

19. Cumulative Assessment

19.1 Introduction

- 19.1.1 This chapter has been prepared to support the EIA scoping process by setting out the proposed scope and methodology for the cumulative effects assessment to be undertaken within the Environmental Statement (ES). The purpose of this chapter is to seek agreement from the Welsh Ministers on the approach to cumulative assessment at this stage, so that the ES can be prepared on a clear, proportionate and transparent basis.
- 19.1.2 The Proposed Development is intended to be consented under the Significant Infrastructure Projects (SIP) regime established by the Infrastructure (Wales) Act 2024 (Senedd Cymru, 2024), which provides for Infrastructure Consent to be granted through an Infrastructure Consent Order.
- 19.1.3 Cumulative effects are those that may arise where the effects of the Proposed Development combine with the effects of other developments, or where different elements of the Proposed Development interact, such that the combined effect differs from (and may be greater than) the effect of any single element considered in isolation.. This includes both inter-project cumulative effects (with other developments) and intra-project cumulative effects arising from the interaction of different components of the Proposed Development. This chapter does not present assessment outcomes; it defines the proposed scope and approach to be applied within the ES and is carried out in accordance with The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (Welsh Government, 2017).
- 19.1.4 For the purposes of Environmental Impact Assessment, the Environmental Statement considers the environmental effects of the on-site wind farm infrastructure together with the reasonably foreseeable off-site grid connection route, in order to provide a comprehensive assessment of potential effects and interactions and to avoid the risk of project-splitting.
- 19.1.5 The off-site grid connection does not form part of the Proposed Development for which consent is sought, and will be brought forward by the relevant developer, and will be subject to a separate consenting process. The inclusion of the grid connection route within the Environmental Statement is therefore for assessment purposes only and does not imply that it forms part of the wind farm project or that it will be delivered by the applicant. The approach to the consideration of grid connection works and any associated corridor assessment is addressed within Chapter 3 Proposed Development of this Scoping Report and is aligned with the cumulative assessment framework set out in this chapter.

19.2 Legislative and Policy Context

- 19.2.1 The Environmental Statement (including cumulative assessment) will be prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (Welsh Government, 2017), as amended including by the Town and Country Planning (Environmental Impact Assessment) (Wales) (Amendment) Regulations 2019 (Welsh Government, 2019). These regulations establish the EIA process and requirements for environmental information including consideration of cumulative effects.
- 19.2.2 The SIP regime is established by the Infrastructure (Wales) Act 2024 (Senedd Cymru, 2024). This Act reforms how major infrastructure is consented in Wales and provides the statutory basis for Infrastructure Consent and Infrastructure Consent Orders (Welsh Government, 2024).
- 19.2.3 The SIP pre-application and application process is supported by The Infrastructure Consent (Pre-Application and Application Procedure and Transitional Provisions) (Wales) Regulations 2025 (Welsh Government, 2025), which make provision for pre-application notification, consultation/publicity and application submission requirements. This Scoping Report is intended to secure agreement on the cumulative assessment approach so it can be as adopted in the preparation of the ES is prepared alongside the SIP pre-application process. (The Infrastructure Consent

19.3 Purpose and Scope of the Cumulative Assessment

- 19.3.1 The purpose of cumulative assessment scoping is to identify whether the Proposed Development could contribute to significant effects through inter-project cumulative effects (in combination with other developments) and intra-project cumulative effects arising from the interaction of different components of the Proposed Development, including through additive, interactive or sequential pathways.
- 19.3.2 This approach is intended to ensure that the Environmental Statement addresses realistic combined change, rather than considering individual project elements in isolation. The proposed approach to the assessment of grid connection works and any associated corridor is set out in Chapter 3 Proposed Development of this Scoping Report and is aligned with the cumulative assessment framework described in this chapter.
- 19.3.3 A cumulative assessment is only meaningful where there is a credible pathway for interaction between developments such as shared receptors, overlapping zones of influence or temporal overlap. The proposed approach therefore includes a structured screening process, whereby other developments and project components are systematically reviewed against defined screening criteria to determine whether a plausible mechanism for cumulative interaction exists. The screening criteria and step-by-step process applied are set out in section 19.4 Proposed Methodology of this

chapter, to ensure that cumulative assessment effort is proportionate and focused on those combinations that could plausibly influence outcomes.

19.4 Proposed Methodology

19.4.1 The methodology which will be adopted for the purposes of the cumulative assessment comprises 4 stages, the details of which are summarised below. The topic chapters of the ES will apply this methodology and, where topic-specific refinements are necessary, those refinements will be clearly stated and justified within the relevant topic chapter.

19.4.2 In addition to the consideration of cumulative effects with other developments, the cumulative assessment methodology also addresses intra-project cumulative effects arising from the interaction of different components of the Proposed Development. Intra-project cumulative effects will be considered within the relevant topic chapters through an integrated assessment of construction, operation and decommissioning activities, where multiple elements of the Proposed Development may act on the same receptors or through shared pathways.

19.4.3 This approach ensures that interactions between project components are identified and assessed using the same significance framework as project-alone effects, without duplication of assessment effort.

19.4.4 The different stages of the above-mentioned methodology are as follows:

Stage 1

19.4.5 The cumulative development longlist will be established on an inclusive and precautionary basis, informed by publicly available planning and consenting information.

19.4.6 The purpose of the longlist is to capture a broad range of developments that could reasonably give rise to cumulative interactions, prior to the application of topic-specific screening. Accordingly, the longlist may include, where information is available in the public domain:

- existing developments that are operational, under construction, consented, or otherwise reasonably foreseeable during the construction or operational period of the Proposed Development;
- developments approaching the end of their consented operational life, where decommissioning, life-extension or repowering activities could plausibly overlap with the Proposed Development and give rise to cumulative interactions;
- developments that are the subject of an undetermined planning or consenting application;
- developments for which an Environmental Impact Assessment scoping request has been submitted to the relevant consenting authority; and

- any other development that the relevant planning or consenting authority considers appropriate for consideration and which is identifiable from public sources.

19.4.7 The inclusion of a development within the longlist does not imply that it will give rise to cumulative effects or that it will be assessed in detail; rather, it provides a transparent starting point for subsequent topic-specific screening undertaken at Stage 2 of the methodology. A map of proposed cumulative schemes is provided as figure 19.1.

Stage 2

19.4.8 Apply topic specific screening to derive shortlists. The longlist will be screened on a topic by topic basis to identify those developments with a realistic potential to contribute to cumulative effects for that topic. This is proposed to ensure the assessment focuses on credible interactions and avoids unnecessary assessment of irrelevant schemes.

Stage 3

19.4.9 Consider temporal overlap and effect pathways. The ES will consider whether cumulative effects could arise through overlapping construction phases, overlapping operational phases, or construction-operation overlap. Where programmes are uncertain, the ES will adopt reasonable worst-case assumptions where necessary to test whether significant cumulative effects could arise. This is proposed to ensure robustness in the face of programme uncertainty at pre-application stage.

Stage 4

19.4.10 Assess cumulative significance and identify mitigation. Topic chapters will assess cumulative effects using the same significance framework as project-alone effects (magnitude/extent/duration and receptor sensitivity/value) and will describe embedded measures and additional mitigation where cumulative effects are identified. This is proposed to provide a clear audit trail from screening through to significance conclusions.

19.5 Proposed Scope for Identifying Cumulative Developments

19.5.1 For the ES cumulative assessment, developments are proposed to be considered for inclusion on the longlist where they are operational, under construction, consented, subject to a live application, or reasonably foreseeable. This is proposed to ensure the ES considers the full range of relevant development that could plausibly contribute to cumulative effects, while remaining proportionate.

19.5.2 At this scoping stage, a fixed cumulative development search area is proposed to provide a clear, proportionate and transparent basis for defining the cumulative longlist. For the purposes of identifying cumulative developments for initial screening, the longlist search area will extend to 34 km from the Order Limits. This distance is proposed with reference to NRW LANDMAP guidance and associated 'visible settings' mapping which uses Zones of Theoretical Visibility calculations out to 35 km as a strategic 'ready-reckoner' for

understanding potential visibility patterns and informing early-stage landscape and visual scoping (Natural Resources Wales, 2021) (Natural Resources Wales, n.d).

- 19.5.3 The longlist derived from this search area will then be screened on a topic-by-topic basis to define topic-specific cumulative shortlists using the relevant topic study areas / Zones of Influence and effect pathways. Where a topic-specific pathway indicates that a different spatial extent is necessary (for example, where effects could reasonably extend beyond the initial longlist search area), this will be clearly stated and justified within the relevant technical chapter.
- 19.5.4 “Reasonably foreseeable” developments are proposed to include developments in the public domain with sufficient information on location and nature to enable meaningful screening of potential cumulative interaction. This is proposed to avoid speculation while ensuring that emerging schemes capable of influencing cumulative outcomes are not omitted. The ES will assess all reasonably foreseeable developments known at the time up to October 2027 which is approximately 3 months before the anticipated submission date of the Proposed Development

19.6 Scope of Cumulative Assessment

- 19.6.1 The cumulative assessment will focus primarily on renewable energy developments (including onshore wind, solar PV, energy storage and associated grid infrastructure) reflecting the dominant form of development in the regional context and the most likely pathways for cumulative interaction with the Proposed Development.
- 19.6.2 Cumulative effects will be considered where there is potential for overlapping or additive effects on the same receptors, sequential or phased impacts occurring over similar timeframes, or combined changes to the receiving environment’s capacity (e.g., landscape character, ecological function, or environmental standards).
- 19.6.3 The assessment will not assume all schemes are constructed simultaneously. Instead, topic chapters will apply a reasonable worst-case approach where effects could coincide in time and space in a manner relevant to the receptor and the consenting decision.
- 19.6.4 Cumulative effects have been considered where there is potential for:
- Overlapping or additive effects on the same receptors;
 - Sequential or phased impacts occurring over similar timeframes; or
 - Combined changes to landscape character, ecological function, or environmental capacity.
- 19.6.5 In accordance with the scope defined in section 19.1 to 19.4, the cumulative assessment will address both, *inter-project* cumulative effects (i.e. inter-cumulative effects) and intra-project effects (i.e intra-cumulative effects). For the purposes of the ES, Inter-project cumulative effects will be assessed as the combined effect of the Proposed Development with other relevant developments identified through the longlist and topic-specific

shortlists. This will include consideration of additive and interactive effects where Zones of Influence overlap, where receptors are shared, or where there is a realistic pathway for effects from different developments to act on the same receiving environment.

- 19.6.6 *Intra-project* cumulative effects (i.e. intra-cumulative effects) will also be assessed, recognising that different components and phases of the Proposed Development may act together to influence the same receptor. This will include (as relevant to each topic) consideration of cumulative effects arising from multiple project elements (e.g. turbines, tracks, borrow pits, substation, construction compounds and on-site cabling), and from the interaction of construction, operation and decommissioning effects where a receptor may experience successive or overlapping changes over time.
- 19.6.7 Inter- and intra-cumulative effects will be assessed using a structured process within each topic chapter. This will include: defining topic-specific receptors and effect pathways; mapping spatial overlap of Zones of Influence; testing temporal overlap using construction and operational programmes (including reasonable worst-case where timing is uncertain); and identifying where multiple pathways could act in combination (for example, where habitat loss, disturbance and fragmentation could together affect ecological functionality, or where construction traffic, noise and dust could coincide at the same locations).
- 19.6.8 Where inter- or intra-cumulative effects are identified, topic chapters will apply the same significance framework as for project-alone effects, taking account of any change in magnitude, extent, duration, reversibility and frequency resulting from combined actions, alongside receptor sensitivity/value. The ES will clearly set out the combinations and scenarios assessed, the assumptions made (including the degree of design/programme certainty for other developments), and the mitigation measures relied upon, so that the basis for cumulative conclusions is transparent.

19.7 Topic Specific Cumulative Effects

- 19.7.1 The cumulative assessment methodology defined in Sections 19.1 to 19.6 will be applied consistently across all technical chapters of the Environmental Statement. Each topic chapter will apply the framework in a manner appropriate to the receptor being assessed and will set out the topic-specific cumulative study area, development shortlists, screening approach, assessment method and conclusions, with any necessary refinements to the standard methodology clearly described and justified within the relevant chapter.
- Cumulative Effects Associated with the Proposed Cable Route
- 19.7.2 The off-site grid connection (between the Site and the export cable from the Proposed Development substation to the point of connection to the grid network) will be brought forward through its own separate consenting process. Notwithstanding this, the Environmental Statement includes assessment of the reasonably foreseeable grid connection route corridor(s) alongside the wind farm, to ensure that potential environmental effects and interactions are appropriately identified and assessed for EIA purposes. This approach reflects the inter-relationship between the wind farm and the grid

connection, while recognising that they are separate developments brought forward by different parties.

- 19.7.3 The potential environmental effects associated with the grid connection route will be assessed within the relevant technical chapters of the Environmental Statement, applying proportionate topic-specific methodologies and significance criteria consistent with those used for the wind farm. Where route alignment remains subject to refinement, assessment will be based on defined route corridors and reasonable worst-case assumptions. This assessment is undertaken without pre-empting or prejudicing the separate grid connection consenting process and does not imply that the grid connection forms part of the Proposed Development.
- 19.7.4 Topic chapters will identify any differences in potential cumulative effects between route options and will set out any route-specific mitigation or design principles required to avoid or reduce cumulative effects.
- 19.7.5 The Environmental Statement does not seek consent for the grid connection and does not constrain the design, routing or consenting of that infrastructure.

19.8 Residual Cumulative effects

- 19.8.1 Cumulative effects will be assessed within the Environmental Statement for each topic taking account of embedded mitigation, which is integral to the design of the Proposed Development and is considered when identifying likely significant effects. Where significant cumulative effects are identified additional mitigation measures will be described as appropriate, and any residual cumulative effects will be reported following the application of such measures. The ES will also provide a clear audit trail showing how the cumulative shortlists were derived from the longlist and how significance conclusions were reached.
- 19.8.2 Where minor cumulative effects are identified, these are considered not significant in EIA terms, having regard to the topic specific significance criteria applied within the ES. Such effects are typically localised, limited in extent, short-term or of low magnitude, and do not materially alter the baseline conditions or undermine the integrity of the receiving environment. On this basis, minor cumulative effects are not considered to give rise to a likely significant effect and are reported for completeness rather than requiring further mitigation.

19.9 Summary and Conclusions

- 19.9.1 This chapter sets out the proposed scope and method for cumulative assessment to be applied within the ES and is provided to support agreement through the Welsh Ministers' scoping direction. The approach establishes ES-wide principles for identifying and screening cumulative developments and assessing cumulative interactions, while allowing topic specialists to apply and, where necessary, justify topic-specific refinements within their technical chapters.

19.9.2 The Applicant requests that the Welsh Ministers confirm that the ES-wide cumulative approach set out in Sections 19.3 to 19.7 is appropriate for the Proposed Development, including the proposed approach to identifying “reasonably foreseeable” development and the treatment of cable route options where more than one route remains realistic at ES stage.

19.10 References

Natural Resources Wales, 2021. *Using LANDMAP in Landscape and Visual Impact Assessments (GN46)*. [Online]

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[Accessed 08 May 2026].