.				
06	From an elevated location adjacent to the minor road (south of Peniel) which wraps around Foel Gasyth, west of the property at Holt. Approx. 265m AOD. View looking NE towards Peniel and Denbigh.	Approx. 892m to nearest wood pole. Distance to centreline of Limits of Deviation: 893m west of alignment. Distance to nearest edge of Limits of Deviation: 873m.	High	Small	Minor	Not Significant
08	From the public footpath north of Ty-Coch on the minor road which runs south of Gwaenynog Registered Park and Garden to the Segrwyd Mill and Segrwyd Goch area. Approx. 140m AOD.	Approx. 183m to nearest wood pole. Distance to centreline of Limits of Deviation: 182m east of alignment. Distance to nearest edge of Limits of Deviation: 172m.	High	Medium	Moderate	Significant
10	View from just south of the A543 on a public footpath heading to Gwaenynog Registered Park and	Approx. 803m to nearest wood pole. Distance to centreline of Limits of Deviation: 846m east of alignment.	High	Small	Minor	Not Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
	Garden. Approx.167m AOD.	Distance to nearest edge of Limits of Deviation: 826m.				
11	From the A543 as it runs from Groes to Denbigh, approx. Approx. 180m AOD.	Approx. 43m to nearest wood pole. Distance to centreline of Limits of Deviation: 34m east of alignment. Distance to nearest edge of Limits of Deviation: 23m.	Medium	Medium	Moderate	Significant
12	From the B5428 near Eriviat Bach-Isaf and Eriviat Bach-Uchaf. Approx. 140m AOD	Approx. 156m to nearest wood pole. Distance to centreline of Limits of Deviation: 156m west of alignment. Distance to nearest edge of Limits of Deviation: 146m.	Medium	Medium	Moderate	Significant
13	Denbigh Castle. Approx. 140m AOD	Approx. 3.2km to nearest wood pole. Distance to centreline of Limits of Deviation: 3.153km east of alignment. Distance to nearest edge of Limits	High	Small	Minor	Not Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
		of Deviation: 3.133km.				
14	On the public footpath southeast of Henllan, that runs from Broadleys Covert to the south of Foxhall Registered Park and Garden.	Approx. 1145m to nearest wood pole. Distance to centreline of Limits of Deviation: 1147m east of alignment. Distance to nearest edge of Limits of Deviation: 1.124km.	High	Small	Minor	Not Significant
15	Near Henllan, from the B5382 west of Henllan near Hafod Farm and Pen Parc Llwyd. Approx. 190m AOD	Approx. 490m to nearest wood pole. Distance to centreline of Limits of Deviation: 492m west of alignment. Distance to nearest edge of Limits of Deviation: 470m.	High	Small	Minor	Not Significant
17	Henllan, St Sadwrn's church yard. Approx. 130m AOD.	Approx. 1.1km to nearest wood pole. Distance to centreline of Limits of Deviation: 1.120km east of alignment. Distance to nearest edge of Limits of Deviation: 1.098km	High	Small	Minor	Not Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
19	Foxhall Registered Parks and Gardens. Approx. 160m AOD.	Approx. 1.47km to nearest wood pole. Distance to centreline of Limits of Deviation: 1.468km east of alignment. Distance to nearest edge of Limits of Deviation: 1.446km.	High	Negligible	Negligible	Not Significant
26	Near Berain house and farm – listed buildings. Approx. 150m AOD.	Approx. 476m to nearest wood pole. Distance to centreline of Limits of Deviation: 477m east of alignment. Distance to nearest edge of Limits of Deviation: 467m.	High	Medium	Moderate	Significant
27	Croen Llwm Mawr northwest of Henllan, near Tyddyn Bartley and Berain.	Approx. 40m to nearest wood pole. Distance to centreline of Limits of Deviation: 40m west of alignment. Distance to nearest edge of Limits of Deviation: 30m.	High	Medium	Moderate	Significant
28	Moel Fodiar. Approx. 390m AOD	Approx. 2.2km to nearest wood	High	Small	Minor	Not

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
		<p>pole.</p> <p>Distance to centreline of Limits of Deviation: 2.188km west of alignment.</p> <p>Distance to nearest edge of Limits of Deviation: 2.167km.</p>				Significant
29	Mynydd y Gaer. Approx. 260m AOD	<p>Approx. 2.2km to nearest wood pole.</p> <p>Distance to centreline of Limits of Deviation: 2.220km west of alignment.</p> <p>Distance to nearest edge of Limits of Deviation: 2.188km.</p>	High	Small	Minor	Not Significant
31	Llanefydd Village (School). Approx. 210m AOD.	<p>Approx. 1.9km to nearest wood pole.</p> <p>Distance to centreline of Limits of Deviation: 1.935km west of alignment.</p> <p>Distance to nearest edge of Limits</p>	High	Negligible	Negligible	Not Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
		of Deviation: 1.913km.				
32	South western approach to the Elwy Valley from Tal y Bryn and Plas Buckley. Approx. 160m AOD.	Approx. 204m to nearest wood pole. Distance to centreline of Limits of Deviation: 204m west of alignment. Distance to nearest edge of Limits of Deviation: 194m.	High	Medium	Moderate	Significant
34	Tan-y-Graig which lies on the north eastern slopes of the Elwy Valley. Approx. 130m AOD.	Approx. 887m to nearest wood pole. Distance to centreline of Limits of Deviation: 888m east of alignment. Distance to nearest edge of Limits of Deviation: 877m.	High	Medium	Moderate	Significant
37	Public footpath near Plas Newydd and Plas Hafod across the open agricultural fields towards the Elwy Valley. Approx. 120m AOD.	Approx. 275m to nearest wood pole. Distance to centreline of Limits of Deviation: 274m west of alignment. Distance to nearest edge of Limits of Deviation: 263m.	High	Medium	Moderate	Significant
39	Footpath adjacent to Pentre Mawr (northeast of the Cefn	Approx. 312m to nearest wood pole. Distance to centreline of Limits of	High	Medium	Moderate	Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
	Meiriadog ridge line) as the corridor approaches St Asaph. Approx. 60m AOD.	Deviation: 314m east of alignment. Distance to nearest edge of Limits of Deviation: 299m.				
40	B5381 Glascoed Road between St Asaph and Bodelwyddan. Looking towards the Cefn Meiriadog ridge line. Approx. 40m AOD.	Approx. 795m to nearest wood pole. Distance to centreline of Limits of Deviation: 795m east of alignment. Distance to nearest edge of Limits of Deviation: 782km.	High	Small	Minor	Not Significant
41	Bodelwyddan Castle looking towards the Cefn Meiriadog ridge line as the corridor runs over the ridge on the approach to St Asaph. Approx. 50m AOD.	Approx. 1.7km to nearest wood pole. Distance to centreline of Limits of Deviation: 1.707km west of alignment. Distance to nearest edge of Limits of Deviation: 1.694km.	High	Negligible	Negligible	Not Significant
42	Footpath northwest of Nantglyn, near residential property 'Hendre'. Approx. 160m AOD.	Approx. 2.5km to nearest wood pole. Distance to centreline of Limits of Deviation: 2.499km west of	High	Medium	Moderate	Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
		alignment. Distance to nearest edge of Limits of Deviation: 2.489km.				
45	Approach road to Llyn Brenig near the B4501 at Bwlch-du.	Approx. 2.5km to nearest wood pole. Distance to centreline of Limits of Deviation: 2.541km west of alignment. Distance to nearest edge of Limits of Deviation: 2.521km.	High	Negligible	Negligible	Not Significant
47	Minor road which runs from the B4501 at Llyn Brenig, along the ridge line on the western edge of the Lliwen valley, towards Soar and Nantglyn. VRs 23-27 are relatively close to this viewpoint.	Approx. 2.4km to nearest wood pole. Distance to centreline of Limits of Deviation: 2.424km west of alignment. Distance to nearest edge of Limits of Deviation: 2.409km.	High	Medium	Moderate	Significant
48	From the cathedral in St Asaph towards the Cefn Meiriadog	Approx. 3.5km to nearest wood pole.	High	Small	Minor	Not Significant

Ref No	Description of Location	Distance to Nearest Visible Indicative Wood Pole, to centreline of Limits of Deviation, and Nearest Edge ²³ of Limits of Deviation, East or West of Alignment	Overall Sensitivity of the Viewpoint	Overall Magnitude of Effects	Effect on Visual Amenity	Significance of Visual Effect
	ridge.	Distance to centreline of Limits of Deviation: 3.461km east of alignment. Distance to nearest edge of Limits of Deviation: 3.447km.				
50	From Tan y Garth which lies close to the ridge east of Foel Gasyth, along the alignment towards Peniel and Plas Captain	Approx. 5m to nearest wood pole. Distance to centreline of Limits of Deviation: 8m along the alignment. Distance to nearest edge of Limits of Deviation: 0m (within LoD)	High	Medium	Moderate	Significant
51	From B5428, the edge of settlement at Groes village, in the direction of the alignment.	Approx. 856m to nearest pole which cannot be seen from this location, and 858m to nearest pole in the direction of this viewpoint, west of alignment. Distance to nearest edge of Limits of Deviation: 835m	High	Negligible	Negligible	Not Significant

Summary of Operational Visual Effects

- 7.7.94 The Final Route Alignment is a response to detailed desk top study and field survey work to identify a route which would minimise the likely effects on views and wide visual amenity. An overhead line would be visible in the landscape, but the double wood pole support chosen is of an appropriate scale in this landscape (similar in height to mature trees, and generally lying below the horizon formed by the tree canopy) and is constructed from a material which sits well within this (largely) well-treed landscape. As such, effects would be limited by considered routeing and selection of an appropriate support structure.
- 7.7.95 The viewpoints that have been assessed represent some of the more sensitive receptors identified along the Final Route Alignment.
- 7.7.96 **Moderate** effects are predicted for 15 out of 30 viewpoints. Typically these are viewpoints where the visual receptors are considered to be highly susceptible to changes in their view, and where the overhead line would typically be:
- present in the foreground view and close to the viewpoint;
 - present over a significant proportion of the foreground view;
 - visible over a large geographic extent of the view; with limited intervening screening; and
 - skylined in views.
- 7.7.97 The visual effect arising from the Proposed Development is likely to be **negligible** or **minor**, and therefore not significant, for the remaining 15 viewpoints.
- 7.7.98 No major adverse visual effects have been identified.
- 7.7.99 Figure 7.11 illustrates all the viewpoints and also identifies those likely to experience moderate effects.
- 7.7.100 It should be noted that when describing the nature of the views, those experienced by users of public rights of way and users of roads are generally considered to be intermittent and transient (one of a series of views experienced by the people as they walk along the footpath or travel along the road). This is likely to be the case for much of the Proposed Development, however, it is likely that more prolonged views of would be experienced from footpaths in the more exposed and open upland areas to the south of the route near Foel Gasyth and Tir Mostyn. Views experienced from receptors within local communities, edge of settlements, hamlets, caravan parks, etc., are considered to be fixed, and therefore likely to be prolonged.

Clocaenog to Bwlch (Section A)

- 7.7.101 Views of the Proposed Development are likely to be largely contained within the Lliwen Valley due to the topography of the valley and the Foel Gasyth ridge to the north of this section. Viewpoints 2, 3, 42 and 47 have views in the direction of Section A, and the effect on visual amenity arising from the 132 kV Overhead Line is likely to be **moderate**.
- 7.7.102 Viewpoints that are predicted to experience **moderate** visual effects (42 and 47) are located in Section A to the south of the Study Area near Clocaenog, where there are views over elevated upland areas and of the overhead line as it runs along the Tir Mostyn ridge. Overall sensitivity of the viewpoints is considered to be high, whilst the value of the views is considered medium due to their local importance rather than designated status. Up to sixteen poles are likely to be skylined along the Tir Mostyn ridge (depending on the exact viewing location), but due to the scale of the structures (wood poles 7 to 24 are likely to have an above ground height of 10.9-13.4m) and the intervening distance (>2km), they are likely to be viewed as small features in wide and relatively far-reaching views that already include a wind farm, telegraph poles and existing lower voltage overhead lines. The Final Route Alignment, along the shoulder of the Tir Mostyn ridge (rather than at a lower level), was developed in order to prevent skylining in views from receptors that lie along the western flank of the ridge, including receptors along the B4501 and the Lliwen Valley. If the Proposed Development had been routed closer to these properties the magnitude of the effect and resulting level of significance of effect would have been higher as these receptors are considered to have a high susceptibility to changes in their view.
- 7.7.103 Viewpoint 3 is representative of views from receptors along the southern face of the Foel Gasyth ridge and Open Country Region (Open Access Land). Overall sensitivity of the viewpoint is considered high due to the Open Country Region status and the presence of clusters of residential properties, and the value of this relatively expansive view is considered to be high. The Proposed Development is likely to be visible in sustained views over a 3km section of the ridge, as it runs along the rising land on the shoulder of the ridge. However, it is likely to be fully backclothed and (as above) the poles are likely to be viewed as small features in a wide and relatively far-reaching view that already include a wind farm, telegraph poles and existing low voltage lines. As such the significance of the visual effect is predicted to be **moderate**.
- 7.7.104 Viewpoint 2 is representative of views from the edge of the settlement at Saron, and from recreational receptors such as users of the Caer Mynydd Caravan Park. Views are largely contained by the Foel Gasyth ridge to the north, and the rising landform of Moel Ytta to the south. Whilst the overall sensitivity of the viewpoint is likely to be high (edge of settlement), the value is local and therefore medium. The geographic extent of visibility is potentially high, but intervening distance, vegetation and the scale of the poles is likely to reduce this and as such the significance of the visual effect is predicted to be **moderate**.

Bwlch to Eriviat (Section B)

- 7.7.105 Views of the Proposed Development as the Final Route Alignment crosses the Denbigh and Derwen Hills on its approach into the Llanefydd Lowlands, are likely to be from viewpoints that are very close to the alignment. Viewpoints 5, 8, 11 and 50 have views in the direction of Section B, and the effect on visual amenity arising from the Proposed Development is likely to be **moderate**.
- 7.7.106 These views are generally of local (and therefore medium) value, whilst receptors (mainly from very small settlements, hamlets, clusters of residential receptors, users of local roads and footpaths) are likely to have a high overall sensitivity.
- 7.7.107 The potential geographic extent of view is likely to be high, but is reduced in magnitude by the presence of intervening vegetation and backclothing from hedgerow trees and woodland blocks.
- 7.7.108 Viewpoint 50 would experience views of the 132 kV Overhead Line over a significantly greater geographic area that extends well into the Llanefydd Lowlands, but it would be imperceptible due to intervening vegetation, distance and the scale of the poles.
- 7.7.109 Viewpoints that are at a greater distance from the Proposed Development within Section B, are unlikely to experience significant effects on their visual amenity due to the intervening vegetation, distance from the Final Route Alignment and scale of the 132 kV Overhead Line within this landscape.
- 7.7.110 This can be seen in Viewpoint 6 on the northern flank of the Foel Gasyth ridge and Open Country region (Open Access Land), in Viewpoint 10 (adjacent to the essential setting of Gwaenynog Registered Park and Garden), in Viewpoint 13 from Denbigh Castle, and Viewpoint 51 (edge of settlement at Groes).

Eriviat to Plas Buckley via Hafod (Section C)

- 7.7.111 Views of the Proposed Development, as the Final Route Alignment runs through the Llanefydd Lowlands and the Denbigh/Henllan Limestone Plateau on the approach to the Elwy Valley, are likely to be experienced from viewpoints that are very close to the alignment. Viewpoints 12 and 26 have views in the direction of Section C, and the effect on visual amenity arising from the Proposed Development is likely to be **moderate**.
- 7.7.112 Viewpoints 12 (from the B5428 near the privately owned and unregistered setting of Eriviat Hall) and 26 (near the listed buildings and locally valued landscape at Berain) are generally of local (and therefore medium) value, whilst receptors (largely small hamlets, scattered residential receptors, users of local roads and the B5428/ B5382, users of the footpath network including the Clwydian Way Long Distance Footpath) are likely to have a high overall sensitivity.

- 7.7.113 The potential geographic extent of views, which would otherwise be reasonably high, is reduced in magnitude by the presence of intervening vegetation and backclothing from hedgerow trees and woodland blocks. Views of the line are often transient (users of Public Rights of Way, including the Clwydian Way, and users of local road) rather than fixed and prolonged.
- 7.7.114 As such the overall significance of the visual effects is likely be **moderate**. Viewpoints 26 is reflective of this summary, although Viewpoint 12 is likely to experience skylined views of the Proposed Development but over a very small, contained and localised geographic extent.
- 7.7.115 Viewpoints that are at a greater distance from the Proposed Development within Section C are unlikely to experience significant effects on their visual amenity due to intervening screening from vegetation, undulating topography and the scale of the wood poles in relation to existing mature trees (of a similar height and therefore below the horizon formed by the tree canopy).
- 7.7.116 This can be seen in Viewpoints 14 and 19 (in proximity to Foxhall Newydd's registered essential setting), and from Viewpoint 17 (from the church, west of the settlement at Henllan), and from Viewpoint 28 (Moel Fodiar Statutory Access Land and Common Land).

Plas Buckley to Groesffordd Marli (Section D)

- 7.7.117 Views of the Proposed Development (as the Final Route Alignment runs from the Llanefydd Lowlands, to the Elwy Valley and over the Cefn Meiriadog ridge on the approach to St Asaph), are likely to be from viewpoints that are very close to the overhead line, with the exception of the Elwy Valley slopes and the Cefn Meiriadog ridge, where the land is more elevated and views are possible from, between or towards these areas of higher elevation. Viewpoints 27, 32, 34, 37 and 39 have views in the direction of Section D, and the effect on visual amenity arising from the Proposed Development is likely to be **moderate**.
- 7.7.118 Viewpoints 27 and 32 (from the local lane between Henllan and Mynydd Y Gaer, near the listed buildings at Plas Buckley) and 39 (near Groesffordd Marli) are generally of local (and therefore medium) value, whilst receptors (largely small hamlets, scattered residential receptors, users of local roads, users of the footpath network including the North Wales Pilgrim's Way Long Distance Footpath) are likely to have a high overall sensitivity.
- 7.7.119 Proximity of the Proposed Development to the viewpoints is generally close, particularly at Viewpoint 27, and some felling of trees is required to accommodate the Proposed Development. The potential geographic extent of views, which otherwise would be reasonably high, is reduced in magnitude by the presence (and assumed retention) of intervening vegetation and backclothing from hedgerow trees, woodland blocks, topography and the scale of the overhead line in relation the significant number of mature trees and woodland blocks particularly in the area around the Elwy Valley.

- 7.7.120 In the case of Viewpoint 39, there is potential for the Proposed Development to skyline briefly in views as it crosses directly over the Cefn Meiriadog. As such, the overall significance of the visual effects is likely to be **moderate**.
- 7.7.121 Viewpoint 37 lies close to the Final Route Alignment, and the value of the view is high since it overlooks the Lower Elwy Historic Landscape. Overall sensitivity of the viewpoint is high (clustered residential receptors, the public footpath network and recreational visitors drawn by the Registered Historic Landscape), but the geographic extent of the overhead line is reduced by screening from intervening vegetation (mature hedgerow trees) and as such the significance of the effects on visual amenity are likely to be **moderate**.
- 7.7.122 Viewpoint 34 is located in the Elwy Valley next to the Registered Historic Landscape and is likely to have views of the overhead line as it traverses and runs along the upper slopes of the Elwy Valley over a wide geographic extent. The view is largely backclothed, and some sections are screened by intervening vegetation and as such the significance of the effects on visual amenity are likely to be **moderate**.
- 7.7.123 Viewpoints that are at a greater distance from the Proposed Development are unlikely to experience significant effects on their visual amenity due to the intervening vegetation and topography, distance from the alignment and scale of the Proposed Development within this landscape.
- 7.7.124 This can be seen in views from Viewpoint 31 (edge of settlement at Llanefydd), from Viewpoint 29 (Mynydd y Gaer Statutory Access Land and SAM), Viewpoint 41 (Bodelwyddan Registered Park and Garden and essential setting), Viewpoint 40 (B5381 Glascoed road) and Viewpoint 48 (St Asaph Cathedral).

Summary of Significant Effects

- 7.7.125 **Moderate** and therefore significant visual effects have been predicted in the following locations:
- from the settlements, hamlets, clustered properties and footpaths on the western slopes of the Lliwen valley (including Nantglyn), where there are distant but skylined views of the alignment, as it runs across the shoulder of the Tir Mostyn ridge (Viewpoints 42 and 47);
 - from the Open Country Region (Open Access Land), the clustered properties and public footpath network on the southern slopes of Foel Gasyth and the adjacent B4501, where there are long views over the surrounding landscape and of the alignment as it runs (backclothed) along the shoulder of the Tir Mostyn ridge and close to the network of footpaths located on the Tir Mostyn ridge (Viewpoint 3);
 - from footpaths in the more exposed upland areas to the south of the route near Foel Gasyth and Tir Mostyn that are likely to experience more prolonged views of the Proposed Development;

- from the B5435 in Saron, the settlement at Saron, the Caer Mynydd caravan site, the local footpath network which crosses the Proposed Development, and the localised valley around Saron, as the alignment runs north across the valley and heads up over the ridge east of Foel Gasyth (Viewpoint 2);
- from the northern slopes of the ridge east of Foel Gasyth and Peniel, and close to the alignment (part of the Denbigh and Derwen Hills) at Viewpoint 50;
- from hamlets, clustered properties and linear routes which cross or lie close to the Proposed Development as it heads towards the Llanefydd Lowlands via Peniel, Segrwyd, and Eriviat. These are represented by viewpoints at the B4501 northeast of Peniel (Viewpoint 5), the local lane northeast of Segrwyd (Viewpoint 8) and the A543 between Denbigh and Groes (Viewpoint 11);
- from clustered properties, local roads and footpaths close to the route as it crosses more open areas of landscape, areas where tree felling is required (north of Eriviat Bach Isaf and Hafod) and small localised undulations in the Llanefydd Lowlands. These are represented by the localised section of the B5428 near Eriviat Hall where the Proposed Development briefly skylines (Viewpoint 12), and at Berain (Viewpoint 26);
- from clustered properties, local lanes and footpaths close to the route as it crosses well treed areas of landscape (where tree felling is required) and small localised undulations on the approach to the Elwy Valley, including near the North Wales Pilgrim's Way Long Distance Trail (Viewpoints 27 and 32);
- from clustered properties, local lanes and footpaths in the north of the Lower Elwy Valley, close to the route as it crosses well treed areas of landscape on the slopes of the Lower Elwy Valley (Viewpoint 37) and as the Proposed Development crosses the ridges on approach to the valley from the south (Viewpoint 34); and
- from clustered properties, local lanes, and the network of public footpaths on the northern slopes of the Cefn Meiriadog, which lie close to the Proposed Development where it is likely to skyline (in a small section) as it crosses the ridge.

7.7.126 These selected viewpoints are a representative selection of the more sensitive viewpoints within the vicinity of the Final Route Alignment. As such, other receptors (of a similar type) are likely to experience visual effects of similar or lesser significance.

7.7.127 In general significant visual effects are most likely to be experienced at viewpoints close to the Proposed Development. Even then, views are likely to be partially screened by the undulating topography and intervening vegetation.

- 7.7.128 The overhead line is likely to be more visible in views in the south of the Study Area, from the upland locations near Clocaenog, Tir Mostyn and Foel Gasyth.
- 7.7.129 Much of the Proposed Development would be largely unseen from the north of the Study Area, due to the intervening topography of the Cefn Meiriadog ridge.

Residential Visual Amenity Assessment Summary

- 7.7.130 The full Residential Visual Amenity Assessment can be found in Appendix 7.1. This section provides a brief summary of the significant effects identified in the assessment. For further details, including the methodology and detailed assessment, please reference Appendix 7.1.
- 7.7.131 Table 7.22 below details the four individual residential properties or groups of properties within 200m of the Proposed Development where significant visual effects were predicted to occur.
- 7.7.132 The properties in Table 7.22 are unlikely to experience an overbearing effect on their outlook. At Tan Yr Allt, adjustments in routeing (shifting the centreline of the Proposed Development further east, 90m away from the garden boundary) following the statutory consultation, have been utilised to mitigate against a likely major effect on residential visual amenity, resulting in a likely effect of **moderate** significance. The garden boundary at Ty Coch lies over 150m from the nearest pole position (at this distance from the development, a visual effect of major significance is unlikely) and in this case, the **moderate** significant judgement is as a response to the visible geographic extent of the proposed development from the property and the garden. The garden boundary at Lechryd Bach lies over 130m from the nearest pole position (again, at this distance from the Proposed Development, it is unlikely to generate a major effect), however, the Proposed Development is likely to skyline in views to the rear of the property and be visible over a wide field of view. As such the significance of the visual effects of the proposed development is considered to be **moderate** at Lechryd Bach. The property at Plas Hafod lies some 105m from the nearest pole on the centre line of the Limits of Deviation with the garden some 65m away. One double wood pole is likely to be clearly visible in an adjacent field, an existing network of Overhead Lines is present, and other nearby poles are likely to be obscured by intervening hedgerow trees. The visual effects of the proposed development are therefore considered to be of **moderate** significance.

7.7.133 There are an additional 5 locations where effects may become significant if planting (which provides existing screening) was removed, or if the poles were moved within the Limits of Deviation such that they are closer to the receptor. This includes ID 19 at Hafod Olygfa, ID 71a at Pandy Wood (presently derelict), ID 267 Eriviat Bach Isaf, and ID 290 at Berain, and ID 292 at Croen Llwm Mawr. The locations of these visual receptors is identified on Figure 7.12 (sheets 1 to 4).

7.7.134 Table 7.22 details the residential locations from which significant visual effects are predicted to occur, based on the assumption that poles would lie along the centreline of the Limits of Deviation. The distance to the nearest edge of the Limits of Deviation is also given (worst case scenario).

Table 7.22: Residential Locations where Significant Visual Effects Are Predicted To Occur

Ref	Property/ Group Name	Individual (I) or Group (G)	Approx. distance to Nearest Edge of LoD	Sensiti vity	Magnitude	Visual Effect	Significance
7	Tan Yr Allt	I	105m from the property edge	High	Medium	Moderate	Significant
71	Ty Coch	I	180m from the property edge	High	Medium	Moderate	Significant
432	Llechryd Bach	I	140m from the property edge	High	Medium	Moderate	Significant
340	Plas Hafod	I	85m from the property edge	High	Medium	Moderate	Significant

7.7.135 In terms of effects on living conditions and on the basis of the assessment, although occupiers of these properties may experience significant visual effects, none would be likely to have the visual amenity affected to the point where they become 'unattractive and thus unsatisfactory places in which to live'. The full assessment is provided in Appendix 7.1 (DCO Document Ref 6.20)

7.7.136 For all other assessed properties, whilst the 132 kV Overhead Line is likely to be visible, it would not be a particularly dominant component of the view.

7.8 Specific Mitigation Measures

Introduction

- 7.8.1 The landscape and visual effects identified earlier in this Chapter present the realistic worst case scenario and were assessed with embedded mitigation (including direct hedgerow replacement) but without any specific mitigation planting in place, as discussed in Section 7.6 of this Chapter.
- 7.8.2 Specific mitigation measures (as explained in Section 7.8) include a series of planting proposals to mitigate identified effects on landscape character and on views. These measures include tree planting, additional hedgerow and hedgerow tree planting within and immediately adjacent the Final Route Alignment, and linear belts and blocks of woodland planting.
- 7.8.3 The locations of these planting proposals are indicated in Figure 7.13 'Indicative Locations for Landscape and Visual Mitigation and General Environmental Enhancement'.

Mitigation of Landscape Effects

- 7.8.4 Section 7.7 has identified significant effects on the following:
- The landscape of the Denbigh and Derwen Hills, in particular the ridges to the north of Tir Mostyn and to the north of Peniel, which would experience a **moderate** effect;
 - The localised parkland character of parts of the landscape of the Llanefydd Lowlands which would experience a **moderate** effect;
 - The landscape of the Afon Elwy Valley (Afon Elwy Valley – East and Upper Elwy Valley) which would experience a **moderate** effect; and
 - The landscape of the Cefn Meriadog Ridge (Limestone Valley – Cefn) which would experience a **moderate** effect (albeit on the low side of moderate).
- 7.8.5 In these localities mitigation through large scale planting is unlikely to be appropriate and is not proposed. Large scale planting can have a detrimental effect on views (by obscuring them) and can alter the character of a landscape. Large scale planting is generally not a feature of the landscape within this part of the Study Area which is characterised by pastures bounded by hedges with occasional hedgerow trees. As such, the reinforcement of hedgerows and the planting of hedgerow trees present a more appropriate solution to mitigating visual effects.

- 7.8.6 Areas where planting would be appropriate and would help lessen the likely significant effects (although effects are likely to remain moderate) is on the edge of woodlands which would have to be pruned or thinned during construction. This includes areas of woodland near Bryn Foel (north of Saron), south east of Peniel (on the ridge east of Foel Gasyth), Pandy Wood, Hafod Dingle, at Croen Llwm Mawr and on the southern slopes of the valley above the Afon Elwy. At these locations, new woodland edge planting, and natural regeneration of woodland scrub habitat are recommended to soften the edge of any areas of woodland pruning.
- 7.8.7 As well as improving the visual appearance of affected woodland edges, new planting would, in time, help protect against the effects of windthrow or damage to areas of woodland which have previously been protected by intervening trees.

Mitigation of Visual Effects

- 7.8.8 Where visual effects are judged to be significant, SP Manweb is developing a range of mitigation planting proposals with landowners, within the Order Limits, with a view to lessening identified visual effects whilst at the same time enhancing the wider amenity of the area. These are described in Table 7.23, Appendix 7.6 and presented in Figure 7.13 'Indicative Locations for Landscape and Visual Mitigation and General Environmental Enhancement'.
- 7.8.9 Hedgerow trees and woodland edge planting have been included in the mitigation areas. Were we to assume new trees were planted at 8-10m centres along available hedgerows, there is sufficient capacity within the order limits to fulfil the 2:1 tree replacement planting strategy.
- 7.8.10 Where necessary, additional trees could be planted in the locality as part of SP Manweb's commitments on a two-for-one basis. Locations for these additional trees would be agreed in discussion with relevant parties, and because there is no guarantee that they can be delivered, they have not been included within the assessment. The 2 for 1 replacement strategy does not include the managed coniferous commercial forestry at Clocaenog, since this is considered to be a crop.

Table 7.23: Mitigation Planting Within the Order Limits (to Alleviate Landscape and Visual Effects and to Alleviate Residential Visual Amenity Effects)

Location	Planned Mitigation	Reasons for Mitigation
To Alleviate Landscape and Visual Effects		
Tir Mostyn ridge	Existing hedgerow improvements and hedgerow tree planting.	Exposed ridge area with likely moderate visual effects.
Saron woodland edge/localised wooded stream valley	Existing hedgerow improvements and hedgerow tree planting. Woodland edge enhancement to improve linkage of woodland/ hedgerow elements, natural regeneration of woodland scrub habitat, edge planting to reduce linear corridor effect.	Loss of woodland and individual mature trees at sensitive location (LWS SINC). Responds to consultation feedback. Likely moderate landscape and visual effects predicted in this area.
Near Bryn Foel and Tan Yr Allt	Improvements to existing vegetation, including existing hedgerows and tree planting.	Likely moderate significant effects on the slopes of the valley (visible from Saron Village). Responds to public consultation feedback, Holford rules.
Ridge east of Foel Gasyth	Existing hedgerow improvements and hedgerow tree planting.	Sensitive ridge location with potential for skylining (visible from Saron Village). Responds to public consultation feedback, Holford Rules. Likely moderate landscape and visual effects predicted in this area.
B4501 at Peniel	Existing hedgerow improvements and hedgerow tree planting along roadside and within field.	Likely moderate landscape and visual effects predicted in this area. Potential for skylining of poles in views from the road. Introduce hedgerow trees as a screen.

Location	Planned Mitigation	Reasons for Mitigation
Plas Captain/ Ty Coch	Improvements to existing vegetation, including existing hedgerow improvements and hedgerow tree planting along field and road boundaries.	Likely moderate significant effects on residential visual amenity at Ty Coch. Potential for skylining of poles in views from footpaths and local lanes.
Pandy Wood	Woodland edge enhancement/ planting to reduce linear corridor effect and mitigate woodland losses. Natural regeneration of woodland scrub habitat.	Loss of woodland. Responds to public consultation feedback and stakeholder feedback – Woodland Trust.
A543 – where the OHL crosses the road near Groes	Existing hedgerow improvements and hedgerow tree planting along road and field boundaries.	Linear route with likely moderate significant effects due to wide field of view and proximity to poles. Long views to distant uplands. County Boundary.
Eriviat Park near Coed Wern Ddu ASNW and B5428.	Existing hedgerow improvements and hedgerow tree planting along road and field boundaries to limit effects of poles skylining on the approach to Eriviat Bach Isaf.	Localised moderate visual effects likely at this location. Localised skylining.
Woodland northwest of Eriviat Bach Isaf	Woodland enhancement to improve linkage of woodland/ hedgerow elements, edge planting to reduce linear corridor effect, planting to mitigate against losses. Natural regeneration of woodland scrub habitat.	Loss of woodland and individual mature trees at sensitive location: LWS and SINC, adjacent to ASNW. Responds to public consultation feedback and stakeholder feedback – Woodland Trust.
Hafod and Hafod Dingle, Clwydian Way, Lechryd Bach	Woodland enhancement to improve linkage of woodland/ hedgerow elements, edge planting to reduce linear corridor effect, planting to mitigate against losses. Natural	Loss of woodland and individual mature trees at sensitive location: LWS and SINC, and ASNW. Responds to public consultation feedback and stakeholder feedback – Woodland Trust.

Location	Planned Mitigation	Reasons for Mitigation
	regeneration of woodland scrub habitat. Existing hedgerow improvements and hedgerow tree planting along field boundaries and the B5382.	Landscape Habitats Outstanding LANDMAP. Potential for skylining of poles in views from surrounding areas.
Berain	Existing hedgerow improvements and hedgerow tree planting along field boundaries. Woodland enhancement to mitigate against losses. Natural regeneration of woodland scrub habitat.	Localised moderate significant visual effects and landscape effects are likely. Listed building of local importance set in its valued wider setting. Responds to public consultation feedback and stakeholder feedback – Woodland Trust.
Nant Y Croen Llwm/ Tyddyn Bartley/ Croen Llwm Mawr/ North Wales Pilgrim's way Woodland near Bryniau Bychain	Existing hedgerow improvements and hedgerow tree planting along road/ field boundaries. Woodland enhancement to improve linkage of woodland/ hedgerow elements, edge planting to reduce linear corridor effect, planting to mitigate against losses. Natural regeneration of woodland scrub habitat.	Loss of woodland and individual mature trees at sensitive location: Nant Y Croen Llwm plantation on ancient woodland, LWS and SINC, and close to ASNW. Responds to public consultation feedback and stakeholder feedback – Woodland Trust. Localised moderate significant visual effects and landscape effects are likely. North Wales Pilgrim's Way long distance footpath passes through this area. Landscape Habitats Outstanding (LANDMAP).
Woodland near Bod- ysgawen Isaf	Woodland enhancement - edge planting to reduce linear corridor effect, planting to mitigate against losses. Natural regeneration of woodland scrub habitat.	Localised moderate significant visual effects and landscape effects are likely. Loss of woodland and individual mature trees at sensitive location: LWS and SINC, ASNW and RIGS. Responds to public consultation feedback and stakeholder feedback – Woodland Trust.

Location	Planned Mitigation	Reasons for Mitigation
		Landscape Habitats Outstanding (LANDMAP).
Elwy Valley slopes, southern ridge near Bodysgawen Isaf	Existing hedgerow improvements and hedgerow tree planting along field boundaries.	Localised moderate significant visual effects and landscape effects are likely. Sensitive ridge location with potential for skylining. Responds to public consultation feedback, Holford rules and stakeholder feedback – Woodland Trust. Proximity (over 250m) from Elwy Historic Landscape – Historic Landscape and Landscape Habitats Outstanding (LANDMAP) – long views over valley and potential for skylining. Footpaths.
Afon Elwy Coed Wig and Coed y Fadir Elwy Valley slopes to east of the river	Woodland enhancement - edge planting to reduce linear corridor effect, planting to mitigate against losses. Natural regeneration of woodland scrub habitat. Existing hedgerow improvements and hedgerow tree planting along field boundaries.	Localised moderate significant visual effects and landscape effects are likely. Loss of woodland and individual mature trees at sensitive location: LWS and SINC, ASNW. Responds to public consultation feedback and stakeholder feedback – Woodland Trust. Landscape Habitats Outstanding (LANDMAP).
Plas Hafod (near Plas Newydd)	Improvements to existing vegetation, including existing hedgerow improvements and hedgerow tree planting along field boundaries	Localised moderate significant visual effects and landscape effects are likely.
Cefn Meiriadog ridge	Existing hedgerow improvements and hedgerow tree planting along track/ field boundaries.	Localised moderate significant visual effects and landscape effects are likely. Ridge location with potential for skylining. Views likely over wider landscape in the direction of Groesford Marli, St Asaph. Responds to public consultation

Location	Planned Mitigation	Reasons for Mitigation
		feedback, Holford Rules and stakeholder feedback – Woodland Trust.
To Alleviate Residential Visual Amenity Effects)		
Location	Planned Mitigation	Reasons for Mitigation
Tir Mostyn ridge	Existing hedgerow improvements and hedgerow tree planting.	Exposed ridge with likely moderate visual effects.
Tan Yr Allt	Improvements to existing vegetation, including existing hedgerows and hedgerow tree planting. Additional tree and shrub planting to screen likely views of individual poles.	Likely moderate significant effects on the residential visual amenity on the receptor at Tan yr Allt.
Ty Coch	Improvements to existing vegetation, including existing hedgerow improvements and hedgerow tree planting along field and road boundaries.	Likely moderate significant effects on residential visual amenity at Ty Coch.
Eriviat Bach Isaf	Existing hedgerow improvements and hedgerow tree planting along field boundaries. Retention of existing screening.	Residential visual amenity - not significant due to presence of existing trees. Would be major significance if screening compromised. Primary open views in direction of the Proposed Development. Property in close proximity to the Proposed Development, and is set within large well maintained garden and vegetation screening exists.

Location	Planned Mitigation	Reasons for Mitigation
Lechryd Bach	Existing hedgerow improvements and hedgerow tree planting along field boundaries and along local lane	Likely moderate significant effects on residential visual amenity at Lechryd Bach. To help reduce significant effects on this receptor, which is greater than 100m from the Proposed Development but would have wide views of the route to the rear and from the garden with potential for some poles to be locally skylined in the view.
Plas Hafod (near Plas Newydd)	Improvements to existing vegetation, including existing hedgerow improvements and hedgerow tree planting along field boundaries	Likely moderate significant residential visual amenity effects due to proximity and visibility from garden and house. In addition, there are other residential receptors such as Maes and Plas Newydd (which has listed status) that would benefit, despite not having major or moderate significant effects.

7.9 Assessment of Cumulative Landscape and Visual Effects

Introduction

7.9.1 Cumulative landscape and visual effects result from the project that is being assessed interacting with the effects of other proposed developments in the area. Following discussions with stakeholders about which developments to include in the cumulative landscape and visual assessment (CLVIA), it was agreed that the cumulative landscape and visual assessment should follow a two stage approach:

Stage 1 – the Proposed Development + the Wider Scheme (Collector Substation + the underground cable route + works at St Asaph substation) + 2 contracted and consented wind farms (Clocaenog & Brenig²⁴); and

Stage 2 – the proposals in Stage 1 together with Burbo Bank Extension + other onshore proposed wind farms + proposed single turbines and any other major developments.

7.9.2 The developments included in the two stages of the CLVIA are shown in Figure 7.14 and Figure 7.15 respectively. These were derived from a combination of consultation with Denbighshire County Council and Conwy County Council, the Councils' online planning application portals and from the relevant Environmental Statements for each of the developments as appropriate.

7.9.3 For the purposes of the CLVIA, it is assumed that the developments identified for inclusion in the assessments would be present in the landscape, as this represents the 'maximum development scenario' in each case. The reality will be somewhere between the 'maximum development scenario' of all developments being built and the 'minimum development scenario' in which only the currently consented developments will be built, in addition to those existing already and those currently under construction.

7.9.4 Three types of cumulative effect were considered:

- combined 'in combination' effects - these occur where a static receptor is able to view two or more developments from a viewpoint without moving their head i.e. within the receptor's arc of vision (assumed to be 120° for the purpose of this assessment) at the same time;
- combined 'successive' effects – these occur where a receptor is able to see two or more developments from a viewpoint, but needs to turn their head to see them; and

²⁴ Derwydd Bach and Nant Bach are scoped out of the assessment due to the distance and intervening landform and vegetation precluding the possibility of any significant cumulative effects

- sequential effects – these occur when a receptor is moving from one area to another, for example, along a road or footpath and is able to see two or more developments at the same time, or at different times as they pass along the route.

7.9.5 The locations from where cumulative effects may be experienced are indicated by the areas of overlap between the ZTVs for the individual schemes, where one or more of the schemes would potentially be seen at the same time as the Proposed Development.

7.9.6 Frequent sequential effects occur when a development appears intermittently with short time lapses between points of visibility, depending on the speed and distance. Occasional sequential effects occur where long periods of time occur between views of the developments due to a lower speed of travel and/ or longer distances between the points of visibility.

7.9.7 Sequential effects can potentially affect views over a much wider geographic area.

Study Area

7.9.8 The study area for the cumulative landscape and visual assessment was taken as 10km radius from the Final Route Alignment as shown in Figures 7.15 and 7.16. Based on previous experience, this is the distance within which significant cumulative landscape and visual effects arising from the Proposed Development, in combination with other proposed developments are likely to arise.

Developments Included in the Cumulative Assessment Baseline

7.9.9 For LVIA the baseline landscape is the existing baseline, which includes any existing developments or developments under construction (e.g. other the overhead lines, communications masts, wind farms and smaller scale wind energy schemes). This is a known baseline that can be clearly defined.

7.9.10 For the CLVIA, the baseline is more uncertain as not all the identified developments will receive consent or necessarily be built.

7.9.11 The CLVIA considered the following:

- developments that have planning consent but are not yet constructed; and
- undetermined planning applications/ applications for consent.

- 7.9.12 Information on the developments to be assessed was derived from that which was publicly available or which could be obtained from the relevant developer. The assessment did not include any new empirical modelling of effects arising from other projects and was instead based upon analysis of their published ESs and ZTVs. Where information was lacking or unavailable and there was uncertainty about what was being proposed, the assessment was more speculative. In these instances, professional judgement was applied to assess whether the particular development was likely to be visible and if so whether it would contribute to significant cumulative effects.
- 7.9.13 Tables 7.24 and 7.25 summarise the Stage 1 and Stage 2 developments that were identified for consideration within the ES. It also provides further details on each of the developments, data sources and relevant comments. Some of these developments have not been taken forward for consideration as part of the CLVIA - where this is the case a reason has been included in the comments box. It is important to note that the Stage 2 CLVIA considered the Stage 1 Developments plus the Stage 2 Developments.

Table 7.24: Stage 1 Developments

Development	Description & Data Source	Comments
Developments Included in the Stage 1 CLVIA		
Collector Substation at Clocaenog	SP Manweb development – details are included in Appendix 1.1	A separate/ stand-alone assessment has been undertaken for the Collector Substation (see Appendix 1.1)
Underground Cable	SP Manweb development – details are included in Appendix 1.3	A separate/ stand-alone assessment has been undertaken for the underground cable (see Appendix 1.2)
Works at St Asaph substation	SP Manweb development – details are included in Appendix 1.3	Information on the proposed works at St Asaph substation is provided in Appendix 1.3
Clocaenog Forest Wind Farm and Substation	Consented September 2014 - Expected to generate between 64 and 96 MW, from 32 turbines. The turbines would have a total height (to tip) of 145m. Connection to the Collector Substation by underground cable.	
Brenig Wind Farm and substation	Consented April 2009, - 16 turbine wind farm at Llyn Brenig, with an installed generating capacity of 40MW. The turbines would have a total height (to tip) of 100m. Connection to Collector Substation by underground cable.	Data source: ZTV from Brenig ES. Denbighshire planning application ref: 25/2007/0565

Development	Description & Data Source	Comments
Developments Considered But Not Included in the Stage 1 CLVIA		
Nant Bach Wind Farm	<p>Consented May 2011 - 11 turbine wind farm at Nant Bach, with an installed generating capacity of up to 27.5 MW. The turbines would have a total height to tip of 100m.</p> <p>Connection to Collector Substation by underground cable.</p>	<p>As stated in the PEIR, Nant Bach wind farm is considered to be too far from the Proposed Development to give rise to any significant cumulative visual effects and has therefore not been taken forward for consideration within the cumulative landscape and visual assessment.</p>
Derwydd Bach Wind Farm	<p>Consented July 2011 - 10 turbine wind farm at with an installed generating capacity of 23 MW. The turbines would have a total height to tip of 120.5m.</p> <p>Connection to Collector Substation by underground cable.</p>	<p>As stated in the PEIR, Derwydd Bach wind farm is considered to be too far the Proposed Development to give rise to any significant cumulative visual effects and has therefore not been taken forward for consideration within the cumulative landscape and visual assessment.</p>

Table 7.25: Stage 2 Developments (Additional to Stage 1 Developments)

Development	Description & Data Source	Comments
Developments Included in the Stage 2 CLVIA		
Hafod Ty Ddu Wind Turbine	Single wind turbine (55m hub height and 26m blades, up to 81m height to blade tip) located in relatively close to the 132 kV Overhead Line.	
Tyn y ffynnon Wind Turbine	Single wind turbine (up to 48m height to blade tip).	
Meifod Farm, Saron, Wind Turbine	Single wind turbine (up to 34.5m to blade tip).	
Pant y Maen Wind Farm	8no. wind turbines in SSA A.	
Bryn Cocyn Wind Turbine	Single wind turbine (up to 25m height to blade tip).	
Burbo Bank Extension (including onshore substation)	Extension to an existing offshore wind farm (maximum 75 turbines) and proposed substation near the northern end of the Proposed Development.	
Developments Considered but Not Included in the Stage 2 CLVIA		
Llys Dymper Wind Farm	10no. wind turbines (5 no. up to 100m to blade tip and 5no. up to 110m to blade tip, 23mw wind farm) and associated works to be connected to the	Conwy Council requested the inclusion of the Llys Dymper wind farm in the cumulative assessment. The inclusion of this wind farm has been considered but given that it lies just

Development	Description & Data Source	Comments
	National Grid locally at Llansannan. Data Source: Conwy planning application reference 0/38695. (Note: Planning application refused on 15/05/2014 but an appeal has been lodged)	under 12km to the west of the proposed development in the Denbigh Moors VSAA (CNWVS003) it is considered to be too far from the Proposed Development to give rise to any significant cumulative visual effects and has therefore not been taken forward for consideration within the cumulative landscape and visual assessment.
Crematorium proposal on land to south of Glascoed Road		Not likely to give rise to any significant cumulative effects due to the differing nature and scale of development and distance from the 132 kV Overhead Line. This development has not been considered further in the assessment of cumulative landscape and visual effects.
Pilkington Playing fields site on the St Asaph business park	Development of 3.9ha of land for office/ light industrial use (Class B1) and construction of new vehicular/ pedestrian access.	Not likely to give rise to any significant cumulative effects due to the differing nature of development and distance from the Proposed Development. This development has not been considered further in the assessment of cumulative landscape and visual effects.
Bodelwyddan Key Strategic Site A	Development Plan allocation in Denbighshire. Development brief adopted by Denbighshire in July 2014 for a mixed use development <i>'1,715 new dwellings including affordable housing, 26 ha of B1, B2, B8 employment land, education and health provision, infrastructure improvements, open space, community facilities and other associated</i>	Not likely to give rise to any significant cumulative effects due to the differing nature and scale of development and distance from the Proposed Development. This development has not been considered further in the assessment of cumulative landscape and visual effects.

Development	Description & Data Source	Comments
	<i>elements.'</i>	
Application for a residential development at former H M Stanley Hospital site, Upper Denbigh Rd, St Asaph	Conversion of former St Asaph hospital into a housing development (85 homes)	Not likely to give rise to any significant cumulative effects due to the differing nature and scale of development and distance from the Proposed Development. This development has not been considered further in the assessment of cumulative landscape and visual effects.

Methodology

7.9.14 Para 7.3a of GLVIA3 defines cumulative effects as *“the additional changes caused by a proposed development in conjunction with other similar developments or the combined effect of a set of developments, taken together.”*²⁵

7.9.15 Para 7.28 of GLVIA3 also notes that:

“the most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be where the project itself tips the balance through its additional effects. The emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create a significant cumulative effect.”

7.9.16 In this respect, the focus of the assessment is the Proposed 132 kV Overhead Line and other visible components of the North Wales Wind Farms Connection Project.

Assessing Cumulative Effects

7.9.17 The process and procedures for identifying and judging cumulative landscape and visual effects is essentially the same as for the LVIA, in that the degree of effect is determined by combining an evaluation of the sensitivity of the landscape or visual receptor and the magnitude of change likely to arise.

7.9.18 The CLVIA examined the same groups of landscape and visual receptors (including residential visual amenity receptors) as the assessment for the LVIA.

Assessing Cumulative Landscape Effects

7.9.19 Cumulative change to the landscape may occur where the Proposed Development occurs in conjunction with another component of the North Wales Wind Farms Connection Project or other developments, particularly if they appear prominently on the same skyline, or result in converging routes or wirescape, such that they affect the characteristics or features of the landscape.

Sensitivity and Magnitude of Landscape Change

7.9.20 The sensitivity of the landscape was as identified for each receptor previously as part of the LVIA.

²⁵ Scottish Natural Heritage, 2012. Assessing the Cumulative Impact of Onshore Wind Energy Development, Inverness

7.9.21 The magnitude of cumulative change to the landscape was informed by aerial photography, analysis during site visits and professional consideration. Aspects considered included:

- effects on the individual landscape elements;
- effects on characteristic features of the landscape (including perceptual characteristics such as remoteness);
- effects on the integrity of designated landscapes, including the reasons for which they were designated; and
- effects on overall landscape character.

7.9.22 The magnitude of cumulative change is described as large, medium, small or negligible and was defined in accordance with the criteria in Table 7.26.

Table 7.26: Criteria for Assessing the Magnitude of Cumulative Landscape Effect of the Proposed Development in Conjunction with Other Developments

Magnitude	Definition
Large	Substantial additional change to the key components, character and quality of the landscape resulting in some instances the character of the landscape becoming a 'wind farm' landscape and/ or 'wirescape'.
Medium	Additional change to key components, character and quality of the landscape, which may have an effect both locally and across a wider area.
Small	Slight additional change but unlikely to affect the key components, character and quality of the landscape.
Negligible	Little or no perceptible additional change.

Assessing Cumulative Visual Effects

- 7.9.23 The effect of the identified developments listed in Tables 7.23 and 7.24 are considered in this section.
- 7.9.24 Of the developments being considered, it is the tall vertical structures, i.e. the turbines and to a lesser degree, the wood poles, which would have the greatest effect on views.

Sensitivity and Magnitude of Visual Change

- 7.9.25 The sensitivity of the visual receptors is taken as identified in the LVIA for each viewpoint. Viewpoints were identified to include locations where significant cumulative effects were likely to be experienced. No additional viewpoints were identified for the cumulative assessment.
- 7.9.26 The magnitude of cumulative change to visual amenity was informed by computer modelling, analysis during site visits, aerial photographs and professional consideration. Aspects considered included:
- the arrangements of developments in the view, e.g. in one direction or part of the view, or seen in all directions around the viewpoint;
 - the relationship of scale and the developments;
 - the position of the developments in the view, e.g. on the skyline, or against the backdrop of land;
 - the proportion of skyline that is developed; and
 - the perceived distances from the viewer, and between developments.
- 7.9.27 The magnitude of cumulative change is described as large, medium, small or negligible and was defined in accordance with the criteria in Table 7.27.

Table 7.27: Criteria for Assessing the Magnitude of Cumulative Visual Effect of the Proposed Development in Conjunction with Other Developments

Magnitude	Definition
Large	The additional change arising from the developments would be substantial. The developments would become the main focus in the view and/ or the effects would be perceived over a wide geographical area.
Medium	The additional change arising from the developments would be discernible. The developments would be clearly visible but would not define the view.
Small	The additional change arising from the developments would be slight. The developments would form minor elements in the view and/ or the effects would be perceived over a relatively small geographical area.
Negligible	The additional change arising from the developments would be barely perceptible. The developments would be barely visible (blurred, indistinct) and would appear as small features belonging to a distant landscape or view and/ or the effects would be perceived over a very small geographical area.

Assessing Cumulative Residential Visual Amenity Effects

- 7.9.28 The total effect of the identified developments listed in Tables 7.23 and 7.24 are considered in this section.
- 7.9.29 Of the developments being considered, it is the tall vertical structures, i.e. the turbines and to a lesser degree, the wood poles, which would have the greatest effect on views.

Sensitivity and Magnitude of Visual Change

- 7.9.30 The sensitivity of the visual receptors is considered to be high as identified in Appendix 7.1: Residential Visual Amenity Assessment. The cumulative assessment focussed on residential properties within 200m of the Final Route Alignment. Beyond that distance, there may be cumulative visual effects on private properties, but these would arise from the interaction of the other developments which are part of the cumulative assessment, rather than the 132 kV Overhead Line which would be too distant to give rise to any significant residential visual amenity effects.
- 7.9.31 Cumulative residential visual amenity effects were assessed and described as major, moderate, minor and negligible. As with the LVIA, it is important to note that even major effects would not necessarily be overbearing to the degree that they were likely to result in 'unacceptable harm'.

7.9.32 The magnitude of cumulative change to the visual amenity of residential properties was informed by computer modelling, analysis during site visits, aerial photographs and professional consideration. Aspects considered included:

- the arrangements of developments in the view, e.g. in one direction or part of the view, or seen in all directions around the viewpoint;
- the relationship of scale and the developments;
- the position of the developments in the view, e.g. on the skyline, or against the backdrop of land;
- the proportion of skyline that is developed; and
- the perceived distances from the residential property, and between developments.

7.9.33 The magnitude of cumulative change is described as large, medium, small or negligible and was defined in accordance with the criteria in Table 7.27.

Cumulative ZTVs

7.9.34 Cumulative Zones of Theoretical Visibility (CZTV) were produced by overlaying the 5km ZTV for the Proposed Development with the ZTVs defined for the other identified developments²⁶. The CZTVs are illustrated in Figures 7.16 to 7.19.

7.9.35 The areas where the ZTVs overlap were highlighted in different colours to illustrate where visibility of more than one development is likely to arise. These are the locations where significant cumulative landscape and visual effects are most likely to occur.

7.9.36 For the single and small-scale wind energy developments (with a height of up to 55m to blade tip) where ZTVs were unavailable, a 3km cut off around the turbine was used as the cut off for the assessment. For single and small scale wind energy developments >55m and <80m to blade tip, a distance of 5km was used as the cut off for the assessment. This is because at these distances a 55m and 80m high structure would have an apparent height²⁷ of approximately 10mm, which would substantially lessen visibility and the consequent likelihood of significant effects.

²⁶ The assessment was based upon the ZTVs in the individual published ESs and planning applications where available. Where information was lacking or unavailable and there was uncertainty about what was being proposed, professional judgement was applied to assess whether the scheme is likely to be visible and if so whether it would be likely to contribute to significant cumulative landscape and visual effects.

²⁷ For the purposes of this study the 'apparent height' of a structure is defined as, the height that the structure would appear at arm's length (61 cm) from the viewer (i.e. the structure would appear to be the same height as an X cm high object held at arm's length (61 cm) from the viewer).

Stage 1 and 2 Assessment of Cumulative Effects on Landscape or Landscape Related Designations

- 7.9.37 The 132 kV Overhead Line is located far enough away from the nationally designated landscapes of Snowdonia National Park and Clwydian Range and Dee Valley AONB to avoid significant cumulative effects on landscape character and the reasons for their designation (at either Stage 1 or Stage 2).
- 7.9.38 It is judged that there would be no significant cumulative landscape effects on the following landscapes or landscape related designations due to the fact that the effects of the Proposed Development was predicted in the LVIA to be **negligible** and therefore would not contribute towards any potential cumulative effects:
- Y Berwyn AOB;
 - Special Landscape Areas including - Rhyd-y-Foel to Abergele; Hiraethog; and Elwy and Aled Valleys;
 - Conservation Areas including - Nantglyn; Bodelwyddan; St Asaph; and Henllan);
 - Open Access Areas (Land) including land at – Llyn Brenig; Clocaenog; Moel Ytta; Foel Gasyth; Moel Fodiar; and Mynydd y Gaer;
 - Registered Historic Landscapes including – The Denbigh Moors; and the Vale of Clwyd; and
 - Registered Parks and Gardens including – Gwaenynog; Plas Heaton; Bodelwyddan Castle; and Kinmel Park.
- 7.9.39 Whilst the Proposed Development may give rise to **minor** landscape effects on The Lower Elwy Valley Registered Historic Landscape and Foxhall Newydd Registered Park and Garden, these effects were judged to be not significant and there are no developments at either Stage 1 or Stage 2 that would combine with the Proposed Development to give rise to any significant cumulative landscape effects.

Stage 1 Assessment of Cumulative Effects on Landscape Character

- 7.9.40 This stage of the cumulative assessment considers the 132 kV Overhead Line with the Wider Scheme (Collector Substation, the section of underground cable and works at St Asaph substation) in addition to the Brenig and Clocaenog contracted and consented wind farms. The locations of these developments are shown on Figure 7.14.
- 7.9.41 With respect to non-designated landscapes, the assessment of cumulative effects on LANDMAP Visual and Sensory Aspect Areas (VSAAs) is as follows:

Area 1: Clocaenog Forest (DNBGHVS068)

- 7.9.42 The sensitivity of the landscape of this VSAA was assessed as low. The potential effect of the Proposed Development was identified as **minor** in the LVIA.
- 7.9.43 The combination of the Proposed Development, Collector Substation and Clocaenog and Brenig Wind Farms would result in a medium cumulative magnitude of effect resulting in an overall **moderate** and therefore significant cumulative effect.
- 7.9.44 The underground cable and the proposed works at the St Asaph substation are too distant to cause cumulative effects in this location.

Area 2: Llyn Brenig Moorland/Forest (DNBGHVS069)

- 7.9.45 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **minor** in the LVIA.
- 7.9.46 The combination of the Proposed Development, the Collector Substation and Clocaenog and Brenig Wind Farms would result in a medium cumulative magnitude of effect resulting in an overall **moderate** and therefore significant cumulative effect.
- 7.9.1 The underground cable and the proposed works at the St Asaph substation are too distant to cause cumulative effects in this location.

Area 3: Denbigh and Derwen Hills (DNBGHVS067)

- 7.9.2 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.3 The combination of the Proposed Development, Collector Substation and Clocaenog and Brenig Wind Farms would result in a medium cumulative magnitude of effect. The presence of the Proposed Development would extend the influence of the modern development into this VSAA and result in an overall **moderate** and therefore significant cumulative effect.
- 7.9.4 The underground cable and the proposed works at the St Asaph substation are too distant to cause cumulative effects in this location.

Area 4: Central Ridges and Valleys (CNWVS011)

- 7.9.5 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **negligible** in the LVIA therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 5: Llanefydd Lowlands (CNWVS019)

- 7.9.6 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.7 It is predicted that the additional effects of the Proposed Development together with the Clocaenog and Brenig Wind Farms would not result in landscape effects which would increase the effects of the Proposed Development above moderate as identified in the LVIA due to the distance of the wind farms at approximately 5km from the VSAA.
- 7.9.8 Due to their relatively small scale, the Collector Substation, underground cable and proposed works at the St Asaph substation are considered too distant to cause cumulative effects in this location.

Area 6: Limestone Plateau-Denbigh/Henllan (DNBGHVS039)

- 7.9.9 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **minor** in the LVIA.
- 7.9.10 It is predicted that the additional effects of the Proposed Development together with the Clocaenog and Brenig Wind Farms would not result in landscape effects which would increase the effects of the Proposed Development above **minor** as identified in the LVIA due to the distance of the wind farms at approximately 5km from the VSAA.
- 7.9.11 Due to their relatively small scale, the Collector Substation, underground cable and proposed works at the St Asaph substation are considered too distant to cause cumulative effects in this location.

Area 7: Henllan (DNBGHVS110)

- 7.9.12 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 8: Afon Elwy Valley - East (CNWVS069)

- 7.9.13 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.

It is predicted that there are no other developments (that form this part of the CLVIA), which would affect the character of the landscape of this VSAA and therefore there would be no cumulative effects on this VSSA.

Area 9: Upper Elwy Valley (DNBGHVS038)

- 7.9.14 The sensitivity of the landscape of this VSAA was assessed as high. The potential effect of the 132 kV Overhead Line was identified as **moderate** in the LVIA.

It is predicted that there are no other developments (that form this part of the CLVIA), which would affect the character of the landscape of this VSAA and therefore there would be no cumulative effects on this VSAA.

Area 10: Limestone Valley - Cefn (DNBGHVS037)

- 7.9.15 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.

- 7.9.16 It is predicted that the other developments (which form this part of the CLVIA) would not affect the character of the landscape of this VSAA and therefore there would be no cumulative effects. The addition of the underground cable would not add to cumulative effects as it will be buried underground and vegetation loss would be negligible. The proposed works at the St Asaph substation (approx. 1.1km from the VSAA) and the scale of the substation works, which are within the context of an existing facility containing electricity infrastructure.

Area 11: Cefn Estate (DNBGHVS033)

- 7.9.17 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the 132 kV Overhead Line was identified as **negligible** in the LVIA therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 12: Kinmel Park Fringes (DNBGHVS036)

- 7.9.18 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the 132 kV Overhead Line was identified as **negligible** in the LVIA therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 13: Wooded Parkland and Parkland Remnants (DNBGHVS035)

- 7.9.19 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 14: Area North and East of Bodelwyddan (DNBGHVS014)

- 7.9.20 The sensitivity of the landscape of this VSAA was assessed as low-medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Summary of Stage 1 Assessment of Total Cumulative Landscape Effects

- 7.9.21 A total of 4ha of commercial Clocaenog Forest would be felled for the proposed Stage 1 developments. This would affect the local landscape character of the forest. The reduction in the coverage of commercial forest would have a direct cumulative effect on one of the main landscape elements of Clocaenog Forest VSAA (DNBGHVS068). This is not, however, considered to be significant because large scale rotational felling is a normal feature of most commercial forests.
- 7.9.22 At the southern end of the Proposed Development, the landscape in and around Clocaenog Forest, which currently has only one operational wind farm (Tir Mostyn and Foel Goch), would change to a landscape with an additional four wind farms²⁸, a 132 kV Overhead Line and a Collector Substation. This is likely to have a significant effect on landscape character.
- 7.9.23 The wind turbines would be prominent features and their effects would be most evident at higher elevations, particularly around Lyn Brenig where the presence of three wind farms in a relatively restricted area would potentially result in visual coalescence and an apparent increased depth and degree of visual clutter. The resultant effect on the upland landscape would verge on the creation of a 'wind farm landscape'²⁹ being established around Clocaenog Forest.
- 7.9.24 North of Clocaenog Forest cumulative effects may arise in the lower lying areas although these are not considered to be significant except within the Llanefydd Lowlands.
- 7.9.25 The cumulative effects of the 132 kV Overhead Line and underground cable are not considered significant.
- 7.9.26 Overall the significance of cumulative effect on the landscape is considered to be of medium magnitude and **moderate** significance particularly around the Clocaenog Forest area (within the following VSAs: Clocaenog Forest DNBGHVS068; Llyn Brenig Moorland/Forest DNBGHVS069; and Denbigh and Derwen Hills DNBGHVS067) and within the Llanefydd Lowlands (CNWVS019). Elsewhere the cumulative effect is not considered to be significant.

²⁸ Although two of the contracted/ consented wind farms (Brenig and Clocaenog) have been scoped out of the cumulative assessment as explained previously

²⁹ 'Wind farm landscape' as referenced in Design Commission for Wales (DCfW), 2014. Designing Wind Farms in Wales and Scottish Natural Heritage May 2014, Siting and Designing Wind Farms in the Landscape

Contribution of the Proposed Development to the Total Cumulative Effects

- 7.9.27 Whilst the introduction of the 132 kV Overhead Line would add to effects of other developments in some locations, the presence of a wood pole overhead line would be perceived as a subsidiary structure and a relatively small change in the landscape in particular compared to the presence of the turbines, which are considerably larger. As such, at the southern end of the Proposed Development, it would be the wind farms themselves which would generate most of the significant cumulative effect on the landscape rather than the Proposed Development and other components of the North Wales Wind Farms Connection Project.
- 7.9.28 The interaction between the Clocaenog and Brenig Wind Farms, the 132 kV Overhead Line and the Collector Substation may result in significant cumulative landscape effects which would arise due to:
- interactions of the turbines and the wood pole support structures and/ or Collector Substation being incompatible in scale and appearance and giving rise to increased clutter in the landscape;
 - the actual and perceived extension of the wind farm developments by the presence of the 132 kV Overhead Line and Collector Substation, which may extend the effects of the turbines over a wider area; and
 - apparent development of the landscape through the combined presence of multiple tall vertical structures.
- 7.9.29 The overall development would result in the 132 kV Overhead Line and Collector Substation being seen in the context of a more developed landscape than that which exists today, particularly in and around Clocaenog Forest. It is likely that the area may be perceived as a wind farm landscape which is consistent with its location within TAN 8 SSA A. The 132 kV Overhead Line and Collector Substation, however, are likely to be perceived as subsidiary and smaller structures to the turbines.
- 7.9.30 Although significant cumulative effects are identified at the southern extent of the study area around Clocaenog Forest, the Denbigh and Derwen Hills and Llyn Brenig the contribution of the Proposed Development to the total cumulative effects is considered to be small.
- 7.9.31 Where significant cumulative effects occur within the Llanefydd Lowlands these are primarily due to the effects of the Proposed Development more so than the distant wind farms.

Stage 2 Assessment of Total Cumulative Effects on Landscape Character

7.9.32 This stage of the cumulative assessment considers the visible components of the following (as listed in more detail in Tables 7.24 and 7.25):

- North Wales Wind Farms Connection Project (the Proposed Development and the Wider Scheme i.e. the Collector Substation, the section of underground cable, works at the St Asaph substation and the Brenig and Clocaenog consented wind farms;
- onshore wind farms – Pant y Maen;
- onshore wind turbines – Hafod ty Ddu, Tyn y ffynnon, Meifod Saron, Bryn Cocyn; and
- offshore wind farms – Burbo Bank Extension.

7.9.33 The locations of the developments considered as part of the Stage 2 cumulative assessment are shown on Figure 7.15.

7.9.34 In detail the LANDMAP Visual and Sensory Aspect Areas (VSAAs) were assessed as follows:

Area 1: Clocaenog Forest (DNBGHVS068)

7.9.35 The sensitivity of the landscape of this VSAA was assessed as low. The potential effect of the Proposed Development was identified as **minor** in the LVIA.

7.9.36 The **moderate** cumulative landscape effect predicted at Stage 1 would be further influenced by the three individual wind turbines (Hafod Ty Ddu, Tyn y ffynnon and Meifod Saron) within the adjacent Denbigh and Derwen Hills VSAA and Pant y Maen Wind Farm within Llyn Brenig Moorland Forest VSAA. The combined effects of the Stage 2 developments would result in a medium to large magnitude of change, which is considered to be at the higher end of **moderate** significance.

Area 2: Llyn Brenig Moorland/Forest (DNBGHVS069)

7.9.37 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **minor** in the LVIA.

7.9.38 The **moderate** cumulative landscape effect predicted at Stage 1 would be further influenced by an additional wind farm within Llyn Brenig Moorland Forest VSAA (Pant y Maen) and to a lesser extent three individual wind turbines (Hafod Ty Ddu, Tyn y ffynnon and Meifod Saron), within the adjacent Denbigh and Derwen Hills VSAA. Taken together these developments would add to the effects of the existing Tir Mostyn and Foel Goch Wind Farm. The combined effects of the Stage 2 developments would result in a medium magnitude of change, which is considered to be at the higher end of **moderate** significance.

Area 3: Denbigh and Derwen Hills (DNBGHVS067)

- 7.9.39 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.40 The **moderate** cumulative landscape effect predicted at Stage 1 would be further influenced by the three individual wind turbines within relatively close proximity to the Proposed Development (Hafod Ty Ddu, Tyn y ffynnon and Meifod Saron) and to a lesser extent by Pant y Maen Wind Farm (which lies within Llyn Brenig Moorland Forest VSAA). The addition of these individual wind turbines would increase and extend the influence of modern vertical structures into the landscape of the Denbigh and Derwen Hills and create localised 'visual clutter' (in particular where they are located close to the Proposed Development). Visual conflicts may arise from the different heights and styles of turbines in association with the double wood pole structures. The combined effects of the Stage 2 developments would result in a medium to large magnitude of change, which is considered to be at the higher end of **moderate** significance.

Area 4: Central Ridges and Valleys (CNWVS011)

- 7.9.41 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 5: Llanefydd Lowlands (CNWVS019)

- 7.9.42 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.43 At Stage 2 the character of the area would be further influenced by one small individual wind turbine (Bryn Cocyn) and to a much lesser extent by Pant y Maen Wind Farm (which lies within Llyn Brenig Moorland Forest VSAA). It is predicted that the additional effects of these would not increase the overall **moderate** cumulative effects that were identified at Stage 1.

Area 6: Limestone Plateau-Denbigh/Henllan (DNBGHVS039)

- 7.9.44 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **minor** in the LVIA.
- 7.9.45 At Stage 2 there would be no developments to generate additional significant landscape effects beyond the overall **minor** cumulative effects identified for Stage 1.

Area 7: Henllan (DNBGHVS110)

- 7.9.46 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 8: Afon Elwy Valley - East (CNWVS069)

- 7.9.47 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.48 No cumulative effects were identified at Stage 1. At Stage 2 there would be no developments to generate cumulative landscape effects.

Area 9: Upper Elwy Valley (DNBGHVS038)

- 7.9.49 The sensitivity of the landscape of this VSAA was assessed as high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.50 No cumulative effects were identified at Stage 1. At Stage 2 there would be no developments to generate cumulative landscape effects.

Area 10: Limestone Valley- Cefn (DNBGHVS037)

- 7.9.51 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **moderate** in the LVIA.
- 7.9.52 No cumulative effects were identified at Stage 1. At Stage 2 there would be no developments to generate cumulative landscape effects.

Area 11: Cefn Estate (DNBGHVS033)

- 7.9.53 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 12: Kinmel Park Fringes (DNBGHVS036)

- 7.9.54 The sensitivity of the landscape of this VSAA was assessed as medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 13: Wooded Parkland and Parkland Remnants (DNBGHVS035)

- 7.9.55 The sensitivity of the landscape of this VSAA was assessed as medium-high. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Area 14: Area North and East of Bodelwyddan (DNBGHVS014)

- 7.9.56 The sensitivity of the landscape of this VSAA was assessed as low-medium. The potential effect of the Proposed Development was identified as **negligible** in the LVIA, therefore it is unlikely that it would contribute towards any cumulative effects on this VSAA.

Summary of Stage 2 Assessment of Total Cumulative Landscape Effects

- 7.9.57 At the southern end of the Proposed Development, the landscape in and around Clocaenog Forest, which currently has one operational wind farm (Tir Mostyn and Foel Goch) would change to a landscape with five more wind farms³⁰, plus the proposed Collector Substation, a 132 kV Overhead Line and three single turbines, which are located in prominent positions along ridgelines to the north of Clocaenog Forest. The result would be a significant change in landscape character.
- 7.9.58 The turbines would be prominent features and their effects would be most evident at higher elevations, particularly around Lyn Brenig where the presence of three wind farms in a relatively restricted area in combination with nearby Pant y Maen Wind Farm to the east would potentially result in visual coalescence and an apparent increased depth and degree of visual clutter. The resultant effect on the upland landscape would verge on the creation of a 'wind farm landscape'³¹ being established around Clocaenog Forest.
- 7.9.59 North of Clocaenog Forest, cumulative effects may arise in the lower lying areas however, these are not considered to be significant, with the exception of cumulative effects on the Llanefydd Lowlands.
- 7.9.60 Overall the significance of total cumulative effect on the landscape is considered to be of medium to large magnitude, particularly around the Clocaenog Forest area and at the higher end of **moderate** significance. Cumulative effects on the Llanefydd Lowlands are also considered to be **moderate** and significant. Elsewhere the total cumulative effect is not considered to be significant.

Contribution of the Proposed Development to Total Cumulative Landscape Effects

- 7.9.61 The turbines being proposed for the wind farms considered in the cumulative assessment are considerably larger and would be more prominent landscape features than the Proposed Development. Similarly the three proposed single turbines would also be more prominent than the 132 kV Overhead Line although their influence may not extend as far as the larger wind farm turbines.

³⁰ Although two of the contracted/ consented wind farms (Brenig and Clocaenog) have been scoped out of the cumulative assessment as explained previously

³¹ 'Wind farm landscape' as referenced in Design Commission for Wales (DCfW), Designing Wind Farms in Wales 2014 and Scottish Natural Heritage, Siting and Designing Wind Farms in the Landscape, May 2014

- 7.9.62 Whilst the introduction of the Proposed Development would be a perceptible addition to the turbines in some locations, the forestry felling, presence of a wood pole overhead line, underground cable section, substation and associated infrastructure would be perceived as subsidiary structures which contribute to a relatively small change in the landscape compared to the presence of the turbines. As such, it is likely that at the southern end of the Proposed Development, it would be the wind farms and single turbines themselves that would generate most of the significant effects on the landscape rather than the Proposed Development and other components of the North Wales Wind Farms Connection Project. In some locations, however, the interaction between the components of the wind farms and the Proposed Development may cause additional effects. These would arise due to:
- the actual and perceived extension of the wind farm developments by the electricity infrastructure, which may extend the effects of the turbines over a wider area;
 - interactions of the turbines and the electricity infrastructure being incompatible in scale and appearance leading to increased clutter within the landscape; and
 - overall apparent development of the landscape through the combined presence of multiple tall vertical structures.
- 7.9.63 Although significant cumulative effects are identified at the southern end of the study area around Clocaenog Forest, the Denbigh and Derwen Hills and Llyn Brenig, the contribution of the Proposed Development to the total cumulative effects is considered to be small.
- 7.9.64 Where significant cumulative effects occur within the Llanefydd Lowlands these are primarily due to the effects of the Proposed Development more so than the distant wind farms and single wind turbines.
- 7.9.65 Table 7.28 provides a summary of cumulative landscape effects.

Table 7.28: Summary Findings of the Assessment of Cumulative Landscape Effects

Area & Receptor (VSAA's)		Landscape Sensitivity	Conclusion of the LVIA Assessment	Stage 1		Stage 2	
				Cumulative Magnitude	Cumulative Significance	Cumulative Magnitude	Cumulative Significance
1	Clocaenog Forest	Low	Minor	Medium	Moderate (Significant)	Medium-Large	Moderate (Significant)
2	Llyn Brenig Moorland/ Forest	Medium	Minor	Medium	Moderate (Significant)	Medium	Moderate (Significant)
3	Denbigh and Derwen Hills	Medium-high	Moderate (Significant)	Medium	Moderate (Significant)	Medium-Large	Moderate (Significant)
4	Central ridges and valleys	Medium-high	Negligible	No cumulative effects identified			
5	Llanefydd Lowlands	Medium-high	Moderate	Medium	Moderate (Significant)	Medium	Moderate (Significant)
6	Limestone Plateau – Denbigh/ Henllan	Medium	Minor	Small	Minor	Small	Minor
7	Henllan	Medium	Negligible	No cumulative effects identified			
8	Afon Elwy Valley – East	Medium-High	Moderate (Significant)	No cumulative effects identified			
9	Upper Elwy Valley	High	Moderate (Significant)	No cumulative effects identified			

Area & Receptor (VSAA's)		Landscape Sensitivity	Conclusion of the LVIA Assessment	Stage 1		Stage 2	
				Cumulative Magnitude	Cumulative Significance	Cumulative Magnitude	Cumulative Significance
10	Limestone Valley – Cefn	Medium-high	Moderate (Significant)	No cumulative effects identified			
11	Cefn Estate	Medium	Negligible	No cumulative effects identified			
12	Kinmel Park Fringes	Medium	Negligible	No cumulative effects identified			
13	Wooded Parkland and Parkland Remnants	Medium-high	Negligible	No cumulative effects identified			
14	Area North and East of Bodelwyddan	Low-medium	Negligible	No cumulative effects identified			

Assessment of Cumulative Visual Effects

Combined Cumulative Visual Effects

- 7.9.66 The results of the assessment regarding the significance of in-combination and successive cumulative visual effects is presented below, with reference to an assessment of five cumulative representative viewpoints.
- 7.9.67 Five viewpoints have been chosen to reflect visual receptors with a higher level of sensitivity to changes in their landscape and visual environments and at locations within the cumulative ZTV (Figures 7.15 and 7.16) with clear and generally unobstructed views (as far as possible) to the Proposed Development.

Representative Viewpoint 03 - B4501 east of Foel Gasyth

- 7.9.68 Representative viewpoint 03 is located at the junction of the B4501 and a local road to the east of Foel Gasyth; approximately 680m west of the nearest point of the Final Route Alignment. The viewpoint represents views experience by the local community and walkers on local public rights of way and open access land and is judged to be of high sensitivity.
- 7.9.69 At **Stage 1**, the Proposed Development would be seen in combination with the existing and operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms.
- 7.9.70 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and the operational and consented wind farms would be small to medium resulting in a **moderate** significance of cumulative effect on the high sensitivity receptors at this representative viewpoint.
- 7.9.71 At **Stage 2**, in addition to the existing and operational and consented wind farms, the Proposed Development would also be seen alongside some single wind turbines (Meifod Farm, Hafod Ty Ddu and Tyn y Ffynnon) and Pant y Maen Wind Farm.
- 7.9.72 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and these developments would be medium to large resulting in a **moderate-major** significance of cumulative effect on the high sensitivity receptors at this representative viewpoint.

Representative Viewpoint 13 – Denbigh Castle

- 7.9.73 Representative viewpoint 13 is located within the grounds of Denbigh Castle; approximately 3.2km from the Proposed Development. The selected viewpoint generally represents the views experienced by the community, visitors and walkers and is judged to be of high sensitivity.
- 7.9.74 At **Stage 1**, from the viewpoint selected, the Proposed Development would be seen in the distance alongside the existing and operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms together (just visible on the skyline to the south) and a single turbine to the west of Denbigh which is backclothed by landform.

- 7.9.75 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and the operational and consented wind farms would be small, resulting in a **minor** cumulative effect on the high sensitivity receptors at this representative viewpoint.
- 7.9.76 At **Stage 2** (in addition to the existing and operational and consented wind farms/ wind turbines), the Proposed Development would also be seen alongside several single wind turbines (Meifod Farm, Hafod Ty Ddu) and potentially also Tyn y ffynnon single turbine and Pant y Maen Wind Farm, however these would appear as additions to the Stage 1 wind farms and would not notably increase the small magnitude of effect identified at Stage 1.
- 7.9.77 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and the operational and consented wind farms/ turbines would be small resulting in a cumulative effect **which** is at the higher end of **minor** on the high sensitivity receptors at this representative viewpoint.

Representative Viewpoint 28 – Moel Fodiar

- 7.9.78 Representative viewpoint 28 is located along the minor rural road which wraps around the elevated open access and common land of Moel Fodiar, approximately 2.2km from the Proposed Development. The selected viewpoint generally represents the view experienced by the local community, visitors and walkers (including people using the Clwydian Way) and is judged to be of high sensitivity.
- 7.9.79 At **Stage 1**, from the viewpoint selected, operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms would potentially be seen in succession with the Proposed Development and existing/ operational single turbine which lies to the south east closer to Denbigh; however these wind farms are located at some distance (just under 10km) from this viewpoint.
- 7.9.80 It is judged that the magnitude of in succession cumulative visual effects arising from the Proposed Development and operational and consented wind farms would be small resulting in a **minor** cumulative effect on the high sensitivity receptors at this representative viewpoint.
- 7.9.81 At **Stage 2** the Proposed Development would also be potentially seen in combination with a single wind turbine to the north east (Pentre du Isaf) as well as the existing/ operational single wind turbine to the south east; however, the Proposed Development and turbines would lie over 2km from the viewpoint.
- 7.9.82 It is judged that the magnitude of in combination cumulative visual effects arising from the Proposed Development and single wind turbines would be small resulting in a **minor** cumulative effect on the high sensitivity receptors at this representative viewpoint.

Representative Viewpoint 34 – Elwy Valley Slopes

- 7.9.83 Representative viewpoint 34 is located on a minor rural road on the north eastern Elwy Valley slopes, approximately 90m from the Proposed Development. The selected viewpoint generally represents the view experienced by the local community, visitors and walkers and is judged to be of high sensitivity.
- 7.9.84 At **Stage 1**, although the Proposed Development would be seen in combination with the existing and operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms to the south. These wind farms are located at a great distance (over 13km) from this viewpoint and would only just be perceptible.
- 7.9.85 It is judged that the magnitude of in combination cumulative visual effects arising from the Proposed Development and operational and consented wind farms would not result in visual effects that would increase the effects of the Proposed Development above moderate as identified in the LVIA.
- 7.9.86 At **Stage 2** although additional single wind turbines may also be just perceptible (Meifod Farm, Hafod Ty Ddu and Tyn y ffynnon) they would be at such a distance (over 13km) from this viewpoint that they would not increase the cumulative effects.
- 7.9.87 It is judged that the magnitude of in combination cumulative visual effects arising from the Proposed Development and single wind turbine would not result in visual effects that would increase the effects of the Proposed Development above moderate as identified at Stage 1..

Representative Viewpoint 42 - Nantglyn

- 7.9.88 Representative viewpoint 42 is located on a public footpath north west of the village of Nantglyn, approximately 2.5km from the Proposed Development. The selected viewpoint generally represents views experienced by the local community and walkers and is judged to be of high sensitivity.
- 7.9.89 At **Stage 1**, from the viewpoint selected, the Proposed Development would be seen in combination with the existing and operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms.
- 7.9.90 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and the operational and consented wind farms would be small to medium resulting in a **moderate** significance of cumulative effect.
- 7.9.91 At **Stage 2** in addition to the existing and operational and consented wind farms, the Proposed Development would also be seen alongside some single wind turbines (Meifod Farm, Hafod Ty Ddu and Tyn y ffynnon).
- 7.9.92 It is judged that the magnitude of in-combination cumulative visual effects arising from the Proposed Development and these developments would be medium to large resulting in a significance of cumulative effect which is at the higher end of **moderate** on the high sensitivity receptors at this representative viewpoint.

Contribution of North Wales Wind Farm Connections Project to Total Cumulative Visual Effects

- 7.9.93 The turbines being proposed for the wind farms considered in the cumulative assessment are considerably larger and would be visually more prominent features than the largely backclothed and occasionally screened 132 kV Overhead Line. Similarly the three proposed single turbines to the south of the Study Area would be more prominent than the overhead line although their influence may not extend as far as the larger wind farm turbines.
- 7.9.94 Whilst the introduction of the Proposed Development would be a noticeable addition to the turbines in some locations, the presence of the 132 kV Overhead Line, underground cable, Collector Substation and associated infrastructure would be perceived as subsidiary structures which contribute to a smaller change in views compared to the turbines. As such, it is likely that at the southern end of the Proposed Development, it would be the wind farms and single turbines that would generate most of the significant visual effects rather than the 132 kV Overhead Line or other components of the North Wales Wind Farms Connection Project.
- 7.9.95 Potential significant cumulative visual effects have been identified within the southernmost part of the Study Area where the 132 kV Overhead Line runs along the Tir Mostyn ridge. There is potential for a relatively long section of the Proposed Development (circa 1.2 km) to be visible on the skyline along this ridge, the interaction between this and the components of the wind farms and single wind turbines may cause significant cumulative effects in this locality. These would arise due to:
- the actual and perceived extension of the wind farm developments by the electricity infrastructure and turbines; and
 - interactions of the turbines and the electricity infrastructure being incompatible in scale and appearance leading to increased visual clutter within the landscape.
- 7.9.96 Although significant cumulative visual effects are identified at the southern end of the study area, the contribution of the Proposed Development to the total cumulative effects is considered to be small as it is the turbines which generate the most significant effects.
- 7.9.97 Significant cumulative effects identified at the northern end of the study area are in contrast primarily due to the effects of the Proposed Development more so than the distant wind farms and single wind turbines.
- 7.9.98 Table 7.29 provides a summary of the cumulative visual effects identified at the representative viewpoints.

Table 7.29: Summary Findings of the Assessment of Combined Cumulative Visual Effects

VP Ref No	Location	Main Receptors	Sensitivity	Conclusion of the LVIA Assessment	Scenario 1		Scenario 2	
					Magnitude of Cumulative Combined Effect	Significance of Combined Cumulative Effect	Magnitude of Cumulative Combined Effect	Significance of Combined Cumulative Effect
03	B4501 east of Foel Gasyth	Community Walkers	High	Moderate (significant)	Small to Medium	Moderate (significant)	Medium to Large	Moderate to Major (significant)
13	Denbigh Castle	Community Visitors Walkers	High	Minor	Small	Minor	Small	Minor
28	Moel Fodiar	Community Visitors Walkers	High	Minor	Small	Minor	Small	Minor
34	Elwy Valley Slopes	Community Walkers	High	Moderate (significant)	Small to Medium	Moderate (significant)	Small to Medium	Moderate (significant)
42	Nantglyn	Community Walkers	High	Moderate (significant)	Small to Medium	Moderate (Significant)	Medium to Large	Moderate (significant)

Sequential Cumulative Visual Effects

- 7.9.99 The outcome of the assessment regarding the significance of sequential cumulative visual effects from principal routes within the Study Area is presented below, with reference to the Clwydian Way Regional Trail and the B4501.
- 7.9.100 The **Clwydian Way** is a 122 mile circular long distance footpath/ regional trail in North Wales. The route starts and ends in the coastal resort of Prestatyn (some 11 km to the north of the Proposed Development) and stretches as far down as Llangollen in the south (over 25 km from the Proposed Development). The Clwydian Way approaches the Proposed Development from Moel Fodiar in the west and travels through the Llanefydd Lowlands towards and along Hafod Dingle (where the 132 kV Overhead Line oversails the trail), it continues in an easterly direction towards Henllan, Foxhall Newydd and Denbigh. A small section of the Clwydian Way also runs along the southernmost fringes of the study area within Clocaenog Forest (just over 1 km from the southern end of the Proposed Development).
- 7.9.101 It is predicted that people using the Clwydian Way would perceive the Proposed Development when they are in close proximity to it, between Hafod and Henllan, particularly locally where it oversails the trail (at Hafod Dingle); at most this represents intermittent views from a 2 km stretch of the trail (vegetation would screen and filter some views). No additional **Stage 1** or **Stage 2** developments are predicted to be viewed in combination with the Proposed Development from this trail. Taking this into consideration and due to the scale and nature of the Proposed Development and the limited nature of views from this trail it is highly unlikely to give rise to any significant sequential cumulative visual effects on users of the Clwydian Way.
- 7.9.102 The B4501 is a local main road that connects Denbigh to Cerrigydrudion through Clocaenog Forest and past Llyn Brenig. The 132 kV Overhead Line would run parallel to this road (between 500m and 1 km away) in a north east direction from Clocaenog Forest and past Peniel (approximately 5km). The Proposed Development would then oversail the road just north of Peniel and from here would continue in a north west direction away from the road.
- 7.9.103 At **Stage 1** the Proposed Development would be intermittently seen in sequential views (from people travelling along this road), in addition to and sometimes in conjunction with the existing and operational Tir Mostyn and Foel Goch Wind Farm and the consented Brenig and Clocaenog Wind Farms. It is judged that this would result in a **moderate** magnitude of sequential cumulative effects at most and that these would primarily be as a consequence of the extension of the wind farms and not the presence of the 132 kV Overhead Line which would often be screened or backclothed by vegetation and landform.

7.9.104 At **Stage 2** in addition to the existing and operational and consented wind farms, the Proposed Development would also be seen in sequential views (from people travelling along this road) together with some single wind turbines (Meifod Farm, Hafod Ty Ddu and Tyn y ffynnon) and Pant y Maen Wind Farm. It is judged that this would result in a **moderate** magnitude of sequential cumulative effects which would be primarily as a consequence of the extension of the wind farms and presence of additional wind turbines and not the 132 kV Overhead Line which would often be screened or backclothed by vegetation and landform.

Summary of Cumulative Visual Effects

7.9.105 The cumulative viewpoint assessment indicates that at the southern end of the Proposed Development, there may be **moderate** to **major** cumulative visual effects, which are considered significant. These would primarily be due to the additional visual impacts of the wind farms and in particular the single wind turbines (Tyn y ffynnon, Meifod Farm and Hafod Ty Ddu) being located close to the Proposed Development rather than the Proposed Development itself which would be viewed as a subsidiary structure.

7.9.106 Viewpoint locations around the middle section and northern end of the Proposed Development may experience a small degree of cumulative visual effects, however, it is considered that these are highly unlikely to be significant. The exception to this is where views from the elevated areas comprise close up views of the Proposed Development in combination with distant views of wind farms. In these instances significant cumulative visual effects would be caused by the Proposed Development.

7.9.107 The Proposed Development is likely to give rise to some significant sequential cumulative visual effects towards the south of the study area where users of the B4501 would experience sequential views of the Proposed 132 kV Overhead Line, wind farms and single wind turbines. It is not anticipated that sequential cumulative effects would arise elsewhere.

Assessment of Cumulative Effects on Residential Visual Amenity

7.9.108 The outcome of the assessment regarding the significance of in-combination cumulative residential visual amenity effects are presented in Table 7.30 (below) and summarised in the following section. Reference is made to all properties identified within 200m of the Final Route Alignment (the centreline of the Limits of Deviation).

Summary of the Cumulative Effects on Residential Visual Amenity

7.9.109 Hafod Olygfa (Ref 19) is likely to experience **moderate**, and therefore significant, cumulative effects on residential visual amenity as a result of Stage 1 and Stage 2 Developments.

- 7.9.110 This property is located on the shoulder of the Tir Mostyn ridge, near Clocaenog Forest. Existing views from this receptor feature wind farms (Tir Mostyn and Foel Goch) and agricultural buildings. These are visible in primary views (the agricultural sheds) and views to the rear of the property (the wind farms). Additional wind farms (Clocaenog and Brenig) and the single turbines at Hafod Ty Ddu and Tyn y Ffynnon may be visible from this residential receptor, in oblique views. The single turbine at Meifod may be visible in primary views to the north west of the receptor, less than 1.9km to the north east. The magnitude of effects resulting from the Stage 1 and Stage 2 Developments are considered to be small to medium, and as such the significance is judged to be at the lower end of **moderate**.
- 7.9.111 There are unlikely to be any other significant cumulative effects on the residential visual amenity of properties within 200m of the Proposed Development. This is mainly due to the location of the developments which are frequently obscured by intervening topography and vegetation (for example, the ridges at Foel Gasyth, Tir Mostyn, Moel Ytta and the Cefn Meiriadog, and the woodland blocks at Clocaenog). In addition, the developments are frequently located at such a distance from the assessed properties that they are imperceptible or visible as a very small feature in the view.

Contribution of the Proposed Development to Cumulative Effects on Residential Visual Amenity

- 7.9.112 The contribution of the Proposed Development is considered small. The Proposed Development is visible mostly in oblique views from the property. The Stage 1 and Stage 2 turbines are visible in oblique and primary views from the property, they are larger in scale than the Proposed Development, and feature moving parts (turbine blades), and would therefore generate the most significant effects on residential visual amenity.

Table 7.30: Assessment of Cumulative Residential Visual Amenity Effects on Properties (Stage 1 and Stage 2 Developments)

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
19	Hafod Olygfa	I	Minor (not significant)	Tops of Brenig and Clocaenog Wind Farms could potentially be visible in addition to the Proposed Development but not in primary views. Magnitude of cumulative effects would be small to medium, resulting in a moderate (albeit a more minor-moderate judgement) significance of cumulative effect.	Proposed Development could (in addition to Stage 1 Developments) be seen alongside Hafod Ty Ddu and Tyn y Ffynnon but not in primary views. Meifod single turbine could be seen in primary views north east less than 1.9km away. Magnitude of cumulative effects would be small to medium, resulting in a moderate (albeit at the lower end of moderate) significance of cumulative effect.	The contribution is considered to be small and not significant . The Stage 1 and Stage 2 turbines are larger in scale than the Proposed Development, and feature moving parts (turbine blades), and would therefore generate the most significant effects.
17	Bryn Golau (House and bungalow)	G	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening topography. Magnitude of cumulative effects	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				would be negligible, resulting in a negligible significance of cumulative effect.	cumulative effect.	
15	Ples Cefn Maen: <ul style="list-style-type: none"> • Cefn Maen Uchaf • Y Bwthyn • Cefn Y Marial 	G	Minor (not significant)	Views of additional developments are unlikely due to intervening topography and distance. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Proposed Development could be seen in combination with the top of the Meifod single turbine in primary views. The turbine lies to the southeast and less than 1.4km away. Magnitude of cumulative effects would be small resulting in a minor significance of cumulative effect.	Minor cumulative effects predicted.
15a	Cefn Maen Isa	I	Minor (not significant)	Views of additional developments are unlikely due to intervening topography and distance. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative	The top of the Meifod single turbine could be seen in addition to the Proposed Development, in primary views. The turbine lies to the southeast and less than 1.4km away. Magnitude of cumulative effects would be small	Minor cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				effect.	resulting in a minor significance of cumulative effect.	
7	Tan Yr Allt	I	Moderate (significant)	Views of the developments are unlikely in primary views from this receptor, due to the orientation and intervening topography (small localised ridge adjacent to the garden area). Any in-combination views would be over 3km from the receptor. Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	Proposed Development could be seen in combination with the top of the Meifod single turbine in primary views. The turbine lies to the southeast and less than 1.4km away. Magnitude of cumulative effects would be small resulting in a minor significance of cumulative effect.	Minor cumulative effects predicted.
71	Ty Coch	I	Moderate (significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening topography and distance.	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	negligible significance of cumulative effect.	
71a	Agricultural building – Pandy Wood	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to the secluded nature of this receptor, set within a narrow wooded river valley. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Negligible cumulative effects predicted.
185	Bach (locally known as Fach)	I	Minor (not significant)	Turbines at Brenig and Clocaenog could be visible in primary views in addition to the Proposed Development, at a distance of over 6.2km south of the receptor.	In addition, turbines at Hafod ty Ddu, Tyn y Ffynnon and Pant y Maen could be visible in primary views at a distance of over 4.7km from the receptor. Magnitude of cumulative	Minor cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	effects would be small, resulting in a minor significance of cumulative effect.	
186	Bryn Amlwg (unoccupied)	I	Moderate (significant)	Turbines at Brenig and Clocaenog could be visible to the side and rear of the receptor, at a distance of over 5.9km south of the receptor. Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	In addition, turbines at Hafod ty Ddu, Tyn y Ffynnon and Pant y Maen could be visible to the side and rear of the receptor at a distance of over 4.4km from the receptor. Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	Minor cumulative effects predicted.
253	Bodeiliog Uchaf	I	Minor (not significant)	Turbines at Brenig and Clocaenog could be visible in oblique views the receptor, at a distance of over 6.2km south of the receptor. Magnitude of cumulative effects would be small,	In addition, turbines at Hafod ty Ddu, Tyn y Ffynnon and Pant y Maen could be visible in oblique views from the receptor at a distance of over 4.8km from the receptor. Magnitude of cumulative	Minor cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				resulting in a minor significance of cumulative effect due to intervening distance and the presence of an existing turbines in this view.	effects would be small, resulting in a minor significance of cumulative effect.	
267	Eriviat Bach Isaf	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening topography and distance. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Negligible cumulative effects predicted.
217 a	Hafod – Planning permission for dwelling	I	Unknown (Subject to Design of Dwelling)	Unknown (Subject to Design of Dwelling)	Unknown (Subject to Design of Dwelling)	Unknown (Subject to Design of Dwelling)
432	Llechryd Bach	I	Moderate (significant)	Views of the developments in addition to the Proposed	Proposed Development is unlikely to be seen alongside any other	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				Development are unlikely due to intervening topography. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	
290	Berain	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening distance, topography and screening from existing vegetation. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Negligible cumulative effects predicted.
291	Tyddyn Bartley	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				distance, topography and screening from existing vegetation. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	be negligible, resulting in a negligible significance of cumulative effect.	
292	Croen-Llwm-Mawr	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening distance, topography and screening from existing vegetation. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Negligible cumulative effects predicted.
294	Plas Buckley	I	Negligible (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening distance, topography and	Proposed Development is unlikely to be seen alongside any other developments. Magnitude of cumulative effects would be negligible, resulting in a	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				screening from existing vegetation. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	negligible significance of cumulative effect.	
340	Plas Hafod	I	Moderate (significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening (over 14km to the turbines near Clocaenog, where existing turbines are barely perceptible on the far horizon) and intervening topography. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	With the exception of the single turbine at Bryn Cocyn, the top of which may be visible in views to the south, the Proposed Development is unlikely to be seen alongside any other developments due to intervening distance (over 14km to the turbines near Clocaenog) and intervening topography. Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	Minor cumulative effects predicted.
341	Maes	I	Minor (not significant)	Views of the developments in addition	With the exception of the single turbine at Bryn	Minor cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				to the Proposed Development are unlikely due to intervening distance (over 14km to the turbines near Clocaenog, where existing turbines are barely perceptible on the far horizon) and intervening topography. Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	Cocyn, the top of which may be visible in views to the south, the Proposed Development is unlikely to be seen alongside any other developments due to intervening distance (over 14km to the turbines near Clocaenog) and intervening topography. Magnitude of cumulative effects would be small, resulting in a minor significance of cumulative effect.	
358	Tyddyn Eos	I	Minor (not significant)	Views of the developments in addition to the Proposed Development are unlikely due to intervening distance (over 15km to the turbines near Clocaenog) and intervening topography (the Cefn Meiriadog ridge	Proposed Development is unlikely to be seen alongside any other developments due to intervening distance (over 15km to the turbines near Clocaenog) and intervening topography (the Cefn Meiriadog ridge prevents any views south	Negligible cumulative effects predicted.

Ref	Property or Group Name	Individual or Group	Conclusion of the LVIA (Residential Visual Amenity Effects)	Cumulative Residential Visual Effect (Stage 1 Developments)	Cumulative Residential Visual Effect (Stage 2 Developments)	Contribution of the Proposed Development to Cumulative Effects
				prevents any views south of the receptor). Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	of the receptor). Magnitude of cumulative effects would be negligible, resulting in a negligible significance of cumulative effect.	

Proposed Mitigation

7.9.113 No additional mitigation measures are proposed.

7.10 Summary of Residual Effects

Hedgerow Removal & Replanting

7.10.1 On the day of opening the specific mitigation measures would not be effective and therefore the residual effects would remain as assessed without mitigation (minor). As the replanted hedgerows mature, however, this would offset any landscape or visual effects arising from losses due to construction. The residual effects at year 15 are likely to be **negligible** and therefore not significant.

Tree Removal & Replanting

7.10.2 On the day of opening the specific mitigation measures would not be effective and therefore the residual effects would remain as assessed without mitigation (minor). As the replanted trees mature, however, this would help offset landscape or visual effects arising from losses due to construction. The residual effects of the tree removal at year 15 are likely to be **negligible to minor** and therefore not significant.

Effects on Landscape Character

7.10.3 **Moderate** landscape effects as a result of the Proposed Development were identified within five of the fourteen LANDMAP VSAs that fall wholly or partly within the Study Area.

7.10.4 The landscape of the Denbigh and Derwen Hills, particularly the ridges to the north of Tir Mostyn and to the north of Peniel would experience **moderate** effects. Whilst hedgerow, hedgerow tree and some woodland edge planting are proposed in these locations, large scale planting is not considered appropriate, and the scale of the planting is very localised and unlikely to substantially reduce the effects on landscape character. As such, residual effects are likely to remain the same as assessed without mitigation (**moderate**).

7.10.5 The localised parkland character of parts of the landscape of the Llanefydd Lowlands would experience a **moderate** effect. Whilst hedgerow, hedgerow tree and some woodland edge planting are proposed in these locations, the scale of the proposed planting is very localised and unlikely to substantially reduce the effects on landscape character. As such, residual effects are likely to remain the same as assessed without mitigation (**moderate**).

7.10.6 The landscapes of the Afon Elwy Valley – East and Upper Elwy Valley would experience **moderate** effects. Whilst hedgerow, hedgerow tree and some woodland edge planting are proposed in these locations, the scale of the proposed planting is very localised and unlikely to substantially reduce the effects on landscape character. As such, residual effects are likely to remain the same as assessed without mitigation (**moderate**).

- 7.10.7 The landscape of the Cefn Meiriadog Ridge (Limestone Valley – Cefn) would experience a **moderate** effect. Whilst hedgerow, hedgerow tree and some woodland edge planting are proposed in these locations, the scale of the proposed planting is very localised and unlikely to substantially reduce the effects on landscape character. As such, residual effects are likely to remain the same as assessed without mitigation (**moderate**).

Visual Effect on Viewpoints

- 7.10.8 Viewpoints were selected to represent typical and sensitive receptors within the Study Area and particularly sensitive receptors beyond, based on the likely zone of theoretical visibility. The likely effects experienced at the viewpoints give an indication of typical significant effects that may be experienced (to a similar or lesser significance) along the length of the route, in proximity to similar receptors, e.g., edge of settlement. These effects are discussed below. In general, due to the largely rural nature of the landscape adjacent to the Proposed Development, any proposed planting (generally restricted to edge of woodland, hedgerows and hedgerow trees) is unlikely to fully offset effects arising from the Proposed Development but may help to reduce the effects.

Visual Effect on Edges of Settlements

- 7.10.9 Where the Proposed Development is in close proximity to the edge of settlements and small hamlets, the visual effect before mitigation is generally considered to be locally **moderate**. New and supplementary tree and hedgerow planting along adjacent roads and along intervening field boundaries would, in time, help to screen some views. However, due to the proximity of the Proposed Development, some residual effects are likely to remain **moderate**.

Visual Effect on Open Country Region (Open Access Land)

- 7.10.10 The visual effect on users of open access land at Foel Gasyth before mitigation is generally considered to be locally **moderate**. New and supplementary tree and hedgerow planting along roads and intervening field boundaries would have little impact on the magnitude and thus significance of the effects. Views of the Proposed Development would largely remain the same, and as such, residual effects are likely to remain **moderate**.

Visual Effect on Footpaths & Bridleways

- 7.10.11 Where wood pole structures are located close to a footpath or a regional or long distance trail (e.g., the North Wales Pilgrim's Way and the Clwydian Way), new tree and hedgerow planting is proposed to help offset any effects. Whilst, in time, this would compensate for some of the adverse visual effects, it would not be possible to screen views of all poles and the residual effect on short sections of bridleways and footpaths is likely to remain locally **moderate**. However, it is important to note that this effect would be transient and localised. Localised effects are likely to remain **moderate** in more open landscapes to the south of the Proposed Development near Tir Mostyn, where extensive tree or hedgerow planting is not considered appropriate to the local landscape character.

Visual Effect on Local Roads and Lanes

- 7.10.12 The visual effect on local roads and lanes before mitigation is generally likely to be locally **moderate**. Hedgerow improvements and hedgerow tree planting along the roadsides could, in time, help to limit views. However, due to the proximity of the overhead line, particularly as it oversailed the road or lane, the residual effects, although very localised, are likely to remain **moderate**. This is particularly likely in more open landscapes to the south of the Proposed Development near Tir Mostyn, where extensive tree or hedgerow planting is not considered appropriate to the local landscape character.
- 7.10.13 Localised tree and hedgerow planting to infill gaps in field hedgerows is proposed to help offset any effects. Whilst, in time, this would compensate for some of the adverse visual effects, it would not be possible to screen all views of the Proposed Development and the residual effect is likely to remain **moderate**. It should be noted that these effects would be localised, transient and would diminish rapidly with distance.

Visual Effect on Caravan Sites

- 7.10.14 Before mitigation, the visual effect on the Caer Mynydd Caravan Park near Saron is likely to be locally **moderate**. Hedgerow improvements and hedgerow tree planting could, in time, help to limit some views. However, due to the proximity of the Proposed Development, the residual effect, although very localised, is likely to remain **moderate**.

Effects on Residential Visual Amenity

- 7.10.15 Moderate significant effects on residential visual amenity are predicted at four locations: Tan yr Allt, Ty Coch, Lechryd Bach and Plas Hafod. Hedgerow improvements and hedgerow tree planting could, in time, help to limit some views. However, due to the proximity of the Proposed Development, the residual effect, although very localised, is likely to remain **moderate**.

Combined Visual Effects with Existing Overhead Lines

- 7.10.16 In general, due to the largely pastoral and rural nature of the landscape adjacent to the Proposed Development, any proposed planting is generally restricted to edge of woodland, hedgerows and hedgerow trees. It is therefore unlikely to fully offset any combined effects arising from the Proposed Development when seen alongside existing low voltage lines. Any effect is likely to therefore remain the same.

Cumulative Landscape and Visual Effects

- 7.10.17 Whilst the cumulative landscape and visual assessments indicate that at the southern end of the Proposed Development, there may be **moderate** cumulative landscape effects, **moderate to major** cumulative visual effects, moderate sequential cumulative visual effects and a moderate effect on residential visual amenity, the contribution of the Proposed Development to the total cumulative effects is considered to be small. It is the wind farms and turbines that have the greatest contribution to

- cumulative effects. Taking this into consideration, no mitigation measures are proposed and the residual effects are likely to remain the same.
- 7.10.18 Potential significant (moderate) cumulative landscape effects are identified within the Llanefydd Lowlands; primarily due to the Proposed Development. Proposed mitigation measures are not likely to fully mitigate the cumulative effects therefore any residual effects are likely to remain the same.
- 7.10.19 Moderate (significant) cumulative visual effects have been identified from receptors in elevated positions located towards the north of the study area; these are primarily due to close up views of the Proposed Development viewed in combination with distant wind farms. Proposed mitigation measures would help in some cases however these are not likely to fully mitigate all the cumulative effects therefore most residual effects are likely to remain the same.