

**Environmental Report of the
Proposed Variation to the
County Donegal Development
Plan 2018-2024 (As Varied)
in respect of a Wind Energy
Policy Framework
(Variation No. 2)**



**Comhairle Contae
Dhún na nGall**
Donegal County Council

**Community, Development & Planning Services
April 2022**

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1 Introduction

1.1 Background

The County Donegal Development Plan 2018-2024 (As Varied) (“the CDP”) is the statutory development plan for County Donegal and came into effect in June, 2018. There is, however, a policy lacuna in the CDP in relation to wind energy. This gap was created by virtue of a High Court Order made on the 5th day of November, 2018 that removed certain critical provisions of the Plan relating to Wind Energy from that adopted by a resolution of the Members in May, 2018. The Proposed Variation will address these gaps. The sections that were omitted by the aforementioned High Court Order, and that are addressed in the Proposed Variation, are summarized below:

Omitted Section	Section Details
(1.) Section 6.5(c) of the Wind Energy standards at Part B: Appendix 3, Development Guidelines and Technical Standards ;	Wind turbines must meet the requirements and standards set out in the DEHLG Wind Energy Development Guidelines 2006, or any subsequent related Guidelines and in addition must not be located within: (c) Areas identified as locations where wind farm development would not be acceptable as identified on Map 8.2.1, Chapter 8 of the County Development Plan 2018-2024.
(2.) Section 6.5(f) of the Wind Energy standards at Part B: Appendix 3, Development Guidelines and Technical Standards and Map 8.2.1 in Part A	Wind turbines must meet the requirements and standards set out in the DEHLG Wind Energy Development Guidelines 2006, or any subsequent related Guidelines and in addition must not be located within: (f) A set back distance of ten times the tip height of proposed turbines from residential properties and other centres of human habitation.
(3.) Map 8.2.1 in Part A	Wind Energy Mapping (identifies areas as either Open To Consideration, Not Acceptable, or Acceptable for Augmentation.

1.2 Strategic Environmental Assessment – Process to date

Strategic Environmental Assessment (“SEA”) is a systematic and effective process for ensuring that environmental issues are taken into account at every stage in the preparation, implementation, monitoring and review of plans, programmes and strategies. The requirement for an SEA was introduced by Directive 2001/42/EC of the 27th June 2001 (“the SEA Directive”) and Article 1 thereof sets out the objective of the Directive as:

“to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment”.

The former Department of the Environment, Heritage and Local Government (now Department of Housing, Local Government and Heritage) in November, 2004 issued Guidelines for Regional Authorities and Planning Authorities on the implementation of the SEA Directive entitled “Assessment of the Effect of Certain Plans and Programmes on the Environment” (“the SEA Guidelines”). Donegal County Council (“DCC”) as a Planning Authority is obliged to have regard to such Guidelines in the performance of its functions and the requirements have been observed in the preparation of this Environmental Report.

The SEA Guidelines outlines the SEA process and sets out the requisite steps. The following paragraphs summarise the steps completed to-date.

1.2.1 STEP 1 – SCREENING: Considers whether or not the Proposed Variation would be likely to have significant effects on the environment.

Completed: Screening was undertaken by the Planning Authority in December, 2021 in accordance with Article 13K(1) of the Planning and Development Regulations, 2001 (As Amended) (“the Regulations”). Taking into account the relevant criteria set out in Schedule 2B of the Regulations, it was determined that the Proposed Variation had potential to give rise to a number of environmental impacts and, accordingly, that it should be the subject of a Strategic Environmental Assessment and Environmental Report on foot of same. The process therefore moved on to the next step.

1.2.2 STEP 2 – SCOPING: Consultation with Statutory bodies and other interested parties on the scope and level of detail to be considered in the assessment.

Completed: In accordance with Article 13M of the Regulations, the following bodies were notified that an Environmental Report would be prepared and submissions in relation to the scope and level of detail to be included in said report were invited from same:

- SEA Section, Environmental Protection Agency (EPA)
- Department of Housing, Local Government and Heritage (DHLGC)
- Department of the Environment, Climate and Communications (DECC)
- Department of Agriculture, Food and the Marine (DAFM)
- Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DTCAGSM)
- Leitrim County Council
- Sligo County Council
- Fermanagh and Omagh District Council
- Derry City and Strabane District Council
- Causeway Coast and Glens Borough Council

Submissions were received from 4 agencies. These submissions are reproduced in Appendix A. The issues raised are summarised in Table 1.1 below, together with responses of the Planning Authority. The comments received were taken on board in the preparation of this Environmental Report, where appropriate, as outline in the responses in Table 1.1.

Table 1.1: Scoping Submissions and Summary Responses

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>Department of Agriculture, Food and the Marine</p> <p>Note that policy is predominately land-based, but request that consideration be given to the potential impacts on any commercial sea-fishing activities and advise it is essential that any negative impacts on fisheries are avoided. Such considerations need to be given as part of any planning/proposal process and during the development process itself. Imperative that engagement should be sought with the fishing industry and other relevant stakeholders at as early a stage as possible to discuss any changes that may affect them to afford a chance for their input. Fishers' interests and livelihoods must be fully recognised, supported, and taken into account.</p>	<p>Noted. It is not anticipated that implementation of the Variation will have any material impact on commercial sea-fishing activities, and thus changes to the Proposed Variation are not required.</p>
<p><u>Geological Survey of Ireland</u></p> <p><u>Geoheritage</u></p> <p>Welcome and support this proposed inclusion of County Geological Sites in the Wind Energy Policy Framework. Important that the democratic process of public consultation and approval by councillors of the CDP means that stakeholders in the CGSs and all of the local community can buy into the process. Important to note however, that management issues for the majority of geological heritage sites may differ from ecological sites, and in some cases development may facilitate enhanced geological understanding of a site by exposing more rock sections - for example, in a quarry extension. County Geological Sites are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest.</p> <p>Necessary to include a policy objective to protect geological NHAs as they become designated and notified to the Local Authority, during the lifetime of the Plan.</p> <p><u>Geohazard</u></p> <p>'Pleased to see use of' GSI's Landslide Susceptibility Map in Ref 10, 'Table 1: Individual Spatial Data Layers Used In The Construction of 'Not Normally Permissible' Areas'. However, offer clarification in relation to the following statement in the (Introduction) document: "<i>GSI officials provided an opinion that only areas identified as being of 'High Landslide Susceptibility' should be included in the 'Not Normally Permissible' designation.</i>" When Geological Survey Ireland staff met with Donegal Co Co officials we advised that the National Landslide Susceptibility map and</p>	<p>Noted. Changes to the Proposed Variation are not required.</p> <p>Noted. Such protection is already provided in the existing Natural Heritage policies of the Plan (Policies NH-P-1 and NH-P-19 refer) thus changes to the Proposed Variation are not required.</p> <p>This matter was considered by the Plenary Council at its meeting of 31st January, 2022 (adjourned to 21st February, 2022 and 28th March, 2022 (adjourned to 6th April, 2022). At these meetings, Members noted the observations made by GSI but retained their position in relation to the incorporation of 'Moderately High' and 'Moderately Low' landslide</p>

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>Landslide Database should be considered with respect to planning and future developments. The advice provided was based on what the map represents i.e. the factors of terrain used in the methodology and the density of landslides which provides the classification of landslide susceptibility.</p> <p>We also note the decision by the Plenary Council Meeting members to include the 'Moderately High' and 'Moderately Low' Susceptibility layers within the 'Not Normally Permissible' designation. It is important to note, and we would emphasise that, while areas of moderately high to high susceptibility are more likely to experience landslides the areas of low to moderately low susceptibility should also be examined as these areas can experience landslides in certain conditions e.g. the Meenbog area. Geological Survey Ireland did not advise on what should or shouldn't be included in the designation of "not normally permissible" as we did not perform this analysis. Geological Survey Ireland provided a baseline dataset for inclusion in that analysis only.</p> <p>Also recommend that the regional scale of the map should also be considered.</p>	<p>susceptibility areas in the 'Not Normally Permissible' designation in Map 8.2.1, 'Wind Energy'.</p> <p>Noted. The comment infers that the mapping may not be entirely accurate at a local level. The possibility of such occurrences arising not just in relation to landslide susceptibility but all evidence data layers is addressed in Amendment Item 4 wherein it is noted that: <i>'Within each of the wind energy area designations on Map 8.2.1, and along the interface between the designations, there may be small areas that do not fully meet the intent of the designation. Such anomalies shall be considered individually and in the context of all other objectives and policies contained within this Plan, should an application for development be submitted in these. The onus shall be on the applicant to make the case that the site does not meet the characteristics of the designation within which it is located, but ultimately it shall be a matter for the Planning Authority to adjudicate on such matters.'</i></p>

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>Environmental Protection Agency</p> <p>Proposals for renewable energy developments (wind & solar) should be subject to the relevant environmental assessments, including Environmental Impact Assessment, Appropriate Assessment and visual impact assessment, as appropriate. A commitment to that effect should be given in the Variation.</p> <p>The need for all future renewable energy developments to be climate resilient and able to adapt to the effects of climate change (extreme weather events, increased runoff, erosion/landslides etc.) should be considered. Areas where windfarm developments occur (upload areas, raised and blanket bogs, cutaway bogs) can be particularly vulnerable. The relevant obligations of the National Adaptation Framework, the Climate Action Plan 2021 and forthcoming regional, local and sectoral adaption plans should be acknowledged in the Variation.</p> <p>The Variation and SEA should consider the obligations of the Water Framework Directive (WFD) and the National River Basin Management Plan and associated Programme of Measures. You should ensure that a commitment is included to protect water quality status and associated habitats and species in implementing the Variation. Water Framework Directive protected areas (including salmonid rivers, nutrient sensitive rivers, freshwater pearl mussel rivers etc.) and High-Status water bodies should be afforded particular protection in implementing the Variation.</p> <p>The relevant OPW Flood Risk Management Plans and associated flood mapping should also be referenced. The second cycle of Flood Risk Assessment has commenced and will consider the implications of flooding in rural areas as well as the risk to critical infrastructure.</p> <p>The potential impact on designated national and international nature conservation sites (Natura 2000, NHA's, pNHAs, Nature Reserve) both within and adjacent to the Variation area should be assessed.</p>	<p>This is a development management function/practice issue. Existing Policy E-P-18 already alludes to this practice thus changes to the Proposed Variation are not required.</p> <p>This issue is already addressed in Amendment Item 17 and the proposed policy, Policy E-P-26, therein: <i>'It is the policy of the Council that all applications for wind farm development located on peatland and bog, including the re-powering and augmentation projects, shall be accompanied by a 'Peat Stability Risk Assessment Report'.</i></p> <p>The referenced obligations have been considered. The requested protection commitments are already provided in the existing CDP (e.g. refer Objectives WES-O-4, WES-O-5, and WES-O-6).</p> <p>Flooding is addressed in Section 5.4 of the existing CDP. Objective F-O-1 and Policies F-P-1 to F-P-7 refer.</p> <p>The potential impact on Natura sites both within and adjacent to the Variation area have been assessed both in the preparation of Proposed Map 8.2.1 and the Natura Report and the Environmental Report. NHA's, pNHA's and Nature Reserves within the Variation area have been assessed and this is considered a reasonable approach. Potential impacts on such designations outside of the area can be assessed on a case-by-case basis should the need arise.</p>

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>A clear commitment should be given to require screening for Appropriate Assessment to be carried out for all wind and solar energy developments, which may arise in the implementation of the Variation with potential for likely significant effects on Natura 2000 sites. Appropriate Assessment, where required, should be carried out in accordance with the Habitats Directive and in-line with the NPWS and DHPLG <i>Appropriate Assessment Guidance for Planning Authorities</i>.</p> <p>The Variation should take account of the National Biodiversity Action Plan (NBAP), as well as any existing Heritage/Biodiversity Action plans and available habitat mapping and these should be integrated as appropriate in the Variation. The potential impact on protected species including birds, bats, flight paths etc. should also be assessed. The National Peatland Strategy, National Raised Bog SAC Management Plan and National Raised Bog NHA Review should be considered, as appropriate. A National Blanket Bog SAC Management Plan and associated NHA review is under consideration. If prepared within the lifetime of the Variation, the Variation should include a commitment to incorporate the relevant aspects of these plans.</p> <p>The National Landscape Strategy should be referred to and considered as appropriate. The National Planning Framework and the Northern and Western Regional Spatial and Economic Strategy both include provisions for protecting and managing our landscape resources, and should also be acknowledged.</p>	<p>This is a development management function/practice issue.</p> <p>The Environmental Report identifies the referenced documents in Chapter 6: '<i>Environmental Protection Objectives Established at An International, European Union or National Level...</i>' environmental protection objectives.' It is noted in the Chapter that the CDP already contains in Section 7.1: 'Natural Heritage' of Chapter 7: 'The Natural and Built Heritage' strong objectives and policies aimed at protecting biodiversity, flora and fauna. Raised bogs have been carefully considered in the preparation of the Variation (refer to the Not Normally Permissible Area including all Natura 2000 sites and NHA's, and the lesser-quality remaining bogs in the County also being identified as requiring careful consideration by their inclusion in the 'Open to Consideration' designation. Flightpaths of protected birds species has been considered in the Natura Report.</p> <p>The landscape of the County was already considered through the statutory process of preparing the CDP, leading to the designation of 'Especially High' (EHSA), 'High' (HSA) and 'Moderate' scenic amenity areas. The entire EHSA area is contained within the 'Not Normally Permissible' area, while the entire HSA area is contained within the 'Open to Consideration' designation thereby identifying a potential landscape impact for prospective developers. This approach is considered reasonable.</p>

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>The Variation should address the need for the preparation and effective implementation of Environmental Management Plans (EMPs) to manage the construction, operation, maintenance and decommissioning phases of wind and solar energy developments. The Variation should describe the information to be included in the EMPs including monitoring and reporting provisions and mitigation measures as well as supervision/oversight of construction works. This should ensure the potential for adverse environmental effects are minimised and provisions for remedial actions are included.</p> <p>The EPA may provide additional comments upon receipt of the SEA Scoping Report for the Variation.</p> <p>(The submission contains a significant suite of additional comments but these would appear to be designed to inform area plans and so are not addressed here.)</p>	<p>Noted. Refer Section 2.2 above.</p>
<p>Fermanagh and Omagh District Council</p> <p>Refer to the FODC LDP 2030 – Draft Plan Strategy Policy TOU01 which states that “The Council will not permit any form of development that would, in itself or in combination with existing or approved development, have an adverse impact on the intrinsic character or quality of a tourism asset or any part thereof, or diminish its tourism value, or part thereof”. Welcome DCC’s approach to wind energy development, including consideration of environmental sensitivities, scenic and cultural quality, NHA’s, flying constraints, Geological Heritage Sites, FWPM catchments, Peat Bogs (outside Natura sites), Natura 2000 site buffers, and HSA areas.</p> <p>Highlights the importance of the impacts on public & animal health, in particular from low frequency noise and infrasound, and suggests these matters should be an important consideration by DCC.</p> <p>Notes that while there are differences in approach in relation to identifying areas of capacity for wind energy, FODC and DCC aim to support wind energy development while considering environmental, landscape and visual amenity impacts, and in a strategic context there is no significant conflict in approaches.</p> <p>FODC previously raised concerns about the potential visual impact of new wind farm developments in the vicinity of proposed Areas of High Scenic Value, particularly Lower Lough Erne. Also raised concerns that the approach to wind energy along the Council boundary could additionally affect the village of Belleek, which is an important tourist</p>	<p>Noted.</p> <p>Noted. Human health is addressed in the Proposed Variation (refer Amendment Items 13 and 15). Animal health is not referenced in national guidelines but can be considered at the project level, if deemed necessary.</p> <p>Noted.</p> <p>Noted. The Proposed Wind Energy Map 8.2.1 contains a combination of ‘Not Normally Permissible’ and ‘Open to Consideration’ designations along the interface with the FODC area. These should ensure sufficient</p>

Consultee/Summary of Contents	Executive's Assessment/Recommendation
<p>destination in the district. Encourages DCC to have regard to the studies, which support the FODC LDP, the Landscape Wind Energy Capacity Study, Landscape Character review and Landscape Designation review as part the Variation and the implementation of policies within.</p> <p>FODC are of the opinion that landscape character designations should align across adjoining Council areas, there should not be different designations across the same landscape as a result of a Council boundary.</p> <p>Notes the additional data layer 'Lifford-Stranorlar Municipal District Areas at Risk of Landslides and Associated Environmental and Ecological Concerns' due to the Meenbog landslide event.</p> <p>DCC should consult DAERA on the SEA and AA, as a statutory nature conservation body as it has overall responsibility for designation, management and monitoring of European sites, if it has not done so already.</p> <p>Welcome consultation on any significant planning applications or other planning matters of mutual interest, which may be proposed adjacent to FODC's boundary.</p>	<p>consideration is given to the protections as requested through the development management process.</p> <p>Noted. This is a matter for the CDP Four-Year Review.</p> <p>Noted.</p> <p>Noted. The N. Ireland agencies will be consulted when the Draft Variation is published for public consultation in accordance with Article 13O of the Planning and Development Regulations.</p> <p>Noted and agreed</p>

1.2.3 STEP 3 – PREPARATION OF ENVIRONMENTAL REPORT

This Environmental Report contains the environmental assessment of the Proposed Variation, and recommends measures to prevent, reduce and offset likely significant effects on the environment as a result of its implementation, where required. It should be read in conjunction with the Stage 2 Natura Impact Report (NIR).

The Proposed Variation is designed solely to provide a strategic policy framework for the sustainable development of County Donegal's wind energy resource. In light of the fact that it is considered beyond reasonable doubt that windfarm applications will require an Environmental Impact Assessment Report ("EIAR") and Appropriate Assessment ("AA") at the development consent stage, it is considered appropriate to assess at this time the likely significant effects of the Proposed Variation on the environment at a strategic level only and to leave over for detailed project level assessment matters connected with the exact location and detailed design of the windfarm(s). In turn the Environmental Report identifies possible overall measures which may prevent, reduce, or as fully as possible offset such adverse environmental impacts (i.e. mitigation measures). Table 1.2 sets out the information to be contained within the Environmental Report as set out in Annex 1 of the SEA Directive and Schedule 2B of the Regulations, and indicates where in this report each is included.

Table 1.2: Checklist of Contents of Environmental Report

Contents of Environmental Report		Section of Report
(a)	An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	Section 1- Introduction. Section 2- Contents and Main Objectives of the Proposed Variation and Relationship with Other Plans.
(b)	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Section 3- Relevant Aspects of the Current State of the Environment and Likely Evolution thereof without Implementation of the Proposed Variation.
(c)	The environmental characteristics of areas likely to be significantly affected.	Section 4- Environmental Characteristics of Areas Likely to be Significantly Affected by the Proposed Variation.
(d)	Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC (as amended by Directive 2009/147/EC) and Directive 92/43/EEC.	Section 5- Existing Environmental Problems of Relevance to the Proposed Variation.
(e)	The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 6- Environmental Protection Objectives of Relevance to the Proposed Variation.
(f)	The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Section 7- Assessment of the Likely Significant Effects on the Environment of Implementing the Proposed Variation.
(g)	The measures envisaged to prevent, reduce, and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Section 8- Measures Envisaged to Prevent, Reduce and as Fully as Possible Offset any Significant Adverse Environmental Effects on the Environment of Implementing the Proposed Variation.
(h)	An outline of the reasons for selecting alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know how) encountered in compiling the required information.	Section 9- Selection of Alternatives to the Proposed Variation.

Contents of Environmental Report		Section of Report
		Section 9.3 Description of How the Assessment was Undertaken. Section 9.4- Difficulties Encountered
(i)	A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the Variation in accordance with Article 10.	Section 10- Monitoring of Significant Environmental Effects.
(j)	A non-technical summary of the information provided under the above headings.	Section 11- Non-Technical Summary.

1.2.4 REMAINING STEPS

The public consultation exercise will invite comments or submissions on the Proposed Variation, the Environmental Report and the Natura Impact Report. The Chief Executive must subsequently prepare a report on the outcome of the public consultation exercise and submit the report to the Members of the Council. The Members must consider the contents of the said Chief Executive’s Report, including any content therein in relation to the Environmental Report and SEA process generally. Having concluded its deliberations, the Planning Authority must then prepare and publish an SEA Statement identifying how environmental considerations and consultation have been integrated into the Adopted Variation.¹

1.3 PLANNING CONTEXT

The Proposed Variation has been prepared in the context of the higher level planning policy framework, principally the following: Project Ireland, 2040; and the Regional Spatial and Economic Strategy (RSES) 2020-2032 for the Northern and Western Regional Assembly area. The development plans of adjoining authorities have also been considered (please refer to Section 2.2: ‘Relationship With Other Relevant Plans’).

1.4 APPROPRIATE ASSESSMENT

The Habitats Directive (Council Directive 92/43/EEC) on the conservation of natural habitats and of wild flora and fauna obliges member states to designate, protect and conserve habitats and species of importance in a European Union context. Article 6(3) of the Habitats Directive requires that *“any plan or project not directly connected with or necessary for the conservation of a site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives.”*

A Natura Impact Report (NIR) of the Proposed Variation was completed in accordance with the requirements of Article 6(3) of the above-noted Directive, and in accordance with the requirements of Part XAB of the Planning and Development Act (2000) as amended.

The NIR concluded a Finding of No Significant Effects following the completion of Stage II of the Appropriate Assessment (AA) process in relation to the Proposed Variation.

¹ An additional step may be required should the Planning Authority resolve to publish Proposed Material Alterations.

2 Contents and Main Objectives of the Proposed Variation and Relationship with Other Relevant Plans

2.1 Contents and Main Objectives

Section 1.1 sets out the background to the Proposed Variation, the key policy areas to be addressed, and the key objective of addressing a current policy lacuna in the CDP for wind energy development policy. A total of 19 textual amendments and 1 mapping amendment are included (refer Table 2.1 below).

The amendments are contained mainly in Part B: in relation to Chapter 8: Natural Resource Development, Section 8.2: Energy. Additional amendments are proposed in respect of Chapter 2A: Core Strategy (narrative) and Part B Appendix 3: Development Guidelines and Technical Standards, 6.5 (Technical Standards). A full description of the amendments included in the Proposed Variation is set out in Section 7, Table 7.2.

Table 2.1: Summary of Proposed Variation Amendment Items

Ref	Location in Plan	Type of Change	Explanation for Specific Textual Changes
1	Part A Section 2A.1 Page 10 (end of 3 rd Paragraph)	Amend Text	This part of the Core Strategy sets out the vision for the sustainable growth of the County, including its consistency with national climate change and decarbonisation agenda. The amended text updates references to national climate related legislation and guidelines.
2	Part A Section 2, Appendix 2	Deletion of entire Section 28 statement in respect of Wind Energy Development	This part of the Plan sets out how the Planning Authority has taken into account the Ministerial Planning Guidelines as required under Section 28 of the Planning and Development Act, 2000 (As Amended). The Variation provides for new wind energy policies and objectives and, as such, that part of the existing Section 28 Statement as it deals with wind energy requires updating.
3	Part A Section 2, Appendix 2	Insert new Section 28 statement in respect of Wind Energy Development	This amendment provides for a new Section 28 Statement as referred to in Item 2 above.
4	Part A Chapter 8: Natural Resource Development	Amend Text	This part of the Plan sets out the background to Chapter 8.2 Energy, of the Plan, including its consistency with the national climate change agenda and specifically the context for wind energy developments (also refers to other renewable energies).

Ref	Location in Plan	Type of Change	Explanation for Specific Textual Changes
	Section 8.2.1 Page 143		<p>Generally the amended text in Section 8.2 Background, updates references to national climate related legislation and guidelines.</p> <p>The amended text within the section entitled Wind Energy Context, updates references to national climate change legislation and renewable energy guidelines. The text also contains a background and description of the proposed 3 draft wind energy zoning objectives, that are wholly changed from the provisions of the Plan relating to Wind Energy that were adopted by a resolution of the Members in May, 2018.</p>
5	Part A Chapter 8: Natural Resource Development Section 8.2.1 Page 143	Amend Text	This part of the Plan sets out that a community report must be submitted with a planning application for windfarm development in accordance with Article 22A of the Planning and Development Regulations 2001 (as amended)
6	Part A Chapter 8: Natural Resource Development Section 8.2.3 Objectives page 146	Amend existing objective E-O- 1	This amended objective reflects national policy to develop a diverse and secure renewable energy supply.
7	Part A Chapter 8: Natural Resource Development Section 8.2.3 Objectives page 146	Insert New Objective E-O- 7	This new objective aligns with SPPR1 in the Guidelines, to secure maximum wind energy potential commensurate with the proper planning and sustainable development of the County.
8	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies,	Insert New Policy E-P-22	This new policy relates to community consultation at planning application stage.
9	Part A Chapter 8: Natural Resource Development	Delete Policy E-P-12	This policy related to, and would have been considered in the context of, Wind Energy Map 8.2.1 as adopted by a resolution of the Members in May, 2018 but which were subsequently removed by High Court Order made on the 5th day of November, 2018. As that Wind Energy Map 8.2.1 map has been replaced, policy E-P-12 is no longer relevant.

Ref	Location in Plan	Type of Change	Explanation for Specific Textual Changes
	Section 8.2.3 Policies, page 147		
10	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies, page 147	Insert new policy E-P-12	E-P-12 This new policy is related to, and is to be considered in conjunction with, proposed Map 8.2.1 that identifies areas that are (a) Acceptable in Principle, (b) Open to Consideration and (c) Not Normally Permissible.
11	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies, page 148	Amend Policy E-P-13	The policy has been amended to reflect the designations in the new Map 8.2.1
12	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies, page 148	Delete policy E-P-16	This change removes an unnecessary superseded policy relating to improving the capacity of existing turbines.
13	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies, page 149	Insert new policy E-P-23 and new associated definitions	This new policy sets out the requirements for set-back distances between wind turbines and residential receptors for visual amenity purposes. The Policy reflects amendments made by resolution of the Members of the Council at the Plenary Council meeting of 29 th November, 2021 to stipulate set-back distances of ten times tip height distance, whereas the recommended setback distance was four times tip distance.
14	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies, page 149	Insert new Policy E-P-16	This new policy pertains to the location of new wind measuring masts in areas designated as 'Acceptable in Principle' or 'Open to Consideration'.
15	Part A Chapter 8: Natural Resource Development	Insert new policy E-P-24	This new policy sets out the requirements for set-back distances between wind turbines and the curtilage of residential properties for noise and shadow flicker reasons. following instruction from Elected Members at the Plenary Council Meeting of the 29 th November 2021. The Policy was included by resolution of the Members of

Ref	Location in Plan	Type of Change	Explanation for Specific Textual Changes
	Section 8.2.3 Policies		the Council at the Plenary Council meeting of 29 th November, 2021.
16	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies	Insert new policy E-P-24	This new policy pertains to the decommissioning and site restoration at the end of life of a windfarm operation
17	Chapter 8: Natural Resource Development Section 8.2.3	Insert new Policy E-P-25	This new policy pertains to proposed wind farm developments located on peatlands to ensure that the impact on same is fully considered at planning application stage.
18	Part B Appendix 3: Development Guidelines and Technical Standards, 6.5 Wind Energy 191	Delete Technical Standard	All of the technical standards(a) – (f) listed in 6.5 are to be deleted: <ul style="list-style-type: none"> – Two, (c) and (f), were removed by the High Court Order made on the 5th day of November; one relating to Map 8.2.1 and one referring to the ten times tip height of turbines from residential properties. – Two, (a) and (b), are being removed as they referred to restrictions within the zone of visual influence of Glenveagh National Park and the zone of influence/flight path of Donegal Airport, City of Derry Airport or Finner Camp and which have now been incorporated into policy. – Two, (d) and (e), have been removed in order to align the policy treatment of the referenced environmental designations (i.e. Natura 2000 sites and Freshwater Pearl Mussel Catchment Areas FWPMC's) with the treatment of other similar such assets in the CDP. Other such assets are not addressed at Technical Standards 6.5; rather, they are addressed in policy and on Map 8.2.1. Natura 2000 sites and FWPMC's are similarly addressed in policy and on Map 8.2.1. Removing bullets (d) and (e) will therefore provide for consistency of treatment in the CDP of these assets with other such assets.
19	Part B Chapter 7: The Natural and Built Environment Section 7.1.3 Policies Page 132	Amend Policy NH-P-6	The amendment to this policy would reflect that windfarm development within EHSA's would have limited circumstances where it could be considered to be of a strategic importance.
20	Part A Chapter 8: Natural	Insert new Map 8.2.1	A new map is required which replaces Wind Energy Map 8.2.1 as adopted by resolution of the Members in May,

Ref	Location in Plan	Type of Change	Explanation for Specific Textual Changes
	Resource Development Section 8.2.3 Policies, page 149		2018 but subsequently removed by High Court Order made on the 5th day of November, 2018. The new Wind Energy Map 8.2.1 identifies areas zoned as (a) Acceptable in Principle, (b) Open to Consideration and (c) Not Normally Permissible and used the evidenced based methodology and approach in accordance with the Wind Energy Development Guidelines 2021 as a basis. Additional spatial layers to be included within Areas 'Not Normally Permissible' were added by Elected Members at the Plenary Council Meeting of the 29 th November 2021.

2.2 Relationship with other Relevant Plans

2.2.1 Context

This Section focuses on the relationship of the Proposed Variation with other statutory land use plans of relevance to the Proposed Variation. For the purposes of clarity, and in accordance with Schedule 2B(e) of the Regulations, a much broader range of plans and programmes (and the environmental protection objectives contained therein) of relevance to the Proposed Variation is addressed in Section 6.

2.2.2 National Policy Hierarchy

2.2.2.1 Project Ireland 2040

Project Ireland 2040, the Government's overarching policy initiative to make Ireland a better country comprises both the National Planning Framework 2018 (NPF) and the National Development Plan 2018-2027 (NDP).

2.2.2.2 Ireland 2040 Our Plan National Planning Framework 2018 (NPF)

The NPF includes ten 'National Strategic Outcomes' (NSO's). NSO 8 is of direct relevance in that it seeks a 'Transition to a Low Carbon and Climate Resilient Society'. This is further transposed into National Policy Objectives 53 and 55 that both support and promote greater sustainable use of renewable energy. For example, National Policy Objective 55 seeks to:

NPO 55 'Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050'.

2.2.2.3 Project Ireland National Development Plan 2018-2027 (NDP)

The NDP sets out the investment priorities that will underpin the successful implementation of the NPF and acknowledges the importance of climate change and transitioning to a low-carbon and climate-resilient society as a vital strategic outcome. National Strategic Outcome 8, 'Transition to a Low-Carbon and Climate-Resilient Society', identifies this as a Strategic Investment Priority with an identified investment of €21.8 billion (€7.6 billion Exchequer/€14.2 billion non-Exchequer).

2.2.2.4 Northern and Western Regional Assembly's Spatial and Economic Development Strategy (2020-2027)

The Regional Spatial and Economic Strategy (RSES) 2020-2032 includes support for the provision of sustainable energy. Regional Policy Objectives RPO 4.16 and RPO 4.18 state:

RPO 4.16 "The NWRA shall co-ordinate the identification of potential renewable energy sites of scale in collaboration with Local Authorities and other stakeholders within 3 years of the adoption of the RSES. The identification of such sites (which may extend to include energy storage solutions) will be based on numerous site selection criteria including environmental matters, and potential grid connections."

RPO 4.18 "Support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs."

In addition, there are a number of Regional Policy Objectives contained within the RSES that seek to ensure sustainable development and protection of the environment.

2.2.2.5 Relationship with Above-noted Plans

Various provisions of the Planning and Development Act collectively require that the CDP complies with the policy hierarchy. Thus Section 23(3) provides that 'In preparing its rses, a regional assembly shall ensure that the strategy is, in particular consistent with.....national planning policy as set out in the NPF. In turn, Section 27(1) of the Planning and Development Act, 2000 (As Amended) requires that: 'A planning authority shall ensure, when making a development plan...that the plan is consistent with any regional spatial and economic strategy. The broad support contained in these documents for renewable energy has been fully considered by the Planning Authority during the preparation of the Proposed Variation.

3 The Relevant Aspects of the Current State of the Environment and the Likely Evolution Thereof Without Implementation of the Plan or Programme

The current state of the environment is considered under the environmental headings as outlined in the SEA Directive, as follows: Biodiversity, Fauna and Flora; Population and Human Health; Soil; Water; Air; Climatic Factors; Material Assets; Cultural Heritage, including Architectural and Archaeological; Landscape; and The interrelationship between the above topics. A separate table is provided for each environmental heading. The tables contain a referencing system for ease of reference in connecting the baseline topics with associated environmental protection objectives as discussed at Chapter 6: *'Environmental Protection Objectives Established at an International, European Union or National Level which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during the preparation of the Proposed Variation'*. For example, BSBIO1 is the reference no. for Natura 2000 sites in Section 3.1 below and the same reference no. is used in that part of Chapter 6 dealing with the 'Habitats Directive' and 'Birds Directive'.

3.1 BIODIVERSITY, FLORA AND FAUNA

Donegal's biodiversity is comprised of a wide range of terrestrial and marine features. The richness of the resource is illustrated by the number of European and National-level designated sites found in the County.

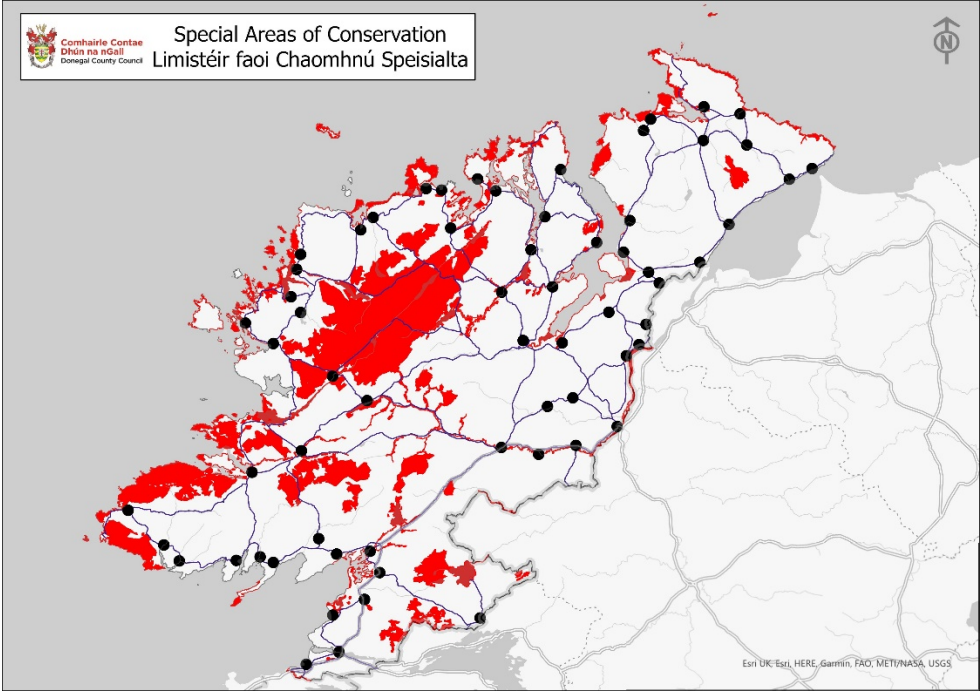
International/EU Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO1/ Special Areas of Conservation; and Special Protection Areas (Natura 2000 sites): Contain habitats and/or species designated to be of European ecological importance.</p> <p>47 SACs and 26 SPAs spread across all parts of Donegal. A further 41 SACs and 12 SPAs are located</p>	<p>There is no information available on the status of the Natura 2000 sites buffer areas. Surveillance information for Ireland's Natura sites is contained in: <i>'The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report.'</i> The following information in relation to the current state of these sites in Donegal has been extracted from this document.</p>

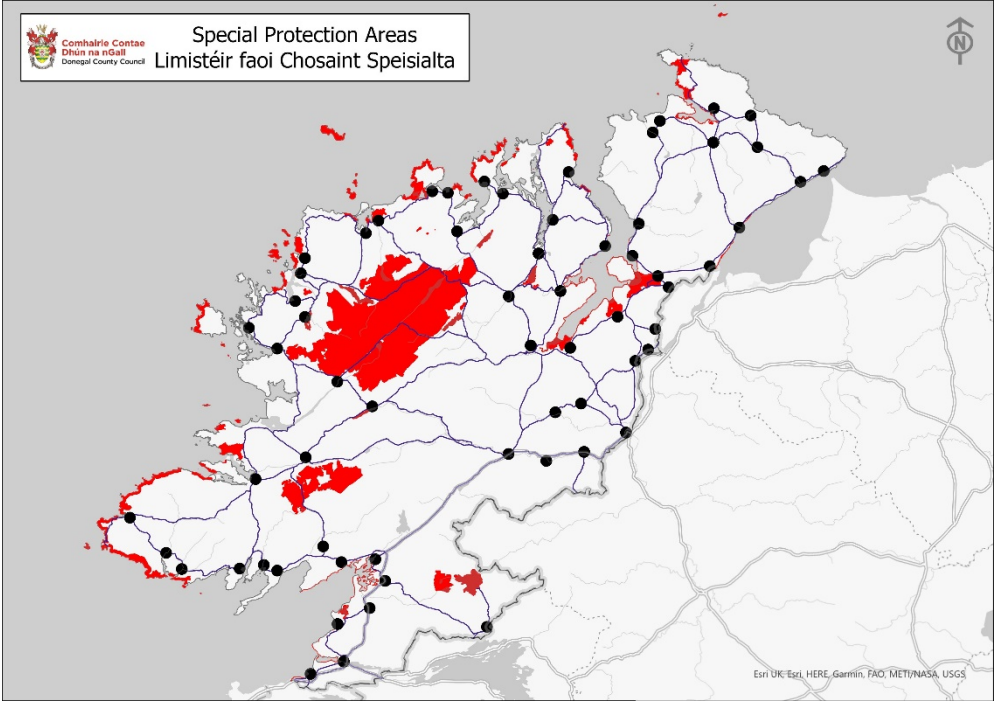

International/EU Designations									
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status								
<p>within the zone of influence of the Plan area in Counties Leitrim and Sligo, and in the N. Ireland jurisdiction (refer Fig 3.1 and Fig. 3.2). Many of the Natura sites in Donegal are coastal or riparian and are therefore highly unlikely to be attractive to developers for wind energy projects. These sites could, in theory, be impacted by adjacent or nearby developments, however, and must therefore still be considered as part of this assessment.</p> <p>It is important also to recognise buffer areas for all 126 designated Natura 2000 sites in light of European case law that clearly determines that relevant ecological assets within such adjacent grounds should also be protected as necessary, having regard to the qualifying interests of the pertaining Natura site and the characteristics of adjoining grounds and their importance for the designated area in terms of habitats and species.</p>	<p>44 Annex I Habitats as listed in the Habitats Directive are represented within SACs in County Donegal;</p> <p>Current State of SAC's in Donegal (by reference to Protected Habitats and Species)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #0070C0; color: white;">Status</th> <th style="background-color: #0070C0; color: white;">No. of Habitats</th> </tr> </thead> <tbody> <tr> <td>Favourable</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Inadequate</td> <td style="text-align: center;">21</td> </tr> <tr> <td>Bad</td> <td style="text-align: center;">19</td> </tr> </tbody> </table> <p>Source: Extracted from <i>The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report, 2019.</i></p> <p>Similar information is not available for SPAs.</p> <p>A full schedule of the designated Natura 2000 sites, together with information on their qualifying interests, conservation objectives, and threats to their integrity is provided in the Appropriate Assessment Natura Impact Report also prepared for the Proposed Variation (insert link to NIR). Figs. 3.1 and 3.2 show the extents of the respective SAC and SPA 'portfolios' both within and without the jurisdiction of the Planning Authority.</p>	Status	No. of Habitats	Favourable	4	Inadequate	21	Bad	19
Status	No. of Habitats								
Favourable	4								
Inadequate	21								
Bad	19								

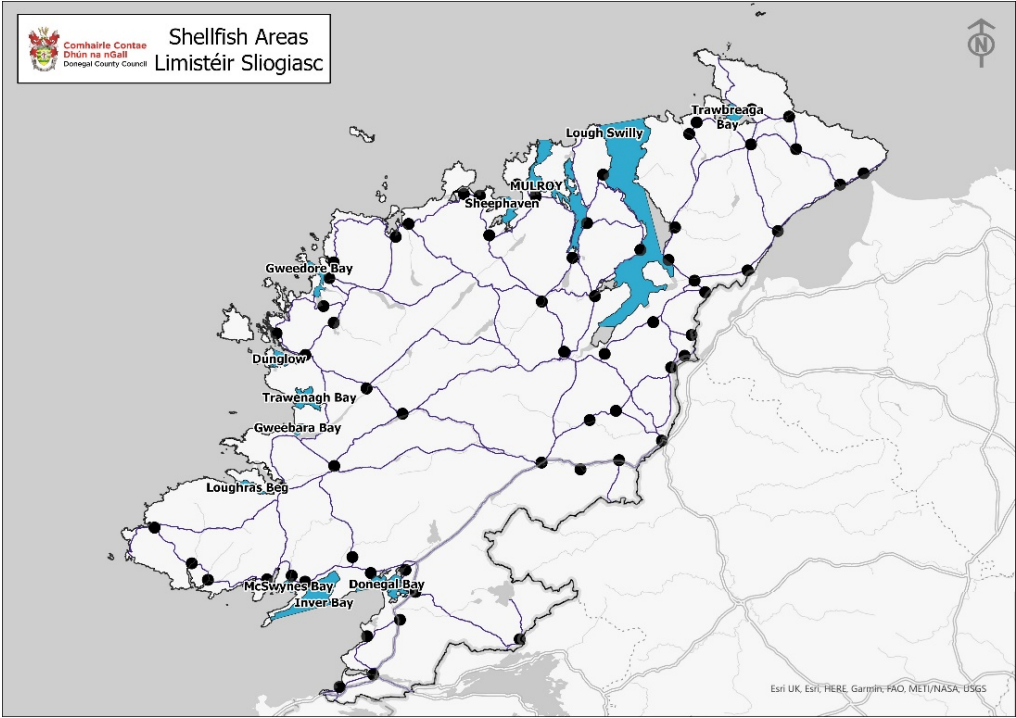
International/EU Designations

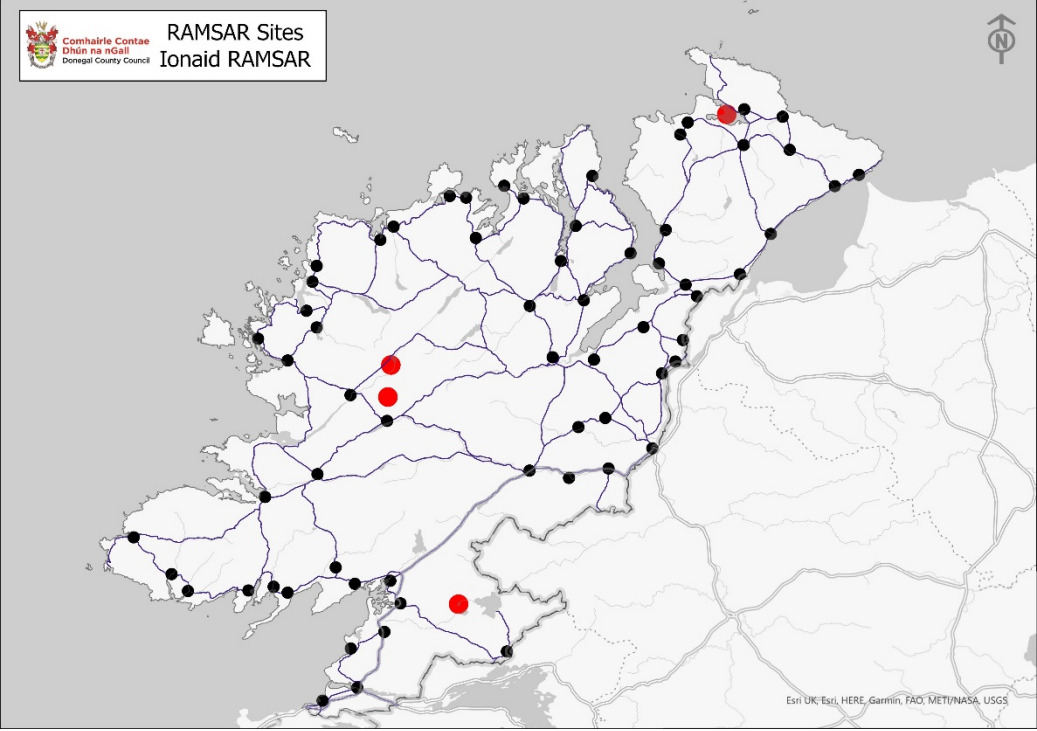
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
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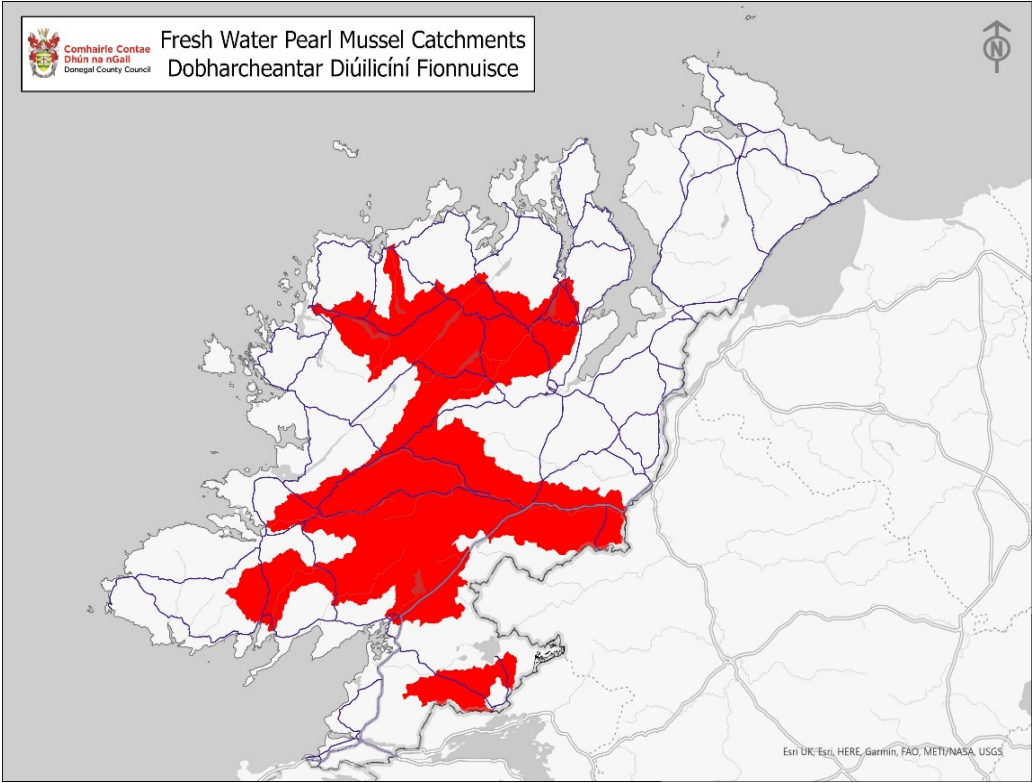
Figure 3.1: Special Areas of Conservation



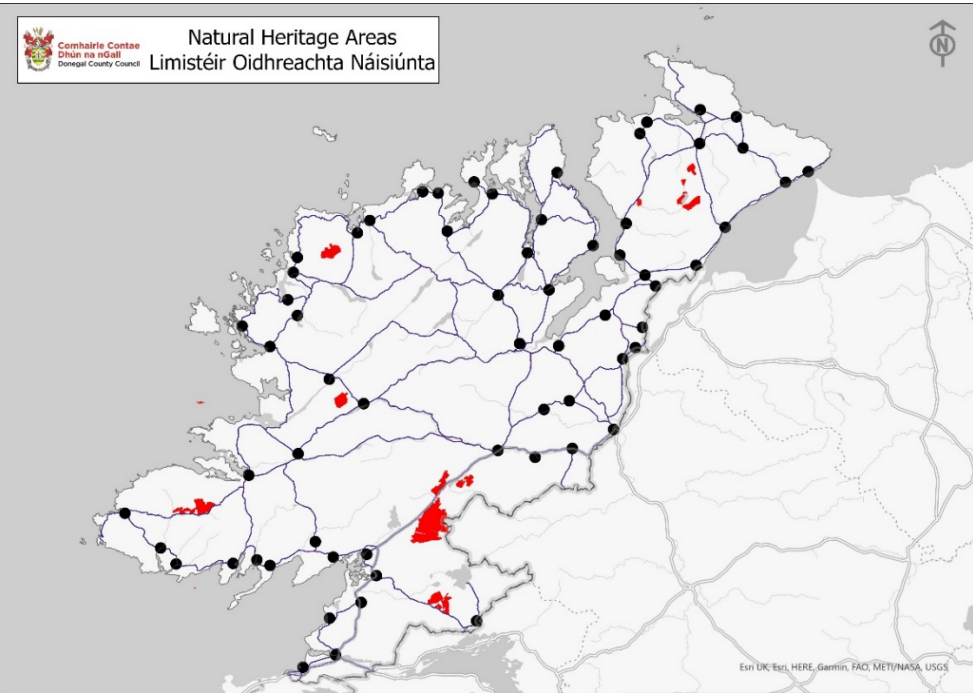
International/EU Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
	<p data-bbox="860 400 1346 432">Figure 3.2: Special Protection Areas</p>  <p data-bbox="882 469 1323 523">  Comhairle Contae Dhún na nGall Donegal County Council </p> <p data-bbox="1010 469 1317 523"> Special Protection Areas Limistéir faoi Chosaint Speisialta </p> <p data-bbox="1608 1118 1823 1134"> <small>Esri UK; Esri, HERE, Garmin, FAO, METI/NASA, USGS</small> </p>

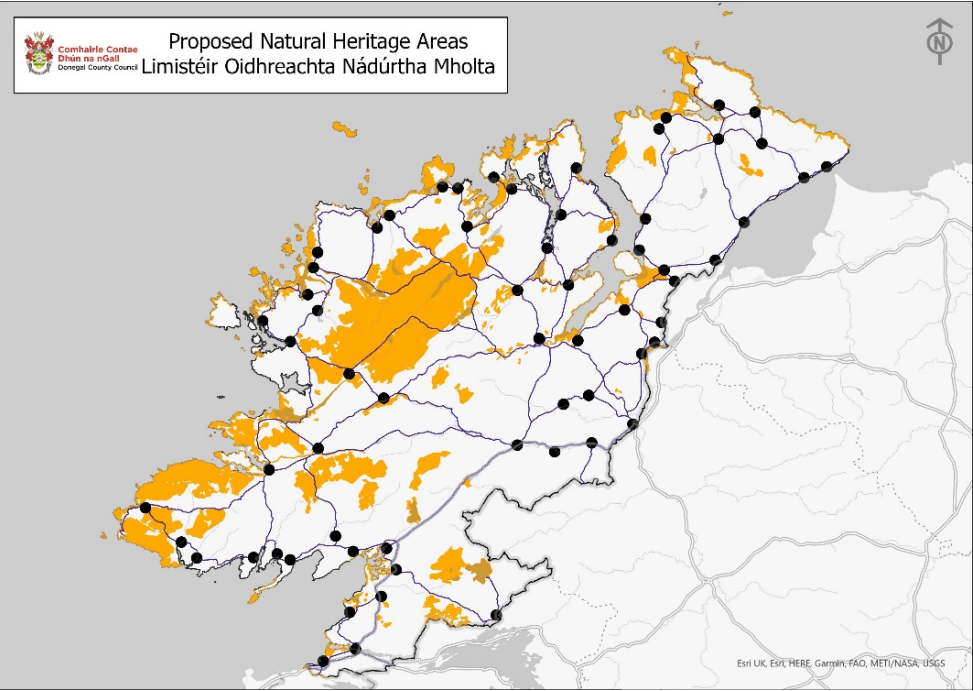
International/EU Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO2/Shellfish Waters: Coastal waters containing aquatic habitat of bivalve and gastropod molluscs which include oysters, mussels, cockles, scallops and clams.</p> <p>12 sites at various locations along the southern, western and northern coastlines of the County at: Mulroy Bay; Donegal Bay; Dungloe; Gweebara Bay; Gweedore Bay; Inver Bay; Lough Swilly; Loughros Beg; Mc Swyne's Bay; Sheephaven Bay; Trawbrea Bay, (Bhreige); and Trawenagh Bay (Eanach) (refer Fig. 3.3).</p> <p>Whilst it is highly unlikely that these areas will be attractive to windfarm developers, the risk of damage arising from discharges of developments on adjacent lands must still be considered.</p>	<p>The most recent information available is from 2021 Characterisation Reports published/updated by the Department of Housing, Heritage and Local Government in March, 2021. These reports indicated that 7 of the 12 'sites' has 'no key pressures', 4 were the subject of potential risks arising from wastewater systems and agriculture, 1 was subject to risks from wastewater systems only, and 1 from both wastewater systems and port activities.</p> <p>Figure 3.3: Shellfish Waters</p> 

International/EU Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO3/Ramsar Sites: Wetlands of significant value for nature.</p> <p>4 sites in the north, west and south of the County at: Meenachullion Bog; Pettigo Plateau Code; Trawbreaga Bay; and Lough Barra Bog, collectively covering a total of 2,273 hectares (refer Fig. 3.4).</p>	<p>No information available.</p> <p>Figure 3.4: Ramsar Sites</p> 

International/EU Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO4/Freshwater Pearl Mussel Populations and Catchments: Important populations of large filter-feeding bivalve, which is found in near-pristine freshwater habitats.</p> <p>6 extensive populations, and 7 other known populations in Donegal (refer Fig. 3.5)</p> <p>The 6 extensive populations are included in the qualifying interests of, and contained within, 5 of the County's SACs. The conservation objectives of these SACs include, inter alia, maintaining or restoring the freshwater pearl mussel at favourable conservation status. The mapping identifies two categories of FWPM catchments as published by the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DATA.GOV.IE/Margaritafera Sensitive Areas Map).</p> <ul style="list-style-type: none"> ~ SAC populations listed in S.I. 296 of 2009; and ~ other extant populations <p>The wider catchments of the populations must also be considered however, owing to the sensitivity of the species (refer column 2) and to the potential detrimental impact on feeder watercourses (e.g. from sedimentation during the construction phase or changes in the hydrological flow regime during the operational phase).</p>	<p>The Freshwater Pearl Mussel (FWPM) is a highly threatened animal, categorised as critically endangered in Europe; 90% of all FWPM died out across Europe in the 20th Century. Article 17 Report (2019) by NPWS indicates that the conservation status for FPM across Ireland is “bad” and declining.</p> <p>Figure 3.5: Freshwater Pearl Mussel Catchments</p> 

International/EU Designations											
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status										
<p>BSBIO5/Protected Habitats and Species Many habitats and species are already protected owing to their location within designated Natura 2000 sites. Some however are located outside of any designated site. Annex IV of the Habitats Directive makes it clear that a strict protection regime must be applied across their entire natural range both within and outside Natura 2000 sites.</p> <p>Protected animal species include (list is not exhaustive): the otter, all bat species, all cetaceans (whales and dolphins), the natterjack toad, the leatherback turtle, kemp's ridley turtle, loggerhead turtle, hawksbill turtle and the Kerry slug. Protected plant species include (list is not exhaustive): the Slender Naiad, the Yellow Marsh Saxifrage, and the Killarney Fern.</p>	<p>In 2019, the NPWS prepared a detailed assessment of a total of 68 protected species listed in Ireland. Of these 68 species, 40 are found within Special Areas of Conservation in Donegal. The overall status at a national level of the 40 species found in Donegal SACs is set out in the table below.</p> <p style="text-align: center;">National Status of Protected Species Found Within SAC's in Donegal</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #0070C0; color: white;">Status</th> <th style="background-color: #0070C0; color: white;">No. of Species</th> </tr> </thead> <tbody> <tr> <td>Favourable</td> <td style="text-align: center;">28</td> </tr> <tr> <td>Inadequate</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Bad</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Unknown</td> <td style="text-align: center;">4</td> </tr> </tbody> </table> <p><i>Source: Extracted from 'The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report, 2019.'</i></p>	Status	No. of Species	Favourable	28	Inadequate	4	Bad	4	Unknown	4
Status	No. of Species										
Favourable	28										
Inadequate	4										
Bad	4										
Unknown	4										
<p>BSBIO6/Ecological Networks Important ecological networks/corridors and 'stepping stones' for wildlife including for migration, dispersal and genetic exchange of species of flora and fauna. Important in connecting areas of local biodiversity with each other and with nearby designated sites. Comprised of linear features such as treelines, hedgerows, rivers and streams. Particularly important for mammals, especially bats and small birds.</p> <p>Resource is too numerous to list.</p>	<p>No information available.</p>										

National Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO7/Natural Heritage Areas: Areas considered nationally important for the habitats present, or which holds species of plants and animals whose habitat needs protection.</p> <p>14 sites spread around the County at: Cashelnavean Bog; Inishduff Bog ; Roaninish; Corveen Bog; Illies Hill Bog; Lough Fad Bog; Crocknamurrin Mountain Bog ; Slieve Snaght Bogs; Barnesmore Bog; Camowen River Bog; Umrycam Bog; Meenagarranroe Bog; Lough Hill Bog; Meenmore West Bog; and Aran Island (Donegal) Cliffs (refer Fig. 3.6).</p> <p>Figure 3.6: Natural Heritage Areas</p> 	<p>No information available.</p>

National Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO8/Proposed Natural Heritage Areas: Sites are of significance for wildlife and habitats.</p> <p>78 sites spread widely across the County (please refer to Table B1, Appendix B for details and Fig. 3.7: 'Proposed Natural Heritage Areas' below).</p> <p>Figure 3.7: Proposed Natural Heritage Areas</p> 	<p>No information available.</p>

National Designations

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'

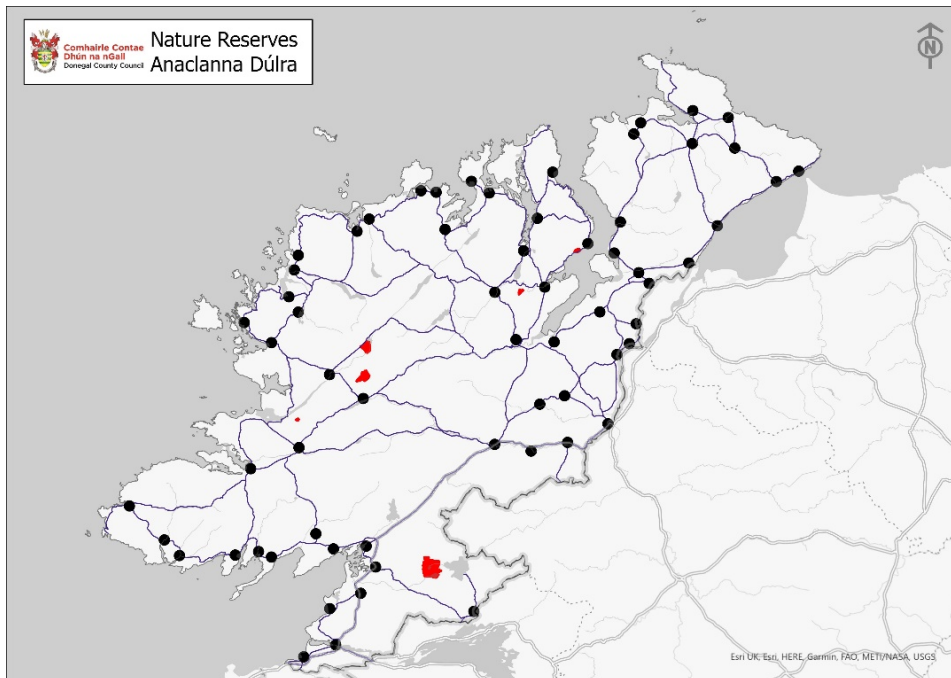
Current Status

BSBIO9/Nature Reserves: State-owned land, inland waters or foreshore areas forming the habitat of a species or community of flora and fauna of scientific interest or forming part of an ecosystem of scientific interest, which would benefit from protection measures, established under the Wildlife Act 1976 and the Wildlife (Amendment) Act 2000, and are protected under Ministerial Order.

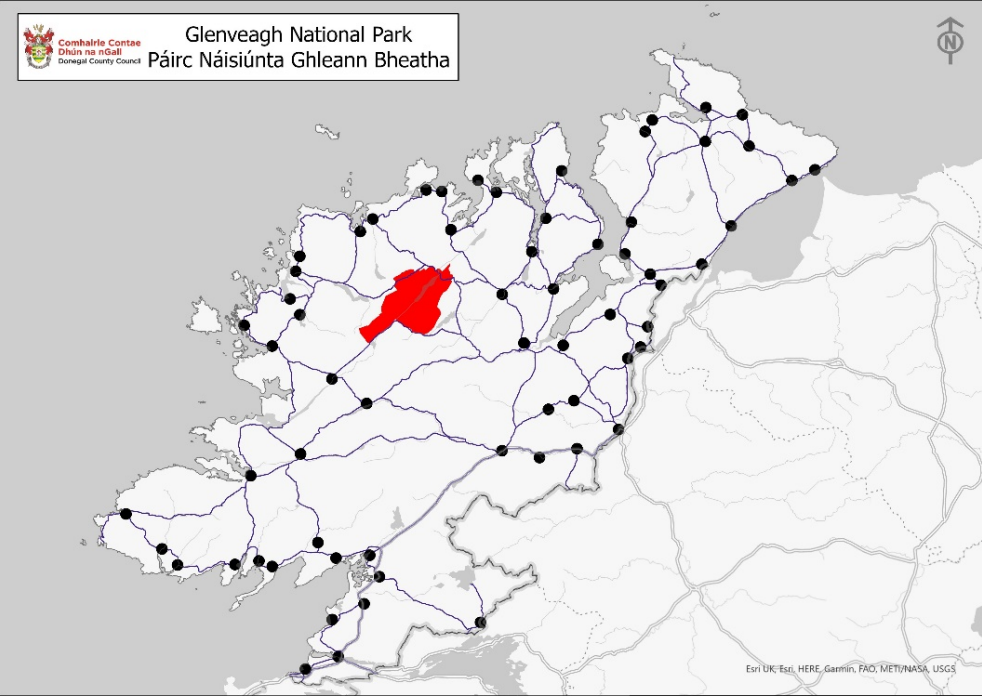
No information available.

7 designated sites spread across the County (refer Fig. 3.8) at: Ballyarr Wood; Derkmore Wood; Duntally Wood; Lough Barra Bog Nature Reserve; Meenachullion; Pettigo Plateau; and Rathmullan Wood. In addition there are also 3 Nature Reserves which have never been officially designated: Ardnamona Nature Reserve, Inch Levels Wildfowl Reserve and Sheskinmore Nature Reserve.

Figure 3.8: Nature Reserves



National Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO10/National Parks: National Parks are designated on the basis of having the following characteristics:</p> <ul style="list-style-type: none"> • Where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest or which contain a natural landscape of great beauty; • Where the highest competent authority of the country has taken steps to prevent or eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; • Where visitors are allowed to enter, under special conditions, for inspirational, educational, cultural and recreational purposes. <p>One such park in Donegal, Glenveagh National Park, is one of six nationally (refer Fig. 3.9). Glenveagh lies within the Cloghernagore Bog & Glenveagh National Park SAC, and Derryveagh & Glendowan Mountains SPA. An extensive range of protected flora and fauna species listed in the Habitats Directive are found within the Park. These species include; Freshwater Pearl Mussel, salmonoid fish, red deer, otters and bats.</p>	<p>No information available.</p>

National Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>Figure 3.9 Glenveagh National Park</p> 	
<p>BSBIO11/Ancient Woodlands</p> <p>Ancient Woodlands are defined as areas of woodland believed to have remained continuously wooded since 1660. This date is used as it was during the 1650s that the Down Survey and the Civil Survey were conducted to facilitate the confiscation of lands following the Cromwellian conquest and these are the two most useful historical resources available. Shortly after this time, planting of new woodland by English landowners would have been encouraged with the publication of Evelyn's Sylva (1664). Possible Ancient Woodland is defined as areas of woodland that are thought to have remained continuously wooded since 1660, but for which evidence is not so strong, due typically to the somewhat ambiguous nature of names and locations in much of the 17th century literature.</p>	<p>No information available.</p>

National Designations

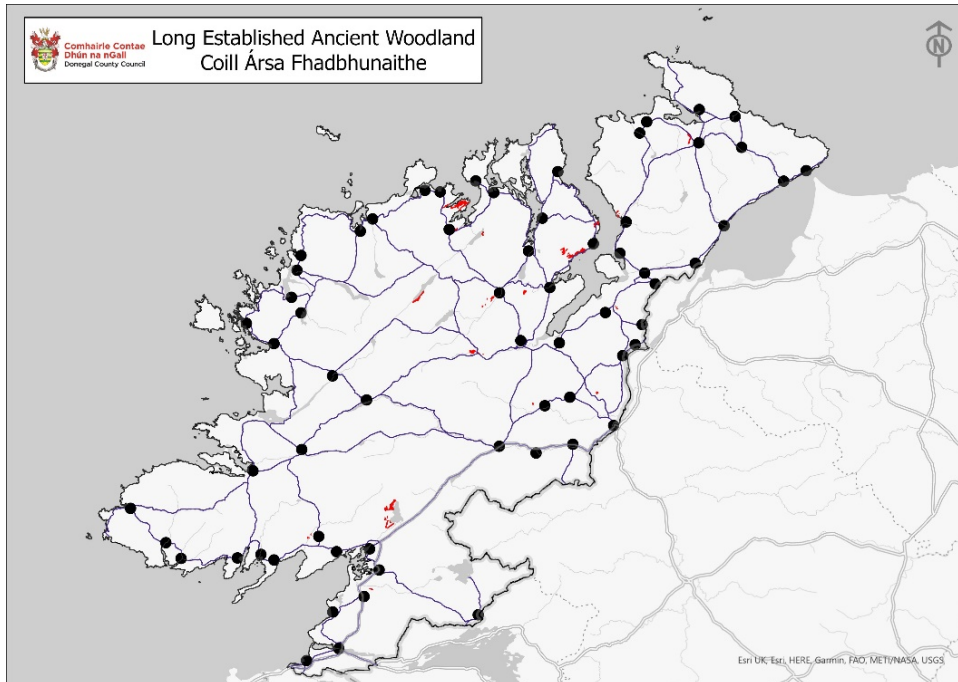
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'

Current Status

Ancient woodlands are important in terms of their biological and cultural value, and may even form links with prehistoric wildwoods. Ancient woodland sites often contain communities of animals and plants which are confined to, and dependent for their existence upon, ancient semi-natural woodland. Ancient woodland can also contain historical landscape and archaeological features which are important in their own right.

5 sites in Donegal identified by NPWS as containing Possible Ancient Woodlands (PAW) following desk-based research (refer Fig. 3.10): Ardnamona Wood; Ballyarr Wood; Feddyglass Wood; Keeloges; and Mullangore Wood. 4 of these are located within SACs, pNHAs and Nature Reserves.

Figure 3.10 Ancient Woodlands

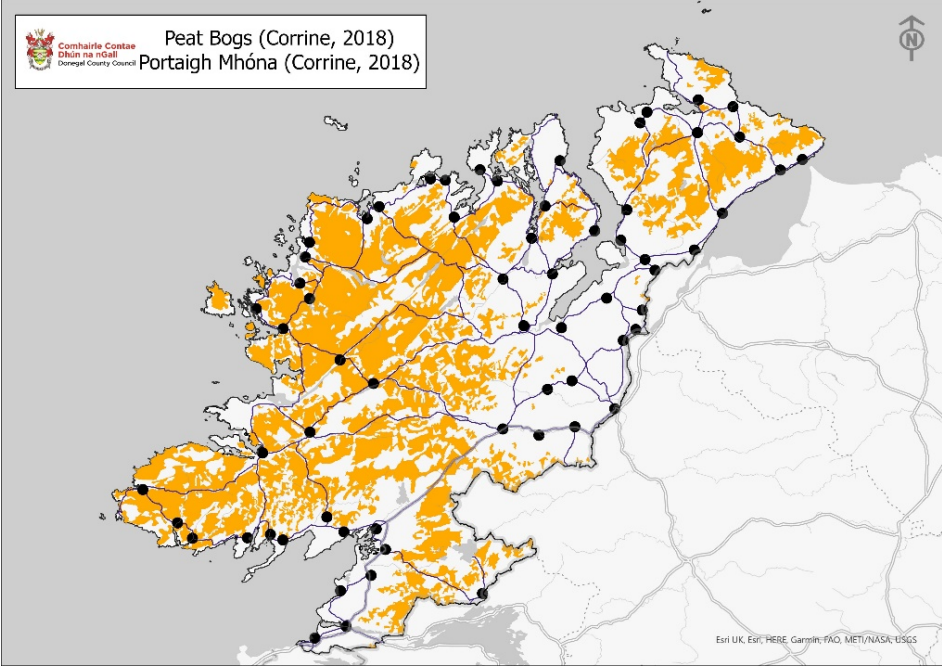


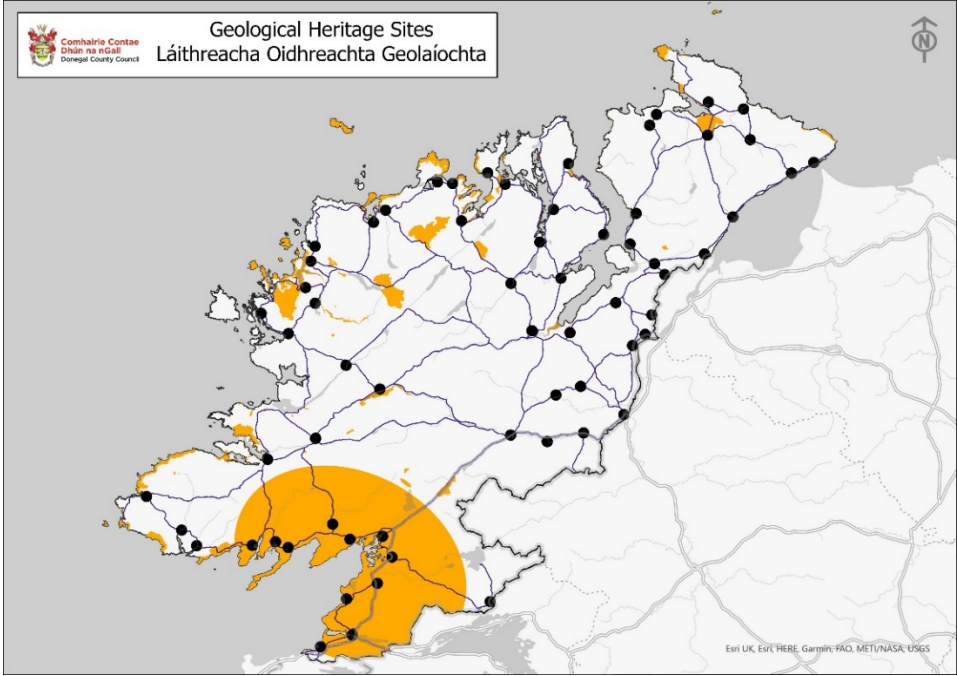
National Designations	
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>BSBIO13/Invasive Species</p> <p>The key relevance of invasive species from a development perspective is that development on sites containing invasive species can cause the spread of the species into neighbouring developed and undeveloped property. Invasive species can:</p> <ul style="list-style-type: none"> • alter ecosystems and habitats – some invasive plants can change the chemical composition of soil or clog up waterways, leading to flooding. • outcompete native plants, threatening the long-term survival of the species. • be costly to eradicate and restore degraded environments. <p>Plant species in Donegal includes the Giant Knotweed.</p>	N/A

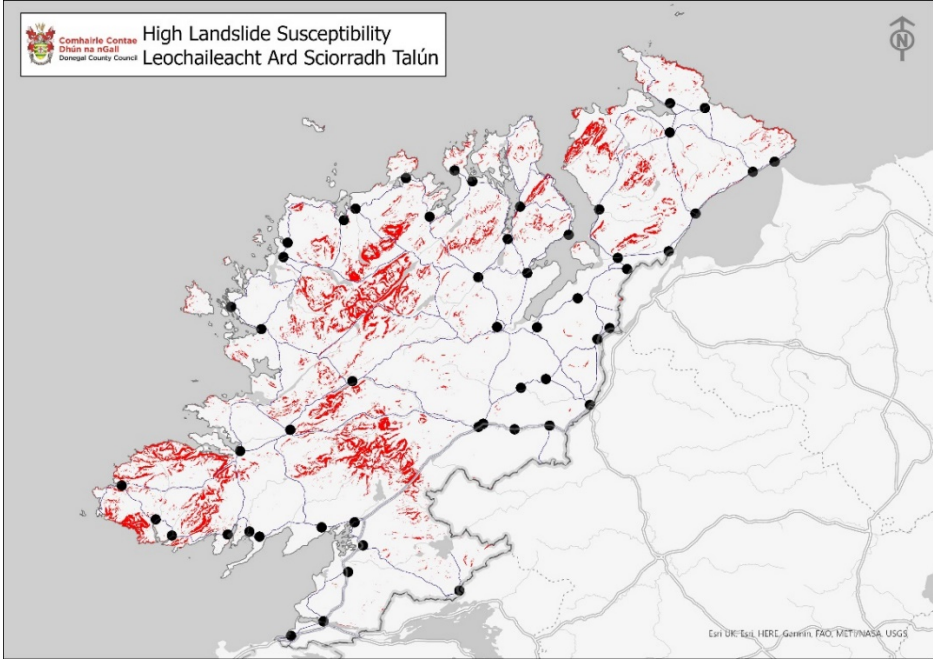
3.2 Population and Human Health

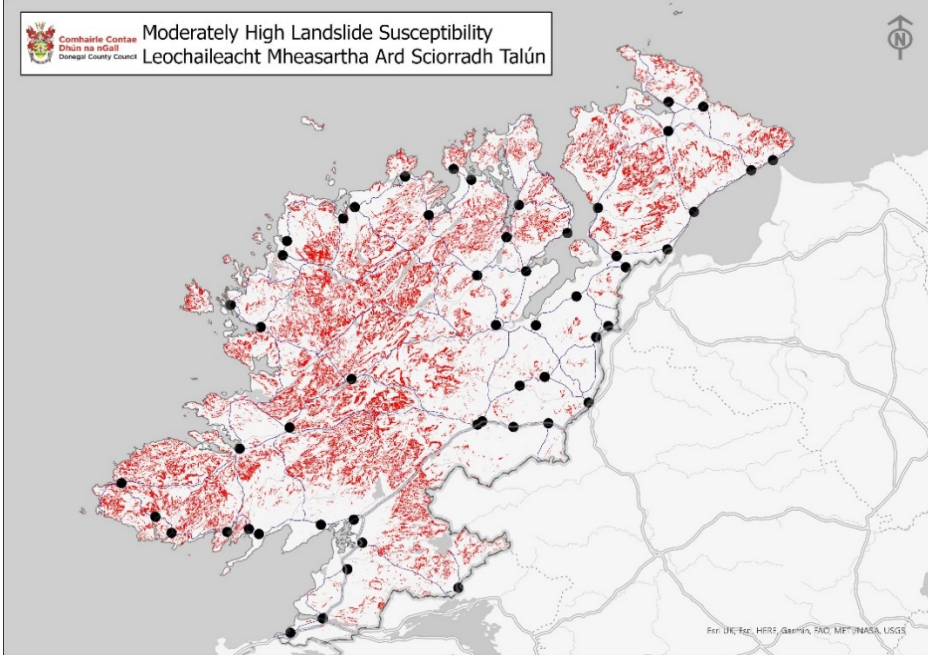
Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>POP1/Population: 2016 County Population: 159,192</p> <p>Given the subject of this Variation, and given that the most likely locations of windfarm developments are in the rural area, it is relevant to consider the distribution of the overall population between the urban and rural areas. In this regard:</p> <ul style="list-style-type: none"> • Approx. 50,837 people are resident in the 'Open to Consideration' and 'Acceptable in Principle' areas; and approx. 108,000 people are resident in the 'Not Normally Permissible Area' as identified on Map 8.2.1: 'Wind Energy'. <p>(Sources: Census and DCC GIS)</p>	N/A

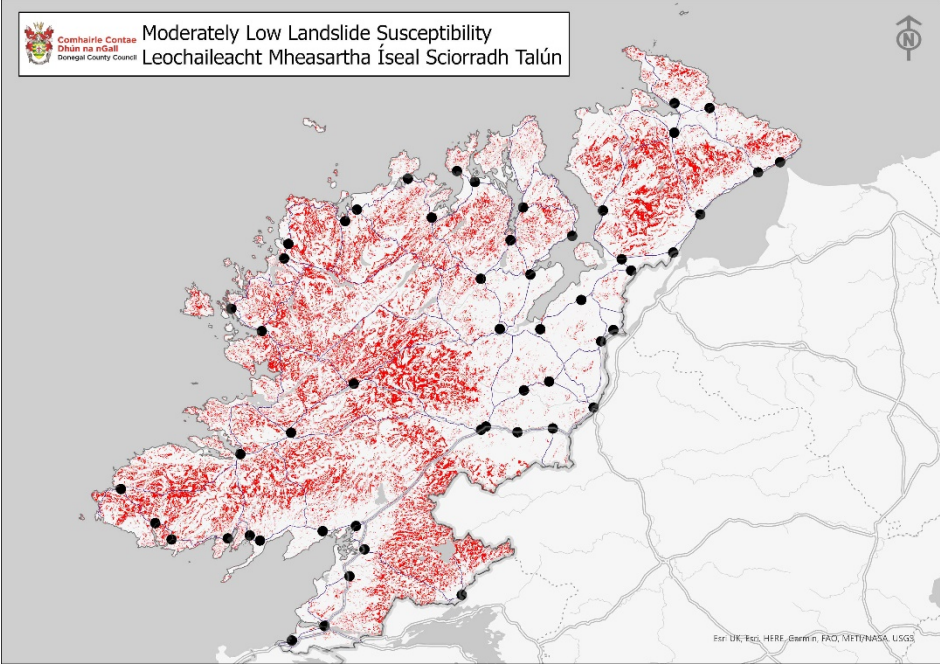
3.3 Soil

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>SL1/Peat Bog: 26 types of land cover in the county as identified by Corine Land Use Cover 2018 ('CLC'). The CLC shows that most of the county is identified as rural, with over 99% combined rural land cover. Of particular relevance for wind energy development is that 34% of the rural area is peat bog (refer Fig. 3.11) and 6% is moors and heath. These land covers are usually to be found in upland areas that are attractive to the windfarm industry due to the wind resource to be harvested there.</p>	<p>The Irish Peatland Conservation Council estimate that Irish peatlands store 53% of all carbon in Ireland on 16% of land area, and that current management is creating negative effects on climate and biodiversity, suggesting that protection of intact peatlands could maintain their carbon storage, sequestration capacity and associated ecosystem functions.</p> <p>Figure 3.11 Peat Bogs</p>  <p>Comhairle Contae Donegal County Council Peat Bogs (Corrine, 2018) Portaigh Mhóna (Corrine, 2018)</p> <p>Esri UK, Esri, HERE, Garmin, FAO, METI/NASA/USGS</p>

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>SL2/County Geological Sites: County Geological Sites (CGS) have been identified in the Geological Heritage Audit of Donegal, 2019 (prepared By Geological Survey Ireland and supported by the Heritage Council and Donegal County Council). The Audit identifies a total of 102 CGS, 22 of which have been recommended as NHAs (refer Fig. 3.12). The CGSs identified are the most important geological sites in the County, and some are identified as having national importance.</p>	<p>N/A</p> <p>Figure 3.12: County Geological Sites</p> 

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
<p>SL3/Landslide Susceptibility: The Geological Survey Ireland (GSI) identifies areas of 'High', 'Moderately High', 'Moderately Low', and 'Low' Landslide Susceptibility on a national basis having regard to a specified set of conditions (e.g. slope, terrain) that cumulatively inform areas where landslides could occur. All three categories are to be found in Donegal as illustrated in Figs. 3.13a, 3.13b and 3.13c.</p>	<p>N/A</p> <p>Figure 3.13a: High Landslide Susceptibility</p> 

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
	<p data-bbox="1041 331 1774 363">Figure 3.13b: Moderately High Landslide Susceptibility</p> 

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Current Status
	<p data-bbox="1043 331 1765 363">Figure 3.13c: Moderately Low Landslide Susceptibility</p> 

3.4 Water

Similar to its biodiversity richness, Donegal also contains a large number, range and geographical spread of valuable waterbodies. Table 3.1 below identifies the overall number of waterbodies as being 468.

An important sub-group of this overall range of waterbodies is the group of 138 such sites identified as Protected Areas in accordance with the EU Water Framework Directive. These include designated areas: 1.) for the abstraction of water intended for human consumption under Article 7; 2.) for the protection of economically significant aquatic species; 3.) as recreation, including areas designated as bathing waters under Directive 76/160/EEC; 4.) as Nutrient-sensitive areas, including areas designated as vulnerable zones under Directive 91/676/EEC and areas designated as sensitive areas under Directive 91/271/EEC; and for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant Natura 200 sites designated under Directive 92/43/EEC (1) and Directive 79/409/EEC.

A further important sub-group is comprised of those identified as having High Status Waterbody Objectives. The second cycle River Basin Management Plan, 2018 (*) identified high status environmental objectives for 310 waterbodies in the country including 26 in Donegal. Finally, it should also be noted that there are 85 shared waterbodies between Donegal and Northern Ireland.

Table 3.1: Global Waterbodies Data, Donegal

Overall No. of Waterbodies (*)						Water Framework Directive ANNEX IV Protected Areas of Direct Relevance for Wind Energy (*)						Water Framework Directive High Status Objective Waterbodies			
River	Lakes	Trans' Water	Coast. Water	Ground water	Tot	Associated With Public Health						River	Lake	Transit. Waters	Coast. Water
						Drink. Water Surface Water bodies	Bath. Water	Sh'fish	Salmon Rivers	Natura (water-based)	Tot				
266	110	20	28	44	468	33	21	12	6	56	138	17	7	1	1

[Source: Compiled from the 3rd Cycle Draft Catchment Reports for each of the six River Basin Catchments in Donegal; EPA Catchments, August, 2021] nb excludes information for the Erne Catchment as the vast majority of that catchment is outside of Donegal County Council jurisdiction.

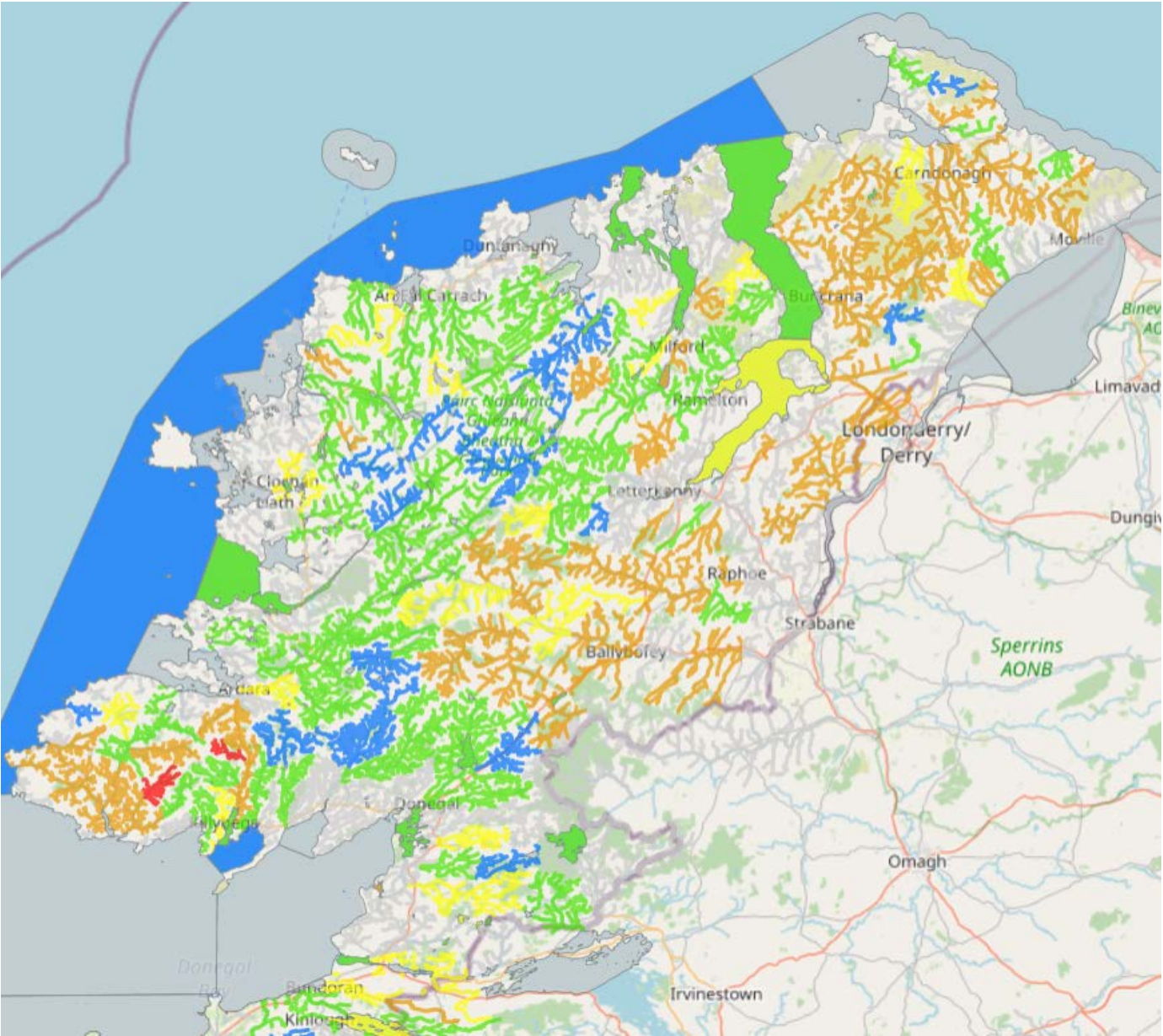


Table 3.2: Current Status of Waterbodies, Donegal

Current Status of Waterbodies (*)						
	High	Good	Moderate	Poor	Bad	Unassigned
Total	26	142	24	70	2	205

[Source: Compiled from the 3rd Cycle Draft Catchment Reports for each of the six River Basin Catchments in Donegal; EPA Catchments, August, 2021] nb excludes information for the Erne Catchment as the vast majority of that catchment is outside of Donegal County Council Jurisdiction.

Table 3.3: Trend in Status of Waterbodies, Donegal

Trend In Status of Waterbodies (*)				
	Improved	Unchanged	Declined	Unassigned
Total	44	178	42	84

[Source: Compiled from the 3rd Cycle Draft Catchment Reports for each of the six River Basin Catchments in Donegal; EPA Catchments, August, 2021] nb excludes information for the Erne Catchment as the vast majority of that catchment is outside of Donegal County Council Jurisdiction.

3.5 Air

There is no baseline information available for air quality in the areas most likely to be impacted by implementation of the Variation i.e. those rural areas where windfarm development is most likely to occur. However, it is reasonable to assume that air quality is high in these areas and that the development of windfarms will not alter this status.

3.6 Climatic Factors

There is no relevant local baseline information available. That said, any consideration of wind energy development policy must be set in the context of the national policy agenda in relation to climate change and the benefits, and indeed international obligations, in relation to renewable energy. These considerations are set out in Chapters 5, 6 and 7.

3.7 Material Assets

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Status
MA1/Airports: Given the potential for windfarms to impact on the safety and operation of air traffic, three airports should be considered: City of Derry Airport; Donegal Airport; and Finner Camp	n/a
MA2/Existing Wind Turbines: Given that wind turbines generally have a finite lifespan, and that replacement of such turbines may be a sustainable form of development, it should be noted that there are currently 301 turbines in County Donegal at present with a capacity in excess of 450MW (almost ½ GW). Ireland as a country needs about 5GW and Donegal is already a substantial supplier of renewable energy to the Grid [approximately 1/10 of total, with the third greatest share of installed capacity in Ireland behind Kerry (first) and Cork (second)]. <i>[Source: SEAI and Wind Energy Ireland]</i>	n/a

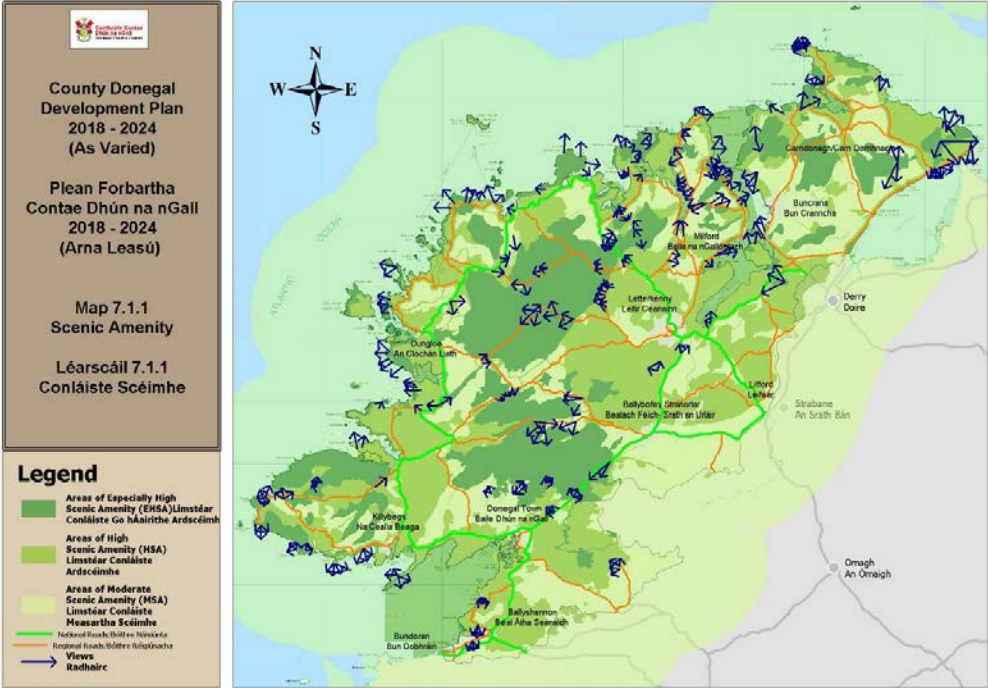
3.8 Cultural Heritage

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Status
CH1/Protected Structures: Currently 385 structures on Donegal County Council's Record of Protected Structures. It is worth noting that only 88 of these are located in 'Open to Consideration' and 'Acceptable in Principle' areas as identified in Map 8.2.1. i.e. where windfarms are not precluded.	n/a
CH2/Structures of Architectural Heritage Value: Currently 1,656 structures on the National Inventory of Architectural Heritage. It is worth noting that 651 of these are located in 'Open to Consideration' and 'Acceptable in Principle' areas as identified in Map 8.2.1. i.e. where windfarms are not precluded.	n/a
CH3/Archaeological Complexes: Currently 29 Complexes protected under the National Monuments Acts 1930-1994. It is worth noting that only 9 of these are located in 'Open to Consideration' and 'Acceptable in Principle' areas as identified in Map 8.2.1. i.e. where windfarms are not precluded.	n/a
CH4/National Monuments: Currently 3,504 Monuments protected under the National Monuments Acts 1930-1994. It is worth noting that 1,551 of these are located in 'Open to Consideration' and 'Acceptable in Principle' areas as identified in Map 8.2.1. i.e. where windfarms are not precluded.	n/a

3.9 LANDSCAPE

Baseline Ref./Resource, Inherent Value Of Resource, and Extent of Donegal 'Portfolio'	Status
<p>LD1/Landscape and Visual Impacts</p> <p>Chapter 7: 'The Natural and Built Heritage' of the CDP categorises the landscape of the County into three layers of value: 'Especially High Scenic Amenity', 'High Scenic Amenity', and 'Moderate Scenic Amenity' areas and identifies these areas in Map 7.1.1: 'Scenic Amenity' (refer Fig. 3.14 below). None of the landscapes have been classified as Low Value. The definitions for each of the areas of landscape value and classification are as detailed below:</p> <p>Areas of Especially High Scenic Amenity (EHSA): Sublime natural landscapes of the highest quality synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development.</p> <p>Areas of High Scenic Amenity (HSA): Landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal. These areas have the capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape, subject to compliance with all other objectives and policies of the plan.</p> <p>Areas of Moderate Scenic Amenity (MSA) Primarily landscapes outside Local Area Plan Boundaries and Settlement Framework boundaries, that have a unique, rural and generally agricultural quality. These areas have the capacity to absorb additional development that is suitably located, sited and designed subject to compliance with all other objectives and policies of the Plan.</p>	<p>n/a</p>

Figure: 3.14 County Donegal Development Plan 2018-2024 (As Varied) Scenic Amenity Map




 County Donegal
 Development Plan
 2018 - 2024
 (As Varied)

 Plean Forbartha
 Contae Dhún na nGall
 2018 - 2024
 (Arna Leasú)

 Map 7.1.1
 Scenic Amenity

 Léarscáil 7.1.1
 Conláiste Scéimhe

- Legend**
-  Areas of Especially High Scenic Amenity (EHSA) *Línteáir Conláiste Go háirithe Ardscéimh*
 -  Areas of High Scenic Amenity (HSA) *Línteáir Conláiste Ardscéimhe*
 -  Areas of Moderate Scenic Amenity (MSA) *Línteáir Conláiste Measartha Scéimhe*
 -  National Roads *Bólaí na hOllsáir*
 -  Regional Roads *Bólaí na hArdchúchta*
 -  Views *Radhairc*

Source - Donegal County Council
 Foinsé - Contae Dhún na nGall

Donegal County Council (2018) Scenic Amenity Map. Donegal County Council. www.donegal.gov.ie
 Donegal County Council (2018) Scenic Amenity Map. Donegal County Council. www.donegal.gov.ie
 Donegal County Council (2018) Scenic Amenity Map. Donegal County Council. www.donegal.gov.ie

3.10 LIKELY EVOLUTION WITHOUT IMPLEMENTATION OF THE VARIATION

The SEA Directive requires the consideration of the likely evolution of the environment in the absence of the implementation of the Variation. The most likely scenario if the Proposed Variation is not adopted should be considered in terms of two aspects: (1.) new windfarm development; and (2.) augmentation of existing windfarms. With regards to new windfarm developments, there will remain a policy lacuna in the Plan relating to new windfarm development. As a result, applications for same would be faced with significant challenges in securing a positive outcome to the application process. That said, applications for augmentation (or re-powering or re-configuration) of established windfarm developments could still be considered by the Planning Authority having regard to the terms of Policy E-P-12:

E-P-12: It is the policy of the Council to:

Consider the development of appropriate new wind energy developments within the areas identified as 'Open To Consideration' on the Wind Energy Map 8.2.1, subject to compliance with all other relevant objectives and policies contained within this Plan.

Consider the augmentation, upgrade and improvements of existing wind farm developments within areas identified as 'Acceptable for augmentation of/improvements to existing windfarms' on the Wind Energy Map 8.2.1 on a case by case basis subject to compliance with other relevant objectives and policies contained within this plan and the following:

(a) Repowering:

Repowering is the process of replacing older turbines with newer ones that either have a greater capacity or more efficiency which results in a net increase of power generated. Repowering may also seek to extend the overall lifespan of the development. Proposals for repowering, shall not result in a net increase in turbines, and it shall be demonstrated that there is no adverse impact on the receiving environment; or

(b) Extension

In areas located outside of Natura 2000 sites, proposals for an extension to an existing wind farm (of up to 20% in terms of permitted numbers of turbines or in cases where 5 or less turbines are permitted in a wind farm, one additional turbine) will be considered. The proposal will be required to demonstrate that the additional turbines may be served by the infrastructure serving the existing development; or

(c) Reapplication

In areas located outside of Natura 2000 sites, where an existing wind farm has been permitted and this permission has expired, a revised proposal will be considered within the planning unit of the previously permitted development, and where it is demonstrated that there is no net increase in turbines.

Not favourably consider wind energy proposals in those areas identified as 'Not Acceptable' on the Wind Energy Map 8.2.1.

In this scenario, the only potential tangible environmental loss would be the opportunity cost of new windfarms not being developed that may have been developed were a robust policy framework in place, and that therefore could have contributed to the national and regional objective of securing increased renewable energy as part of the national policy drive to address climate change. The potential contribution to this national agenda of existing windfarm augmentation would be largely unaffected given the above-noted policy framework.

With regards to other environmental baseline features identified in Sections 3.1 to 3.9 above, their evolutions are unlikely to be negatively impacted to any significant degree as a result of not implementing the Proposed Variation. Not developing new windfarms will have a generally neutral impact on the evolutions of these aspects of the environment. There may be a marginal indirect impact on human health if lost opportunities for new windfarm developments contributed to an insecure or reduced power supply thus possibly contributing to impacts on domestic situations, education, health and job losses.

The re-powering or augmentation of existing windfarms could potentially have some impacts. Whilst the environmental impacts of these original projects would have been considered in great detail through their respective project-level environmental impact assessments, revised proposals could, in theory, give rise to potential greater impacts on the landscape and humans e.g. through increased turbine height or amended layout. Such issues would have to be assessed in detail at the project level in accordance with Policy E-P-12 and national guidelines.

4 Environmental Characteristics of the Areas Likely to be Significantly Affected by the Proposed Variation

This chapter is structured in line with the approach advocated in the SEA Guidelines wherein two distinct questions are posed:

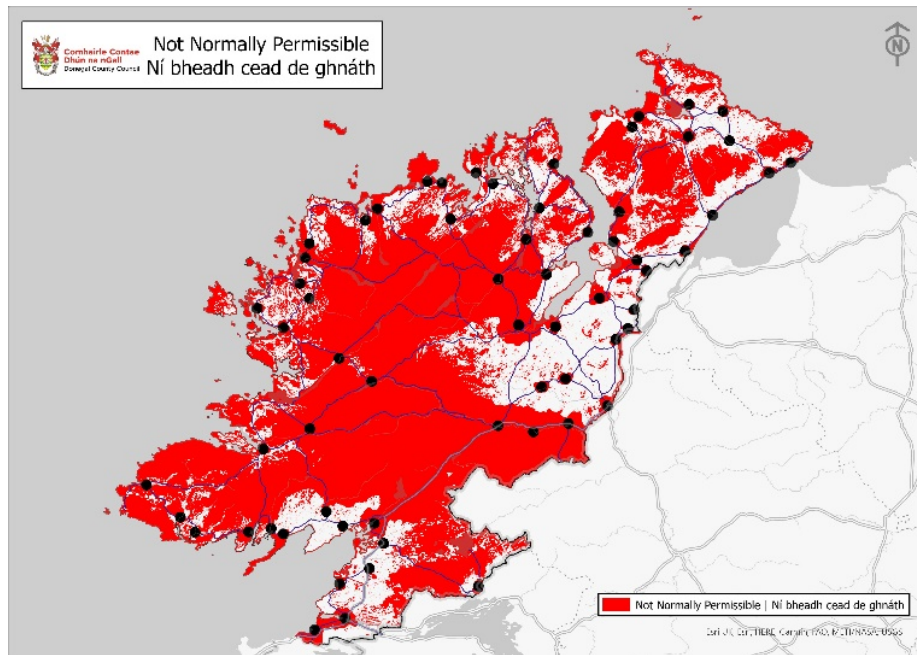
- Where is significant (scale and/or type) development likely to take place during the life of the plan? What kind of development will it be, and what impacts is it likely to have on the environment?
- Are there parts of the area (such as protected sites, areas with vulnerable water courses, or high amenity areas) which are more sensitive to development than others? How are such areas likely to be affected by the plan?

The following information is derived largely from the baseline work undertaken in the preparation of Map 8.2.1 'Wind Energy Map'. Map 8.2.1 designates the suitability of areas of the County to accommodate windfarm developments and for these purposes identifies three sub-areas of the County as: 'Not Normally Permissible'; 'Open to Consideration'; and 'Acceptable in Principle'. These areas were identified by means of a GIS "sieve mapping" methodology using key environmental, landscape and technical criteria.

4.1 AREAS UNLIKELY TO BE AFFECTED

'Not Normally Permissible' areas are considered to have minimal capacity to accommodate windfarm development and have been identified by overlaying spatial layers of the highest environmental, scenic and cultural quality including: areas of European and national protected habitats and species; defined settlements frameworks in the CDP (including a 500m buffer); Natural Heritage Areas; areas of Especially High Scenic Amenity as designated in the CDP; Glencveagh National Park; Areas of High, Medium and Low Landslide Susceptibility; Ancient Woodlands; and Natures Reserves, Margaritifera (i.e. Freshwater Pearl Mussel) Sensitive Areas and additional scenically sensitive areas namely in the vicinity of the Gweebarra River Valley and St John's Point. These areas are thereby afforded the highest level of protection from windfarm development and, consequently, it is not considered that the environmental characteristics within these areas are likely to be significantly affected by the Proposed Variation.

Fig. 4.1: Areas Unlikely to be Significantly Affected



4.2 AREAS THAT MAY BE AFFECTED

'Open to Consideration' areas do not preclude windfarm development. They may be constrained by one or more environmental or aeronautical considerations that require detailed investigation at project level and such detailed investigations may or may not have a positive outcome. These areas were also identified by overlaying spatial layers including proposed Natural Heritage Areas; Donegal Airport, City of Derry Airport and Finner Camp's flying constraints; Geological Heritage Sites;; Peat Bogs (outside of Natura sites); Natura 2000 site buffers; and High Scenic Amenity areas as designated in the CDP.

'Acceptable in Principle' areas are locations where no significant environmental constraints were identified and that do not fall within any of the aforementioned spatial layers used in the 'sieve-mapping-analysis'. In the absence of such substantive constraints, these areas are considered to be acceptable in principle for windfarm development, subject to compliance with all other objectives and policies contained within this Variation and the CDP.

Given that both these areas have the potential to accommodate windfarm development, the environmental characteristics within these areas may be significantly affected by the Proposed Variation. The geographical extent of the 'Open to Consideration' areas is shown in Figure 4.2 below (only a very small area is designated 'Acceptable in Principle'), and the key environmental characteristics of said areas are detailed in Table 4.1 below.

Fig 4.2: Geographical Extent of Areas Likely to be Significantly Affected by the Proposed Variation

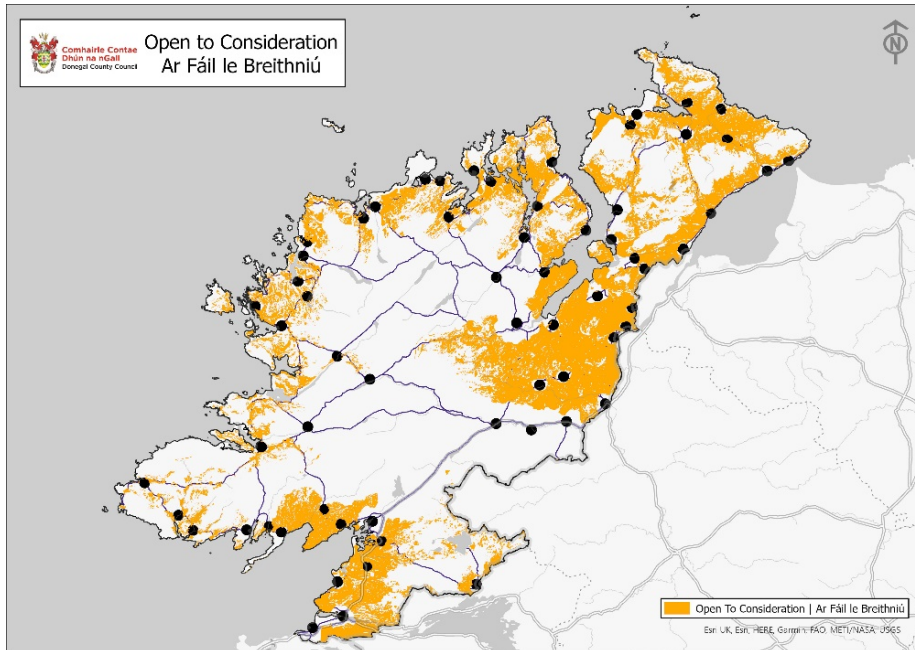
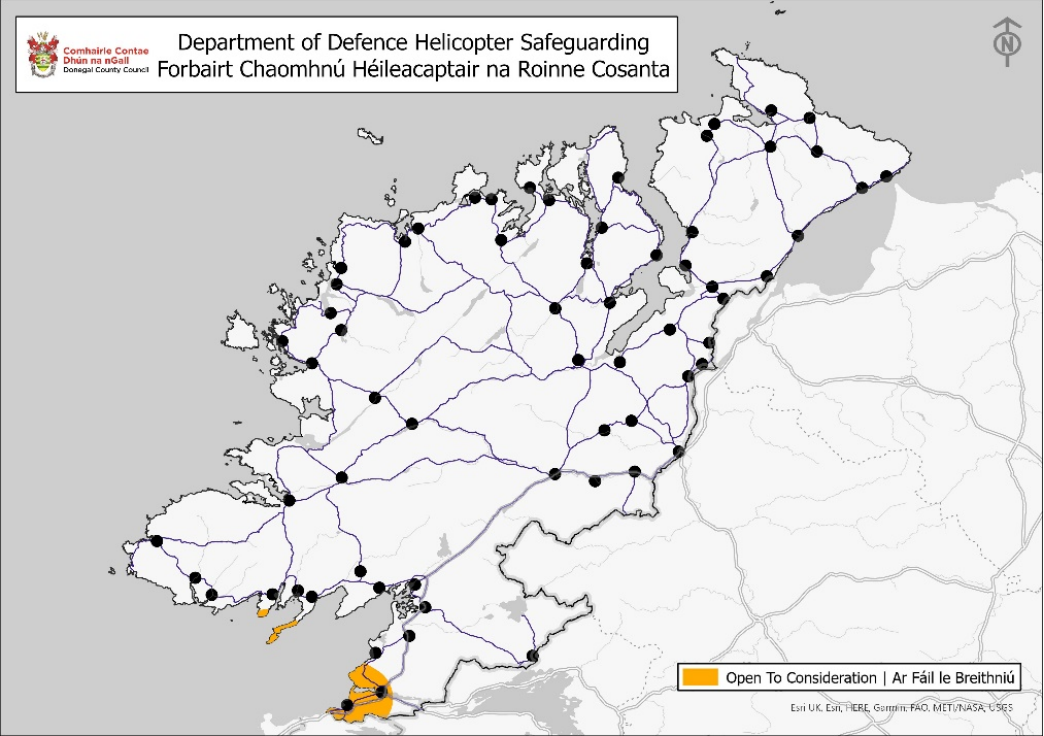
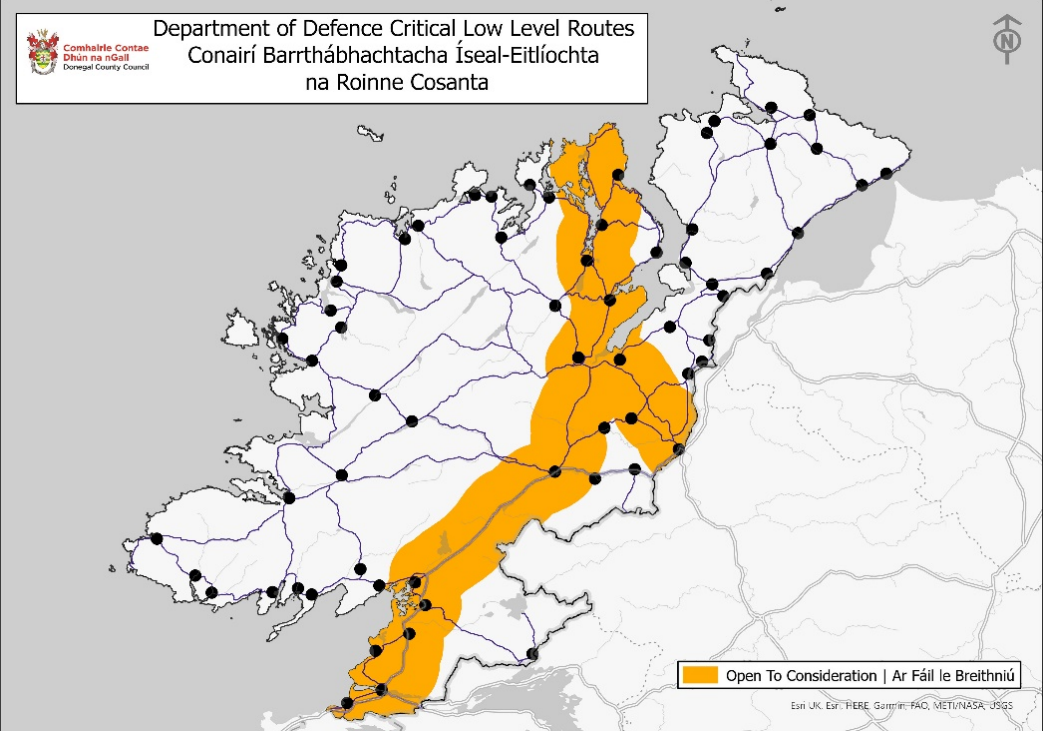
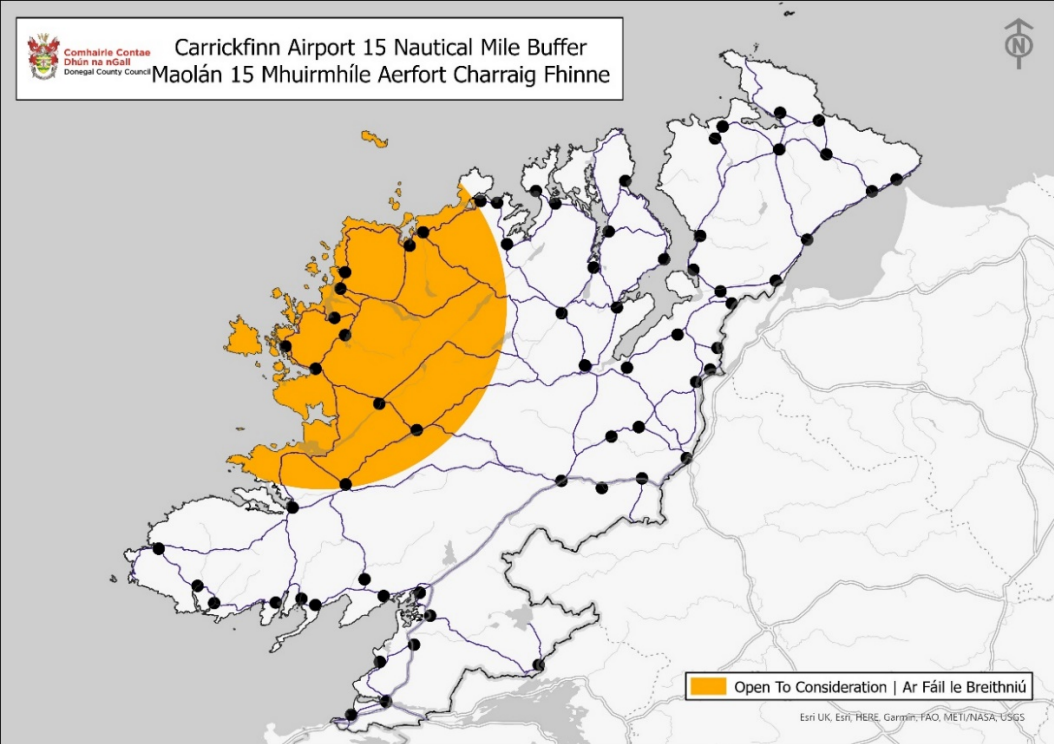
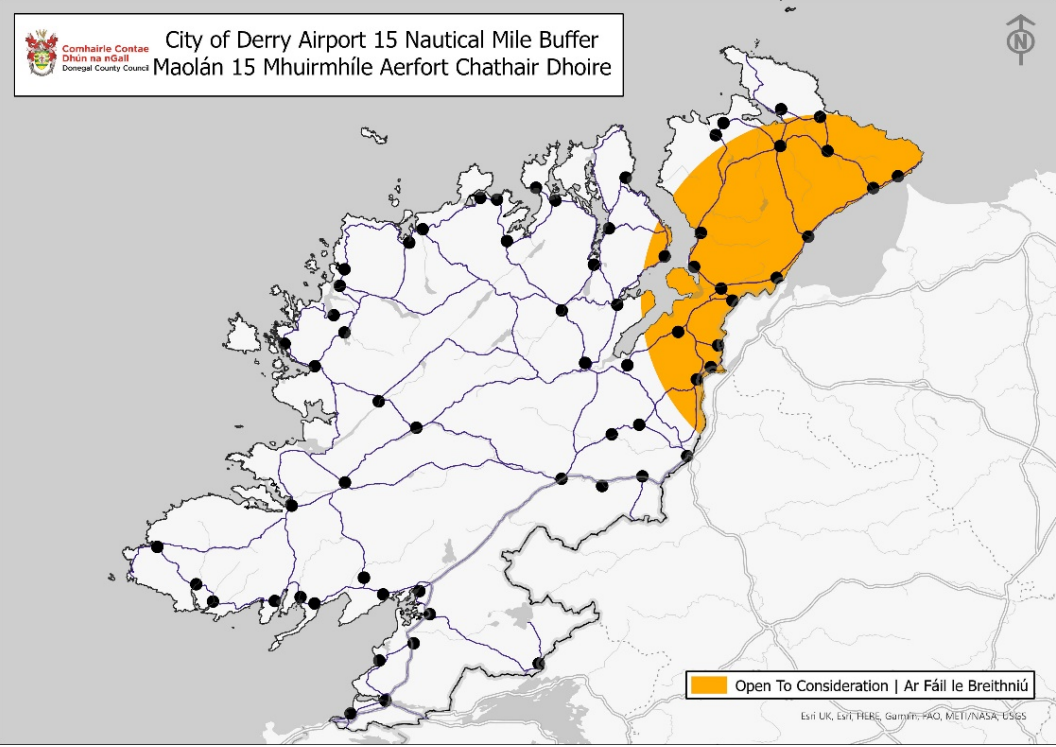


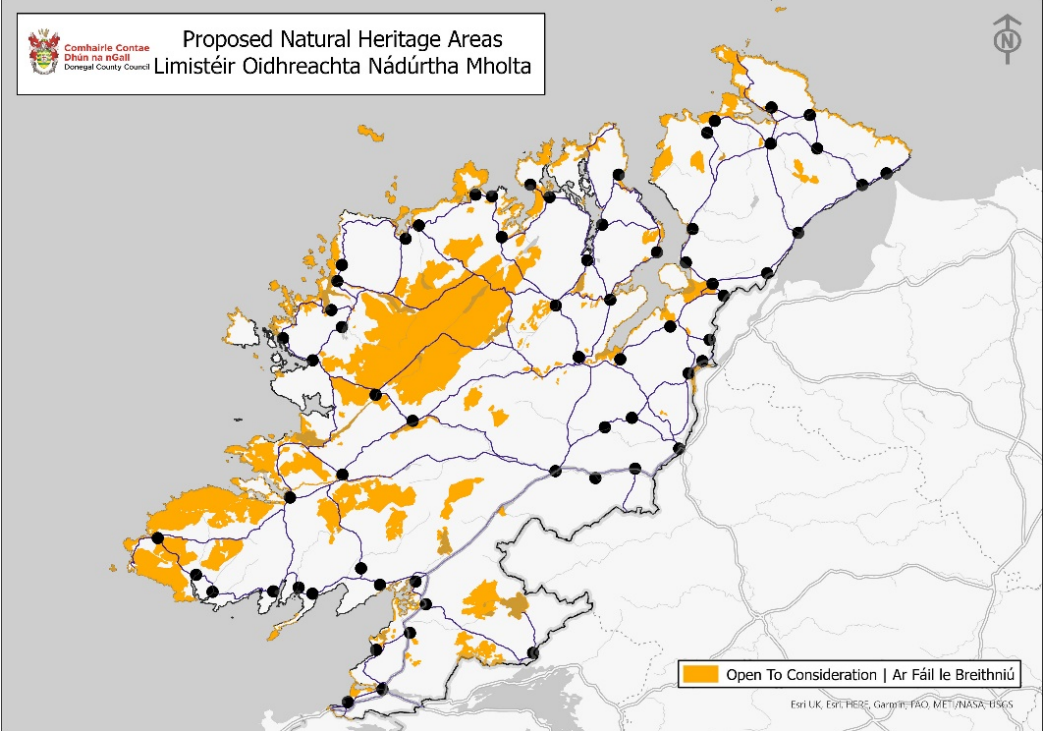
Table 4.1: Environmental Characteristics of Areas likely to be Significantly Affected by the Proposed Variation

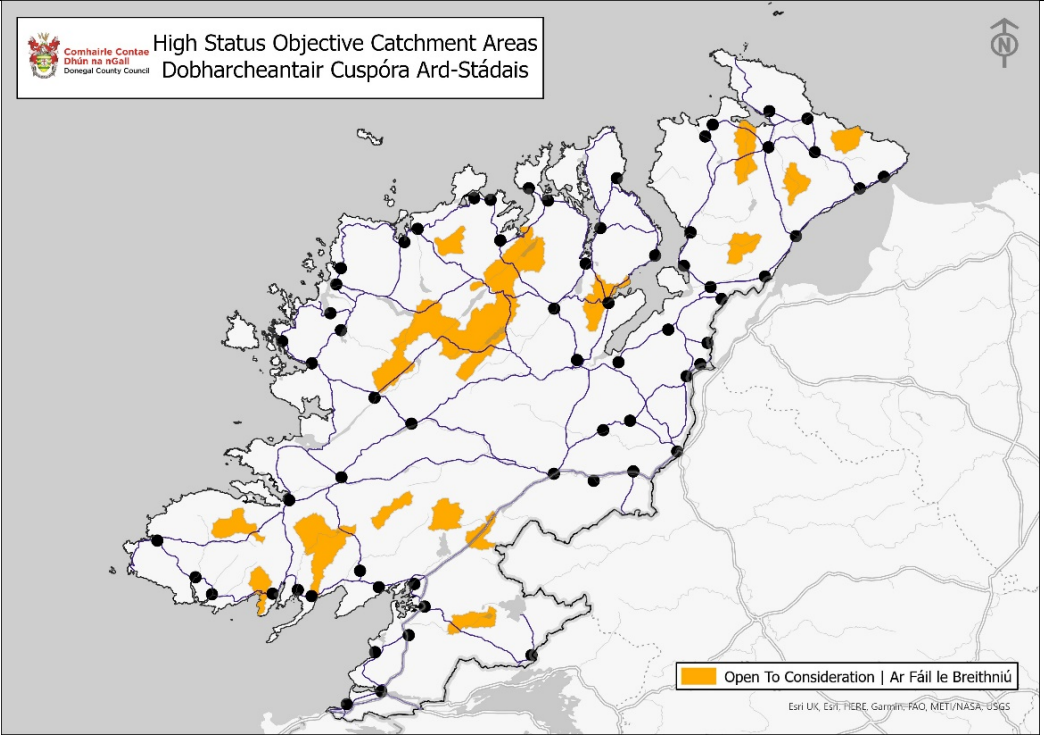
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
1	<p>This image shows areas identified for helicopter safeguarding for approaches to Finner Camp along with a 5km buffer subsequent to instruction from the Department of Defence. Proposed windfarm projects may impact on air safety.</p>	 <p>The map displays the County of Donegal with a network of roads and numerous black dots representing helicopter landing sites. A specific area in the south-western part of the county is highlighted in orange, indicating it is 'Open To Consideration'. A legend at the bottom right of the map reads 'Open To Consideration Ar Fáil le Breithniú'. The map includes a north arrow in the top right corner and a title box at the top center that reads 'Department of Defence Helicopter Safeguarding Forbairt Chaomhnú Héileacaptair na Roinne Cosanta'. Logos for 'Comhairle Contae Donegal' and 'Donegal County Council' are in the top left. Source information 'Esri U.K. Esri, HERE, Garmin, FAO, METI/NASA, USGS' is at the bottom right.</p>

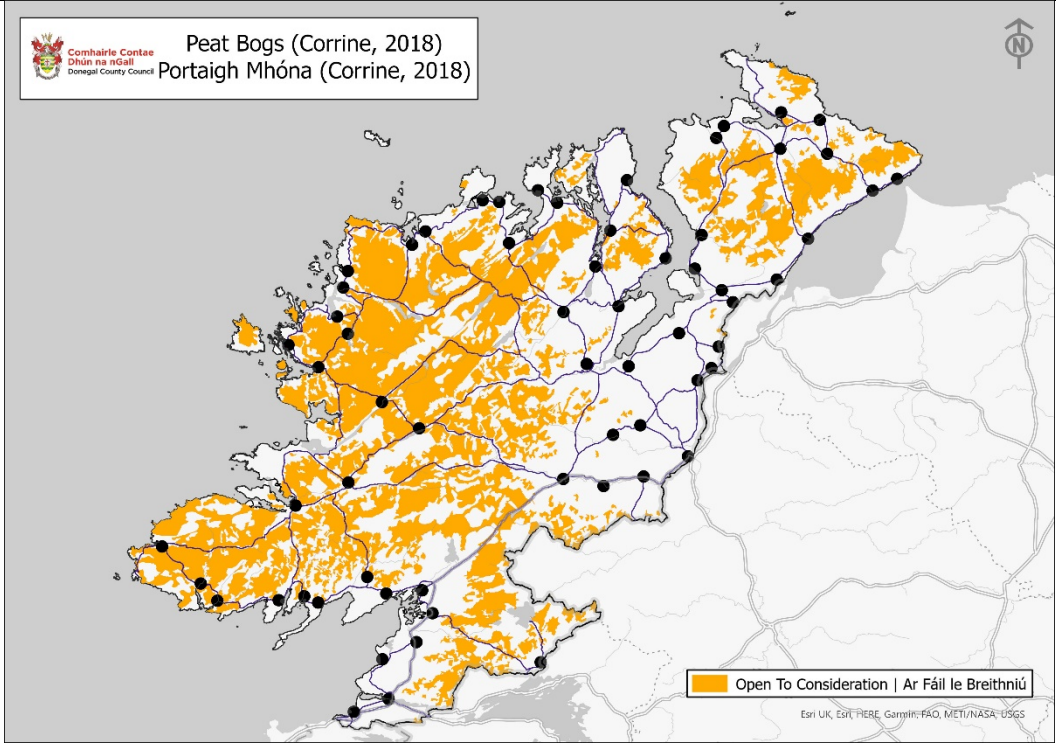
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
2	<p>Air Corps aircraft including Garda Air Support Unit (GASU), helicopter air ambulance and aircraft operating on security taskings use critical low level routes (3NM buffer). These routes have been identified by the Department of Defence. Proposed windfarm projects may impact on air safety.</p>	

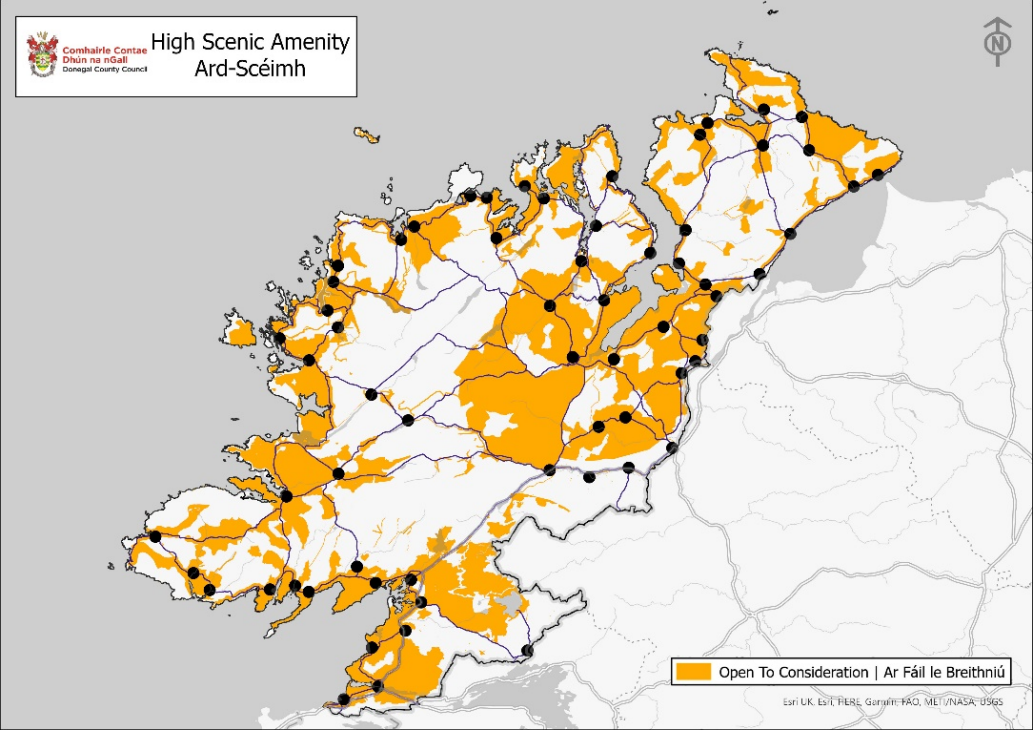
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
3	<p>Carrickfinn Airport has identified a landbuffer of 15 NM around the airport within which windfarm developments could potentially prejudice aviation safety. Proposed windfarm projects within this area may impact on air safety.</p>	 <p>The map displays the Carrickfinn Airport 15 Nautical Mile Buffer in Donegal, Ireland. The buffer area is highlighted in orange. The map includes the Donegal County Council logo and name in both Irish and English. A legend at the bottom right indicates that the orange area is 'Open To Consideration Ar Fáil le Breithniú'. The map also shows a north arrow and source information: 'Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS'.</p>

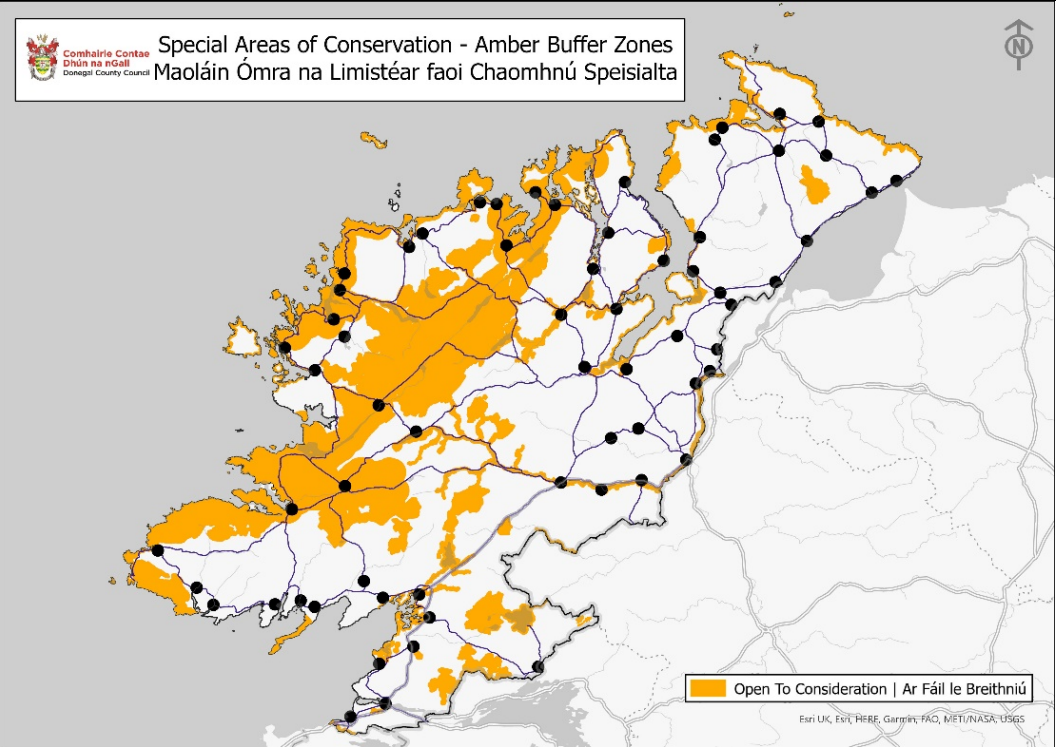
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
4	<p>City of Derry Airport authorities have identified a land buffer of 15 NM around the airport, The areas that fall within County Donegal (only) are illustrated on this map. Proposed windfarm projects in this area may impact on air safety.</p>	 <p>The map displays the geographical outline of County Donegal with a network of roads and numerous black dots representing proposed windfarm locations. A large orange-shaded area, representing the 15 Nautical Mile buffer, is centered on the City of Derry Airport. A legend in the bottom right corner of the map area shows an orange square next to the text 'Open To Consideration Ar Fáil le Breithniú'. A title box in the top left of the map area contains the Donegal County Council logo and the text 'City of Derry Airport 15 Nautical Mile Buffer' and 'Maolán 15 Mhuirmhíle Aerfort Chathair Dhoire'. A north arrow is located in the top right corner. At the bottom right of the map area, there is a small text credit: 'Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, DeLorme'.</p>

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
5	<p>Proposed Natural Heritage Areas (pNHAs) are national sites of significance for wildlife and habitats that have been published on a non-statutory basis and are not yet statutorily proposed or designated to NHA status. Potential impacts include that windfarm developments could cause potential loss and degradation, fragmentation, disturbance, introduction of alien species during construction, changes in the micro-climate and soil compaction as examples. Likely significant effects on birds are habitat loss and degradation, collision mortality, displacement and disturbance, as well as impact on their foraging and nesting grounds.</p>	 <p>The map displays the geographical distribution of Proposed Natural Heritage Areas (pNHAs) in Donegal. The areas are highlighted in orange, showing a concentration in the central and western parts of the county. Black dots are scattered across the map, likely representing specific sites or points of interest. The map includes a legend in the bottom right corner with the text 'Open To Consideration Ar Fáil le Breithniú'. A north arrow is located in the top right corner. The map is titled 'Proposed Natural Heritage Areas Limistéir Oidhreachta Nádurtha Mholta' and features the Donegal County Council logo in the top left corner. At the bottom of the map, there is a small text credit: 'Eirí UK, Eirí, HERE, Garmin, FAO, MET, NASA, USGS'.</p>

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
6	<p>High Status Objective Water Bodies are coastal, transitional, river and lake water bodies that have been identified as having a pristine or high status objective under the Water Framework Directive and the River Basin Management Plan 2018-2021 (RMBP). Potential impacts include risk to waterbodies and their dependant species arising from e.g. sedimentation or polluting run-off.</p>	 <p>Comhairle Contae Dhún na nGall Donegal County Council</p> <p>High Status Objective Catchment Areas Dobharcheantair Cuspóra Ard-Stádais</p> <p>Open To Consideration Ar Fáil le Breithniú</p> <p>Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS</p>

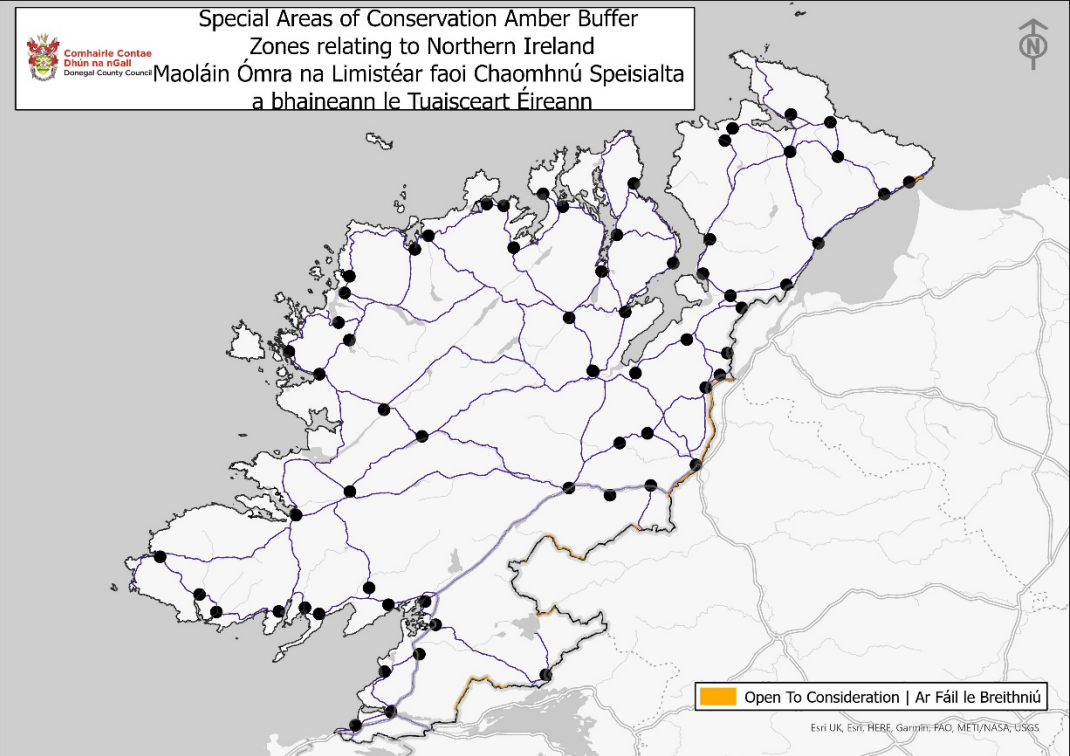
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
7	<p>A significant amount of the land cover of the County is Peat Bog, the majority of which are in upland areas, as identified on this map. Whilst the most substantive parts of this resource are contained within Natura 2000 sites, other more localized, smaller-scale sites are to be found around the County within broader peat bog areas. Windfarm developments could cause potential loss and degradation, fragmentation, disturbance, introduction of alien species during construction, changes in the micro-climate and soil compaction as examples.</p>	 <p>Comhairle Contae Dhún na nGall Donegal County Council</p> <p>Peat Bogs (Corrine, 2018) Portaigh Mhóna (Corrine, 2018)</p> <p>Open To Consideration Ar Fáil le Breithniú</p> <p>Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS</p>

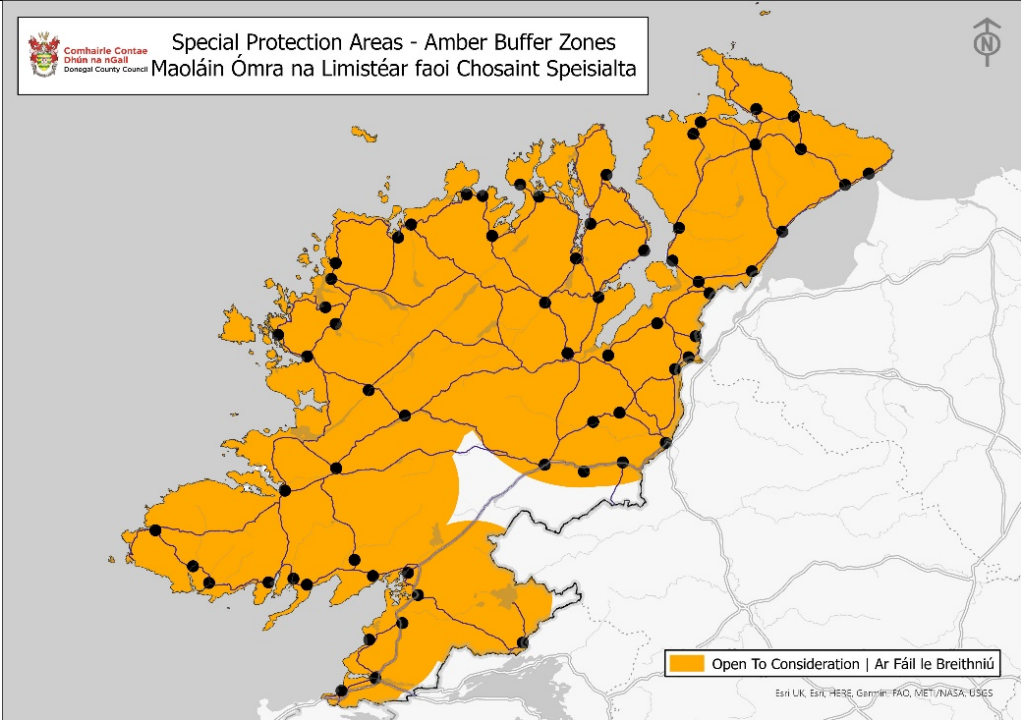
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
8	<p>Scenic Amenity Map 7.1.1 of the CDP identifies three landscape designations for the County. The middle ranked of these is 'Areas of High Scenic Amenity' (HSA). These areas are identified as "landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal. The CDP describes these areas as having: the capacity to absorb sensitively located development of a scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape. Potential impacts are the visual impact of wind</p>	 <p>The image shows a map of County Donegal with several areas highlighted in orange, representing High Scenic Amenity (HSA) areas. The map includes a legend in the bottom right corner with the text 'Open To Consideration Ar Fáil le Breithniú'. A north arrow is located in the top right corner. The map is titled 'High Scenic Amenity Ard-Scéimh' in the top left corner. The map also includes the Donegal County Council logo and name in the top left corner. The map is overlaid on a grey background representing the county's outline and major roads.</p>

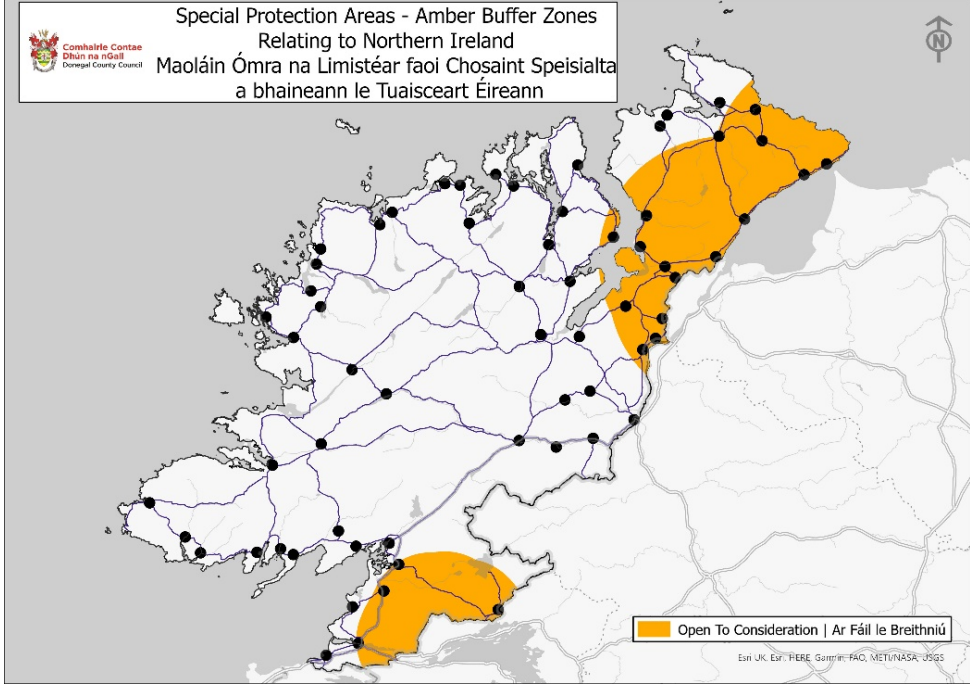
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
	turbines on the landscape.	
9	<p>Specialist ecological consultants procured for this Variation project advised that it would be good practice to define specific, tailored buffer zones around all of the Natura 2000 sites within the County and adjoining authorities inclusive of trans-boundary sites. Each buffer has been identified having regard to the qualifying interests of the (pertaining) Natura site and the characteristics of the adjoining grounds and their importance for the designated area in terms of habitat and species. This image illustrates the extent of SAC buffers within the Republic of Ireland. Wind Energy development occurring within Natura 2000 sites or their corresponding</p>	

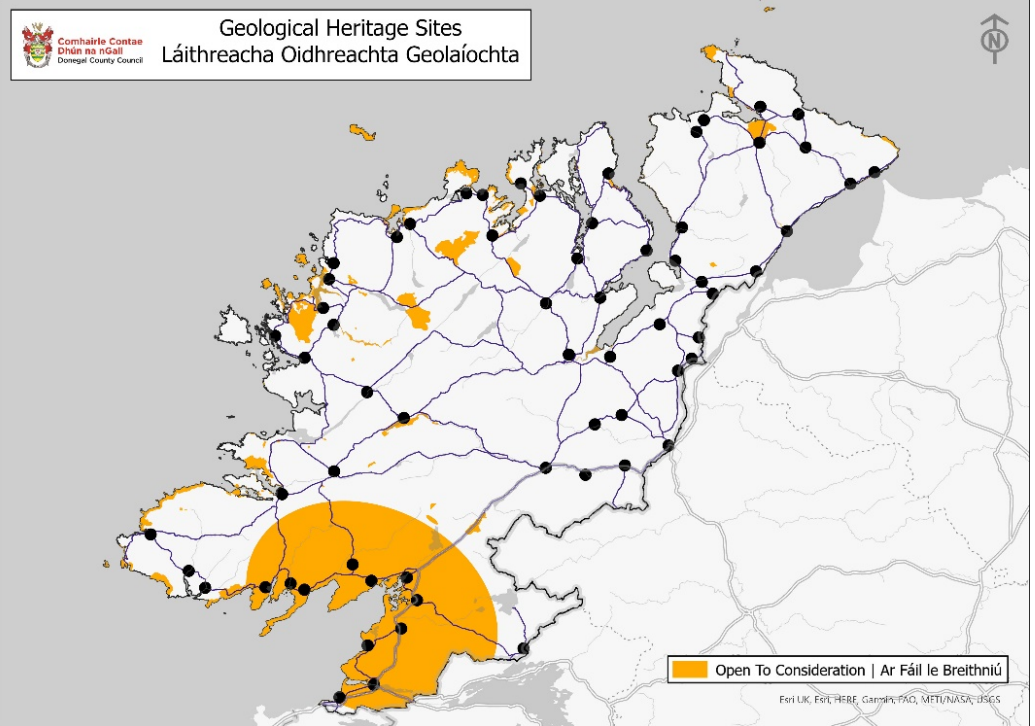
Ref	Brief Description of Spatial data	Image of Spatial Data Layer
	<p>designated buffer zone(s) could potentially affect the qualifying interests of Natura 2000 sites. As regards impacts on habitats, windfarm developments could cause potential loss and degradation, fragmentation, disturbance, introduction of alien species during construction, changes in the micro-climate and soil compaction as examples. Likely significant effects on birds are habitat loss and degradation, collision mortality, displacement and disturbance² as examples, as well as impact on their foraging and nesting grounds.</p>	

² Ibid.p.#

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
10	<p>Similar to Item 10 above, this image illustrates the extent of the buffers of Northern Ireland SACs that fall within the jurisdiction of Donegal County Council. The potential impacts are also similar to Item 10.</p>	 <p>Special Areas of Conservation Amber Buffer Zones relating to Northern Ireland Maoláin Ómra na Limistéar faoi Chaomhnú Speisialta a bhaineann le Tuaisceart Éireann</p> <p>Comhairle Contae Dhún na nGall Donegal County Council</p> <p>Open To Consideration Ar Fáil le Breithniú</p> <p>Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS</p>

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
11	<p>Similar to Items 10 and 11 above, this image illustrates the extent of SPA buffers within the Republic of Ireland. The potential impacts are also similar to Item 10.</p>	 <p>Comhairle Contae Dhún na nGall Donegal County Council</p> <p>Special Protection Areas - Amber Buffer Zones Maoláin Ómra na Limistéar faoi Chosaint Speisialta</p> <p>Open To Consideration Ar Fáil le Breithniú</p> <p>Esri UK, Esri, HERE, Garmin, FAO, METI, NASA, USGS</p>

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
12	<p>Similar to Items 10, 11 and 12 above, this image illustrates the extent of the buffers of Northern Ireland SPAs that fall within the jurisdiction of Donegal County Council. The potential impacts are also similar to Item 10.</p>	
13	<p>County Geological Sites (CGS) have been identified in the Geological Heritage Audit of Donegal, 2019 (prepared By Geological Survey Ireland and supported by the Heritage Council and Donegal County Council). The Audit identifies a total of 102 CGS, 22 of which have</p>	

Ref	Brief Description of Spatial data	Image of Spatial Data Layer
	<p>been recommended as NHAs. The CGSS identified are the most important geological sites in the County, and some are identified as having national importance. Potential risk are from damage to this resource. Potential benefit may be in their exposure during construction that may not otherwise happen.</p>	
14	<p>Population Approx. 65,000 people are resident in the 'Open to Consideration' and 'Acceptable in Principle' areas. Potential risk is due to noise, shadow flicker and, in extreme events, due landslide events or catastrophic failure events.</p>	

5 Existing Environmental Problems of Relevance to the Proposed Variation Including, In Particular, Those Relating To Any Areas Of A Particular Environmental Importance, Such As Areas Designated Pursuant to the Birds Directive or Habitats Directive;

The SEA Guidelines advise that this section should focus on development-related problems and the sections that follow reflect this approach.

5.1 CLIMATE CHANGE: GLOBAL/NATIONAL PERSPECTIVE

Climate Change is widely recognised on a world stage as a potential threat to the future of the planet, with potential negative impacts on landforms and human health arising from a warming of the climate and resultant changes in weather patterns, sea level rise, loss of habitats, loss of species and ecosystems and other natural occurrences. Climate change is now generally acknowledged as being caused by the activities of man. These activities include development in all of its aspects, from the resources and materials used in the development of structures, to development patterns and how this impacts on travel patterns, to heating and power methods designed into buildings and the siting of buildings.

Nationally, climate change is being considered as a specific potential threat to peat habitats, based on recent increased frequency of extreme weather events including increased precipitation, flooding and drought³.

Climate change is a cross cutting issue which impacts on habitats, species, fisheries, aquaculture, tourism, water quality, water safety, flood risk and people. Of increasing concern is the issue of flooding of rivers and coast, harvesting of peat and the resulting loss of its carbon sink qualities, as well as impacts such as eutrophication which can have devastating impacts on human health, water quality and fish stocks as examples.

Ireland's energy systems are highly reliant on fossil energy and largely dependent on fossil fuel systems, the main climate and environmental impacts from the combustion of fossil fuels are identified as⁴:

- The direct production of reactive gases such as nitrate oxides, sulphur dioxide and particulates including black carbon
- The production of secondary pollutant gases and particulates such as ozone, ammonium nitrate, ammonium sulphate and condensed compounds such as organic carbons

³ Ibid.S.5.1

⁴ Ireland's Environment-An Integrated Assessment 2020 EPA

- The release of heavy metals such as mercury and the formation of persistent organic pollutants (POPs) such as polycyclic aromatic hydrocarbons, which build up in ecosystems and in food chains
- The release of greenhouse gases (GHGs) such as carbon dioxide and methane

Energy use is central to all human activities. To address the range of adverse impacts caused by energy use, while maintaining our lifestyles and health and wellbeing, the following strategic objectives have been identified the international, European and national level:

- Reducing energy waste and loss through increasing energy efficiency
- Reducing emissions through mitigation techniques
- Switching to clean and sustainable energy solutions

In 2019, national greenhouse gas emissions from transport were 20.4 % (up from 19.8% in 2017), second only to agriculture at 35.4%, whilst greenhouse gas emissions from the energy industries was 15.8% (third highest sector)⁵. Transport emissions are the greatest source of NOx as well as a source of PM25 that can impact on human health.

Ireland did not meet its overall EU renewable energy target for 2020 of 16%. The overall share of renewable energy was 13.5%, mainly attributable to increased capacity of more than 180MW in 2020. Ireland fell just short of the EU renewable *electricity* target of 40% with 39.1 generated, 59% of the contribution to the renewable energy target was from wind)⁶.

5.2 PEATLANDS

Uplands and coastal locations are likely to be commercially attractive for windfarm developments as wind increases with altitude and over the ocean. In Donegal such locations are often covered with Upland and Atlantic Blanket Bog and such Peatlands provide a unique habitat for flora and fauna. Consequently the existing issues/threats to peatlands are of relevance to the proposed variation. The EPA Report *BOGLAND: Sustainable Management of Peatlands in Ireland* indicates that the main drivers of Peatland biodiversity change are:

- Habitat change (reclamation for agriculture, afforestation, drainage, overgrazing, erosion, quarrying, wind-farm development, dumping, burning, recreation in the form of walking, horse, riding, quads, etc.);
- Exploitation (industrial extraction for fuel and horticulture and domestic turf cutting);
- Nutrient pollution;
- Invasive species; and
- Climate change.

⁵ <https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/#>

⁶ www.seai.ie

5.3 POPULATION AND HUMAN HEALTH

Based on CSO 2016 Small Area Population Statistics, the total county population living in settlements identified in the County Development Plan 2018-2024 Settlement Framework was 70,762. The total county population was 159,192, therefore a population total of 88,430 living in rural areas⁷. Windfarm developments are most likely to impact on this rural population.

The Draft Wind Energy Development Guidelines indicate that noise (both operational and construction) and shadow flicker from such developments may potentially affect human populations through loss of residential amenity.

5.3.1 Operational Noise:

Operational Noise from wind turbines is predominately caused by aerodynamic noise generated by the rotation of the turbine blades which generates a broad-band (i.e. spread across the audible frequency range) swishing sound and increases with the speed of the rotation. In this regard large turbines with a significant blade length and rotor diameter can generate significant tip speeds. Most modern wind turbines are pitch regulated variable speed turbines where noise increase with wind speed up to the point until the turbine is generating its maximum rated power above which there is usually no increase in noise. Mechanical noise can also be produced from actuators, brakes, and hydraulics pumps in the nacelle, however improvements in gearbox design and insulated nacelles have significantly reduced said noise.

Special audible characteristics include tonal, infrasonic (low frequency) and amplitude modulation components. Tonal noise arising from mechanical noise has been significantly reduced by improved gearbox design and sound insulation of nacelles. Some early wind turbine designs had blades downwind of the tower which caused low frequency noise called infrasound. However as modern wind turbine have blades upwind of the tower this has largely eliminated infrasound during operation. Consequently there is normally no excessive tonal or low frequency element in the noise from a wind turbine⁸. Under certain conditions wind turbines may generate a 'whoomping' or thumping' type noise at a distance resulting from amplitude modulation (i.e. a variation in noise level) caused by changes in the rotational speed of blades which may cause more annoyance at lower levels than other turbine related noise.

Noise emissions from a wind turbine increase as wind speed increase however so does background noise tending to mask the turbine noise in higher wind speeds. The impact of noise on noise sensitive receptors (e.g. occupied dwellings) may depend on a range of factors including distance to the receptor, turbine design and scale, background noise levels, wind speed and direction, topography, weather conditions etc. Further there is a human subjective response to noise which can depend on the characteristics of the noise, the duration and time of exposure the activity being carried out during exposure and the personal expectations of the acoustic environment. However any operational noise emissions are likely to be long term and periodic in nature.

However in terms of overall impact the Environmental Noise Guidelines for the European Region (WHO 2018) state that '*the number of people exposed (to wind turbine noise) is far lower than for many other sources of noise (such as road traffic). Therefore, the GDG (WHO Guideline Development Group) estimated the burden on health from exposure to wind turbine noise at the population level to be low, concluding that any benefit from specifically reducing*

⁷ [ArcGIS Web Application](#)

⁸ Draft Revised Wind Energy Development Guidelines 2021

population exposure to wind turbine noise in all situations remains unclear'. These guidelines further state that 'that evidence on health effects from wind turbine noise (apart from annoyance) is either absent or rated low/very low quality' (p. 84).

5.3.2 Construction Noise:

Noise is likely to arise during the construction phase of new wind energy developments including: rock breaking/excavation during the construction of access roads turbine bases etc, the movement of heavy machinery (e.g. haulage lorries, excavators dumpers) during such construction, and the operation of diesel generators during same. The impact of noise on noise sensitive receptors may depend on the scale of the development including length of access roads, the scale of hardstanding areas and the level extent and depth of groundworks required. However any construction related noise impacts are likely to be short term and temporary in nature.

5.3.3 Shadow Flicker:

Wind turbines can cast long shadows when the sun is low in the sky. The effect known as "shadow flicker" occurs where the rotating blades of a wind turbine cast a moving shadow onto a property results in a rapid change or flicker in the incoming sunlight. This effect will occur only for a short period under specific concurrent circumstances.

A number of publications indicate that the impact of shadow flickers diminishes the greater the separation distance between the turbine and the affected property. Moreover as shadow flicker is a predictable phenomena the potential effects of same can be reduced by avoidance and mitigation during the preplanning and operational phases of wind energy developments. At the preplanning stage computational modelling can be used to predict whether the proposed location of a wind turbine has the potential to cause shadow flicker on properties (including in a worst case scenario) and potential excessive shadow flicker impacts can be avoided by the relocation of turbines. During the operational phase shadow flicker can be further reduced as modern wind turbines have the facility to measure sunlight levels and to reduce or stop turbine rotation if the conditions would lead to shadow flicker.

5.4 SOIL AND GEOLOGY

Precipitation changes, flooding and drought arising from global warming partly caused by development could have significant implications for slope stability and landslides and their resultant impacts on water management activities. Eroded soil, with high nutrient contents, can be washed into rivers during heavy rainfall damaging aquatic ecosystems leading to the exacerbation of eutrophication of rivers and lakes.

Peat cutting can cause damage to vegetation, hydrology and landscape and also destroy carbon sinks; the emergence of climate change as a key environmental issue has brought a new impetus to the need to preserve remaining functional peatlands and to restore damaged peatlands where possible.

5.5 WATER

Donegal's waterbodies act as environmental habitats for flora and fauna, provide drinking water, food source and a recreational resource amongst others and is therefore a major environmental concern and priority for the Council. These water bodies are subject to a range of environmental problems including pollution arising from agriculture, deficient municipal wastewater treatment plants, domestic wastewater treatment systems, urban runoff, forestry, invasive species destabilising river banks, the extractive industry, industrial discharges, waste, hydromorphology and water abstraction.

5.6 LANDSCAPE AND VISUAL

Existing environmental problems relating to landscape and visual amenity are related to impacts on the aesthetic landscape and sensitive views, resulting from the cumulative impacts arising from inappropriate typology, use, siting and design of developments. The impact of insensitive development on the landscape has a significant impact on its natural, cultural and visual amenity as well as its intrinsic character, arguably more so within landscapes of the highest amenity designation and environmental sensitivity. Pressures on the landscape primarily arise from the following:

- One-off housing in the countryside;
- Wind farm;
- Afforestation;
- Quarrying; and Major infrastructural projects; some agricultural activities.

6 Environmental Protection Objectives Established At An International, European Union Or National Level Which Are Relevant To The Plan Or Programme, And The Way Those Objectives And Any Environmental Considerations Have Been Taken Into Account During The Preparation Of The Proposed Variation

Having established relevant baseline information for each environmental theme in Chapter 3, Tables 6.1 to 6.9 identify corresponding environmental protection objectives (EPO's) established at the International, European or National level of relevance to those baseline topics, and the way those EPO's and any environmental considerations have been taken into account during the preparation of the Proposed Variation. Tables 6.10 and 6.11 identify 'Sustainable Development' and 'Planning' documents containing broad or multi-issue EPOs. These documents are addressed separately as they do not lend themselves to the individual topics covered in Tables 6.1 to 6.9.

Column 1 identifies the baseline reference number established in Chapter 3 of this Report in the row of the associated environmental protection objective. Columns 2 and 3 identify the source and broad thrust of relevant EPO's. Column 4 then details how the EPO's and any environmental considerations have been taken into account during the preparation of the Proposed Variation. It does so by identifying objectives and policies already contained in the CDP (As Varied) or included in the Proposed Variation (inclusive of the layers of environmental information used in the construction of Map 8.2.1) of relevance to each environmental theme. Finally, it should be noted that Chapter 7 sets out how the EPO's have informed the development of Strategic Environmental Objectives to be used in the assessment matrix contained in Chapter 7: 'The Likely Significant Effects on the Environment, and the Interrelationship Between These Factors'.

Table 6.1: Relevant Biodiversity, Flora and Fauna Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies and Objectives Contained in Existing CDP (As Varied), or Included in Proposed Variation
	International		
	UN Convention on Biological Diversity (1992)	The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.	<u>Existing CDP 2018-2024 (As Varied)</u> The CDP already contains in Section 7.1: 'Natural Heritage' of Chapter 7: 'The Natural and Built Heritage' strong objectives and policies aimed at protecting biodiversity, flora and fauna. The Proposed Variation does not propose to amend or omit any of these objectives and policies and thus the environmental protections provided by them shall remain.
BSBIO3	Ramsar Convention on Wetlands of International Importance (1971 and amendments 1982 and 1987)	Objectives include protection and conservation of wetlands, particularly those of importance to waterfowl as Waterfowl Habitat.	<u>General Objectives and Policies</u>
	Bern Convention (Convention on European Wildlife and Natural Habitats) 1982	The aims of this Convention are to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several States, and to promote such co-operation.	Refer Objectives NH-O-1, NH-O-8 and NH-O-10; and Policies NH-P-5 and NH-P-15). <u>Detailed Objectives and Policies</u>
BSBIO10	International Union for the Conservation of Nature (IUCN) Recommendations re National Parks	Recommendation that all governments agree to reserve the term 'National Park' to areas sharing the following characteristics: <ul style="list-style-type: none"> • Where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest or which contain a natural landscape of great beauty; 	The following objectives and policies provide protections for specifically-referenced natural assets: Objectives NH-O-2, NH-O-3, NH-O-6, NH-O-8 and NH-O-10; and Policies NH-P-1, NH-P-2, NH-P-3, NH-P-4, NH-P-10 and NH-P-20. The specific assets referenced in these objectives

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies and Objectives Contained in Existing CDP (As Varied), or Included in Proposed Variation
		<ul style="list-style-type: none"> Where the highest competent authority of the country has taken steps to prevent or eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; Where visitors are allowed to enter, under special conditions, for inspirational, educational, cultural and recreational purposes. 	<p>and policies include: Natura 2000 sites; Natural Heritage Areas; Ramsar Sites; Plants and Species protected under EU Directives; Nature Reserves; Designated Shellfish Waters; Freshwater Pearl Mussels; and Ecological networks.</p> <p><u>Proposed Variation</u></p> <p><u>Proposed Textual Amendments</u></p>
	European Union		<p>Amendment Item No. 13 contains a new Policy E-P-23.</p>
	EU Biodiversity Strategy to 2030	<p>Aims to ensure that Europe's biodiversity will be on the path to recovery by 2030 for the benefit of people, the planet, the climate and our economy.</p> <p>It contains 3 key nature protection commitments:</p> <ol style="list-style-type: none"> Legally protect a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrate ecological corridors, as part of a true Trans-European Nature Network. Strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately. 	<p>Sub-para. (1) provides that: It is a policy of the Council that wind farm developments must not be located within the zone of visual influence of Glenveagh National Park.</p> <p><u>Proposed Mapping Amendments</u></p> <p>Amendment Item No. 20 contains a new wind energy map – Map 8.2.1: Wind Energy. The map was constructed using a sieve mapping analysis as recommended in the Draft Wind Energy Guidelines leading to the identification of three sub-area designations: 'Acceptable in Principle'; 'Open to Consideration'; and 'Not Normally Permissible'. The natural heritage of the County was again given strong protection in the construction of the map. Thus the 'Not Normally Permissible' designation includes Natura 2000 sites; Ramsar sites; Natural Heritage Areas; Glenveagh</p>
	The Convention on the Conservation of Migratory Species of Wild Animals (also known as CMS or "The Bonn	<p>Article II 3. of the convention states that the parties to the convention</p> <ul style="list-style-type: none"> Should promote, co-operate in and support research relating to migratory species; 	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies and Objectives Contained in Existing CDP (As Varied), or Included in Proposed Variation
	Convention" [L210, 19/07/1982 (1983)]	<ul style="list-style-type: none"> • Shall endeavour to provide immediate protection for migratory species included in Appendix I; and • Shall endeavour to conclude AGREEMENTS covering the conservation and management of migratory species included in Appendix II. 	National Park; Nature Reserves; and Ancient and Long-Established Woodlands. The 'Open to Consideration' designation includes: proposed Natural Heritage Areas; Peat Bogs; Freshwater Pearl Mussel Catchments; Natura 2000 Site Buffers for both sites in Donegal and sites outwith the Donegal jurisdiction but the buffers for which penetrate into Donegal; and County Geological sites.
BSBIO1 BSBIO5 BBSBIO6 BSBIO11	Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats) Directive (92/43/EEC)	The aim of this Directive is to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies. Provides statutory protection for, inter alia, Natura 2000 sites, the Freshwater Pearl Mussel and Ancient and Long-established Woodlands.	
BSBIO1	Conservation of Wild Birds Directive (2009/147/EEC) (Birds Directive)	<p>The central objectives of this Directive is that:</p> <ul style="list-style-type: none"> • Member States take the requisite measures to maintain the population of the species referred to in Article 1 of the directive at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level. • Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1 of the directive: <p>Note: Article 1 relates to relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies. It covers the protection, management and control of these species and lays down rules for their exploitation.</p>	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies and Objectives Contained in Existing CDP (As Varied), or Included in Proposed Variation
	National		
	National Biodiversity Action Plan 2017 – 2021	<p>This plan has 7 key objectives:</p> <ol style="list-style-type: none"> 1. Mainstream biodiversity into decision-making across all sectors 2. Strengthen the knowledge base for conservation, management and sustainable use of biodiversity 3. Increase awareness and appreciation of biodiversity and ecosystems services 4. Conserve and restore biodiversity and ecosystem services in the wider countryside 5. Conserve and restore biodiversity and ecosystem services in the marine environment 6. Expand and improve management of protected areas and species 7. Strengthen international governance for biodiversity and ecosystem services 	
BSBIO7 BSBIO9	Wildlife Acts 1976-2020 (as amended)	The purpose of the Wildlife Acts 1976-2020 is to provide for the protection of wildlife (both flora and fauna) and the control of activities, which may impact adversely on the conservation of wildlife. Provides statutory protection for, inter alia, Nature Reserves and Natural Heritage Areas.	
	All Ireland Pollinator Plan 2015-2020	<p>This plan has 5 main objectives:</p> <ol style="list-style-type: none"> 1. Making Ireland pollinator friendly 2. Raising awareness of pollinators and how to protect them 3. Managed pollinators – supporting beekeepers and growers 4. Expanding our knowledge on pollinators and pollination service 5. Collecting evidence to track change and measure success 	

Table 6.2: Relevant Population and Human Health Environmental Protection Objectives Established at International, European Union or National Level (please note that Air issues are addressed in Table 6.5 below)

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	International		
BSPOP1	World Health Organisation published Environmental Noise Guidelines for the EU in 2018.	Sets out regulations to control noise pollution from various sources, including wind turbines, and it's increasing negative impacts on human health and well being.	<p>Proposed Variation</p> <p><u>Proposed Textual Amendments</u></p> <p>Proposed policy E-P-24 specifically requires a setback distance of ten times tip height of proposed turbines from residential receptors for noise purposes. This is significantly in excess of the broad indicator of four times tip height as contained in the Draft Wind Energy Guidelines.</p> <p><u>Proposed Mapping Amendments</u></p> <p>Amendment Item No. 20 contains a new wind energy map – Map 8.2.1: Wind Energy. The map was constructed using a sieve mapping analysis as recommended in the Draft Wind Energy Guidelines leading to the identification of three sub-area designations: 'Acceptable in Principle'; 'Open to Consideration'; and 'Not Normally Permissible'. All settlements and a buffer of 500 metres are contained within the 'Not Normally Permitted' designation in Proposed Map 8.2.1.</p>
	European Union		
	Environmental Noise Directive (END) (2002/49/EC)	<p>The aim of this Directive (Article 1) refers is to:</p> <ul style="list-style-type: none"> Define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure, to environmental noise. 	
	National		
	Draft Revised Wind Energy Development Guidelines 2019	States that no existing dwelling or other affected property e.g. workplaces or schools, should experience shadow flicker.	

Table 6.3: Relevant Soil Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	International		
BSSL1	National Peatland Strategy (DAHG, 2015)	<p>The vision statement of the National Peatlands Strategy states that:</p> <p>This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.</p>	<p><u>Existing CDP 2018-2024 (As Varied)</u></p> <p>The CDP already contains in Section 7.1: 'Natural Heritage' of Chapter 7: 'The Natural and Built Heritage' strong objectives and policies aimed at protecting peatlands. The Proposed Variation does not propose to amend or omit any of these objectives and policies and thus the environmental protections provided by them shall remain.</p> <p><u>General Objectives and Policies</u></p> <p>Refer Objectives NH-O-1, NH-O-2, NH-O-3 and NH-O-11; and Policies NH-P-1, NH-P-2 and NH-P-5).</p> <p><u>Proposed Variation</u></p> <p><u>Proposed Mapping Amendments</u></p> <p>Amendment Item No. 20 contains a new wind energy map – Map 8.2.1: Wind Energy. The map was constructed using a sieve mapping analysis as recommended in the Draft Wind Energy Guidelines leading to the identification of three sub-area designations: 'Acceptable in Principle'; 'Open to Consideration'; and 'Not Normally Permissible'. The natural heritage of the County was again given strong protection in the construction of the map. Thus the 'Not</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
			Normally Permissible' designation includes Natura 2000 sites; whilst the 'Open to Consideration' designation contains those remaining peatlands outside of Natura sites and Landslide Susceptibility areas.
BSSL2	County Geological Sites	<p>Sites appraised, by the Geological Survey Ireland (GSI) but which are not (yet) selected for Natural Heritage Area (NHA) designation, are classified as 'County Geological Sites' (CGS), as recognised in the National Heritage Plan (2002). This enables their integration into county development plans.</p> <p>All sites of geological heritage importance are currently classified as CGS until such time that the most significant sites can be designated as geological NHAs.</p>	<p>Until the National Parks and Wildlife Service act upon GSI's recommendations and undertake due legal process in advertising and consulting with landowners on their intention to designate, there is no national legislative basis to the 'sites' documented here (excepting those which happen to be within existing designated National Park, Natural Heritage Area or Special Areas of Conservation (SAC). The CGS status within County Development Plans does however give a protective framework within the planning process.</p> <p>These sites are included within the 'Open to Consideration' designation in Proposed Map 8.2.1 thereby ensuring that developers are made aware of the potential issue, and that the relevant authorities will be notified of any planning applications that may impact on such sites and thus their views may be taken into account during the planning application process.</p>

Table 6.4: Water Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	European Union		
<p>BSWR1 BSBIO2 BSBIO4</p>	<p>Water Framework Directive (WFD) (2000/60/EC) (as amended by Decision 2455/2001/EC and Directives 2008/32/EC, 2008/105/EC and 2009/31/EC The following Directives have been subsumed into the Water Framework Directive:</p> <ul style="list-style-type: none"> • The Drinking Water Abstraction Directive; • The Sampling Drinking Water Directive; • The Exchange of Information on Quality of Surface Freshwater Directive; • The Shellfish Directive ; • The Freshwater Fish Directive; • The Groundwater (Dangerous Substances) Directive; and The 	<p>Article 1 of the Directive describes the purpose of the objective as follows:</p> <p>The purpose of this Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which:</p> <ol style="list-style-type: none"> a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems; b) promotes sustainable water use based on a long-term protection of available water resources; c) aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances; d) ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and e) contributes to mitigating the effects of floods and droughts <p>and thereby contributes to: the provision of the sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use, a significant reduction in pollution of groundwater, the protection of territorial and marine waters, and achieving the objectives of relevant international agreements, including those which aim to prevent and eliminate pollution of the marine</p>	<p><u>Existing CDP 2018-2024 (As Varied)</u></p> <p>The CDP already contains in Section 5.2: 'Water and Environmental Services' strong objectives and policies aimed at protecting the County's water resource. Refer in particular to:</p> <p>WES-O-4: To implement the EU Water Framework Directive through the implementation of the appropriate River Basin Management Plan and Programme of Measures as it affects Donegal; and</p> <p>WES-O-5: To maintain, protect, improve and enhance the quality of surface waters and ground waters in accordance with the Programme of Measures contained within the relevant River Basin Management Plan.</p> <p>Policy WS-P-8 provides further policy support for the aforementioned objectives.</p> <p>The Proposed Variation does not propose to amend or omit</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	Dangerous Substances Directive.	environment, by Community action under Article 16(3) to cease or phase out discharges, emissions and losses of priority hazardous substances, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substance	any of these objectives and policies and thus the environmental protections provided by them shall remain. <u>Proposed Variation</u> <u>Proposed Mapping Amendments</u>
BSWR1	Drinking Water Directive (80/778/EEC) as amended by Directive 98/83/EC and Directive (EU) 2015/1787	The objective of this Directive as stated in Article 1 of Directive 98/83/EC is as follows: <ul style="list-style-type: none"> The objective of this Directive shall be to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. 	Amendment Item No. 20 contains a new wind energy map – Map 8.2.1: Wind Energy. The map was constructed using a sieve mapping analysis as recommended in the Draft Wind Energy Guidelines leading to the identification of three sub-area designations: ‘Acceptable in Principle’; ‘Open to Consideration’; and ‘Not Normally Permissible’. The water resource of the County was again given strong protection in the construction of the map. Thus the ‘Not Normally Permissible’ designation includes all water-based Natura 2000 sites; and Ramsar sites. The ‘Open to Consideration’ designation includes: ‘High Status Objective Waterbodies’, waterbodies identified as having pristine or high status objectives under the EU Water Framework Directive and the River Basin Management Plan, 2018-2021.
	Marine Strategy Framework Directive (MSFD) (2008/56/EC)	Article 1 of the directive states that: <ol style="list-style-type: none"> This Directive establishes a framework within which Member States shall take the necessary measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. For that purpose, marine strategies shall be developed and implemented in order to: <ol style="list-style-type: none"> protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected; prevent and reduce inputs in the marine environment, with a view to phasing out pollution as defined in Article 3(8), so as to ensure that there are no significant impacts on or risks to marine biodiversity, marine ecosystems, human health or legitimate uses of the sea. 	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	Floods Directive (2007/60/EC)	<p>Article 1 of this directive states that:</p> <ul style="list-style-type: none"> The purpose of this Directive is to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community. 	
BSWR1	Bathing Water Directive (2006/7/EC)	<p>Article 1 of this directive states that:</p> <ul style="list-style-type: none"> The purpose of this Directive is to preserve, protect and improve the quality of the environment and to protect human health by complementing Directive 2000/60/EC. 	
BSWR1	Groundwater Directive (2006/118/EC)	<p>Article 1 of this directive states its purpose as follows:</p> <ol style="list-style-type: none"> This Directive establishes specific measures as provided for in Article 17(1) and (2) of Directive 2000/60/EC in order to prevent and control groundwater pollution. These measures include in particular: <ol style="list-style-type: none"> criteria for the assessment of good groundwater chemical status; and criteria for the identification and reversal of significant and sustained upward trends and for the definition of starting points for trend reversals. This Directive also complements the provisions preventing or limiting inputs of pollutants into groundwater already contained in Directive 2000/60/EC, and aims to prevent the deterioration of the status of all bodies of groundwater. 	
	National		
BSWR1	River Basin Management	The plan identifies the following evidence based priorities:	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
BSWR2	Plan (RBMP) 2018-2021	<ul style="list-style-type: none"> • Ensure full compliance with relevant EU legislation Prevent deterioration. • Meet the objectives for designated protected areas • Protect high-status waters. • Implement targeted actions and pilot schemes in focused sub-catchments aimed at (1) targeting water bodies close to meeting their objective and (2) addressing more complex issues that will build knowledge for the third cycle 	
	(Surface Water) Regulations 2009 (S.I. 272/2009)	<p>Part II of these regulations contain the following Environmental Objectives for Groundwater:</p> <p>4 A public authority that has functions the performance of which may affect the achievement of the environmental objectives established by these Regulations shall undertake those functions in a manner that will, as far as practicable, promote compliance with the requirements of these Regulations and, in particular shall—</p> <p>a) ensure, in so far as its functions allow, that— (i) surface water bodies comply with the relevant environmental quality standards specified in the Schedules contained in these Regulations, and (ii) protected areas achieve compliance with any standards and objectives laid down for such areas at the latest by 22 December 2015 unless otherwise specified in the national legislation under which the individual protected areas have been established. Where one or more of the objectives or standards under this subparagraph relates to a given body of water, the most stringent shall apply</p> <p>b) establish or make operational within the timeframes prescribed such measures appropriate to its functions as are necessary to achieve the environmental objectives and quality standards established, including the objective of progressively reducing pollution by priority substances and the ceasing or phasing out of emissions, discharges</p>	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<p>and losses of priority hazardous substances, and</p> <p>c) consult, co-operate and liaise with other public authorities within the river basin district and, where appropriate with the relevant competent authorities in Northern Ireland, in such a manner and to such extent as is necessary to co-ordinate compliance with these Regulations.</p> <p>5. A public authority shall not, in the performance of its functions, undertake those functions in a manner that knowingly causes or allows deterioration in the 10 [272] chemical status or ecological status (or ecological potential as the case may be) of a body of surface water.</p>	
	<p>European Communities Environmental Objectives (Groundwater) Regulations 2010. (S.I. No. 9/2010)</p>	<p>Part II of these regulations contain the following Environmental Objectives for Groundwater:</p> <p>Duty on Public Authorities</p> <p>4. A public authority shall, insofar as its functions allow and subject to any provisions and limitations listed elsewhere in this Part, promote compliance with the requirements of these Regulations and take all reasonable steps including, where necessary, the implementation of programmes of measures, to:</p> <p>a) prevent or limit, as appropriate, the input of pollutants into groundwater and prevent the deterioration of the status of all bodies of groundwater;</p> <p>b) protect, enhance and restore all bodies of groundwater and ensure a balance between abstraction and recharge of groundwater with the aim of achieving good groundwater quantitative status and good groundwater chemical status by not later than 22 December 2015;</p> <p>c) reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to</p>	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<p>progressively reduce pollution of groundwater;</p> <p>d) achieve compliance with any standards and objectives established for a groundwater dependant protected area included in the register of protected areas established under Regulation 8 of the 2003 Regulations by not later than 22 December 2015, unless otherwise specified in the Community legislation under which the individual protected areas have been established.</p> <p>5. A public authority shall not, in the performance of its functions, undertake those functions in a manner that knowingly causes or allows deterioration in the quantitative status or chemical status of a body of groundwater.</p>	
	<p>Harnessing Our Ocean Wealth - An Integrated Marine Plan for Ireland (2012)</p>	<p>Goal 2 of said Plan is to:</p> <ul style="list-style-type: none"> • achieve healthy ecosystems that provide monetary and non-monetary goods and services (e.g. food, climate, health and well-being). 	

Table 6.5: Air Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	International		
	World Health Organisation (WHO) Air Quality Guidelines (1999) (updated 2005) and Guidelines for Europe (1987)	The WHO air quality guidelines (AQGs) support actions to achieve air quality that protects public health in different context including the setting of air quality guidelines for specific pollutants.	In Section 3.5 it was concluded reasonable to assume that air quality is high in the (rural) areas most likely to be affected by significant wind energy developments and that the development of windfarms would not alter this status. For this reason, whilst the existing CDP does not contain objectives or policies specifically that specifically address air quality, it is not considered necessary that such measures need be introduced in the Proposed Variation.
	The Gothenburg Protocol (1999)	The objective of the Protocol is to control and reduce emissions of sulphur, nitrogen oxides, ammonia and volatile organic compounds that are caused by anthropogenic activities and are likely to cause adverse effects on human health, natural ecosystems, materials and crops, due to acidification, eutrophication or ground-level ozone as a result of long-range transboundary atmospheric transport, and to ensure, as far as possible, that in the long term and in a stepwise approach, taking into account advances in scientific knowledge, atmospheric depositions or concentrations do not exceed the thresholds set out in the protocol.	
	European Union		
	A Clean Air Programme for Europe (COM(2013) 918)	<p>This strategy aims to:</p> <ul style="list-style-type: none"> • Tackles the reasons for the widespread non-compliance with air quality standards • Proposes legislation to reduce harmful emissions in the longer term which contribute to poor air quality and damage the natural environment. • Promote measures which also mitigate atmospheric warming and climate change. 	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	Air Quality Clean Air For Europe Directive (2008/50/EC)	<p>This Directive lays down measures aimed at the following:</p> <ol style="list-style-type: none"> 1. defining and establishing objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole; 2. assessing the ambient air quality in Member States on the basis of common methods and criteria; 3. obtaining information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and Community measures; 4. ensuring that such information on ambient air quality is made available to the public; 5. maintaining air quality where it is good and improving it in other cases; 6. promoting increased cooperation between the Member States in reducing air pollution. 	
	National Emissions Ceiling Directive (2016/2284/EU)	<p>Article 1 of the Directive states that Objectives of the Directive are as follows:</p> <ol style="list-style-type: none"> 1. In order to move towards achieving levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment, this Directive establishes the emission reduction commitments for the Member States' anthropogenic atmospheric emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), ammonia (NH₃) and fine particulate matter (PM_{2,5}) and requires that national air pollution control programmes be drawn up, adopted and implemented and that emissions of those pollutants and the other pollutants referred to in Annex I, as well as their impacts, be monitored and reported. 2. This Directive also contributes to achieving: 	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<ul style="list-style-type: none"> a) the air quality objectives set out in Union legislation and progress towards the Union's long-term objective of achieving levels of air quality in line with the air quality guidelines published by the World Health Organisation; b) the Union's biodiversity and ecosystem objectives in line with the 7th Environment Action Programme; c) enhanced synergies between the Union's air quality policy and other relevant Union policies, in particular climate and energy policies. 	

Table 6.6: Relevant Climatic Factors Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	International		
	Paris Agreement (UNFCCC, 2015)	<p>This Agreement aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:</p> <ul style="list-style-type: none"> a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change; b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and 	<p><u>Existing CDP 2018-2024 (As Varied)</u></p> <p>The CDP already recognises the climate change agenda both in general terms, and specifically with regards to the role of renewable energy, and particularly wind energy, in addressing climate change concerns and, indeed, obligations.</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.	<u>General Narrative, Objectives and Policies</u>
	European Union		Refer to the general narrative in Section 2A.1, and a key Core Strategy Objective CS-O-17:
	The EU Policy Framework for Climate and Energy in the period from 2020 to 2030	<p>In December 2020, in light of the need to increase climate ambition, also as required by the Paris Agreement, the European Council endorsed a new 2030 target for emission reduction. EU leaders agreed on a binding EU target for a net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990.</p> <p>The greenhouse gas target is implemented by the EU Emissions Trading System, the Effort Sharing Regulation with Member States' emissions reduction targets and the Land use, land use change and forestry Regulation.</p> <p>The EU Emissions Trading System, limits emissions from more than 11,000 heavy energy-using installations (power stations & industrial plants) and airlines operating between these countries</p> <p>The Effort Sharing legislation establishes binding annual greenhouse gas emission targets for Member States for the periods 2013–2020 and 2021–2030. These targets concern emissions from most sectors not included in the EU Emissions Trading System (EU ETS), such as transport, buildings, agriculture and waste.</p> <p>All three pieces of climate legislation will now be updated with a view to implement the proposed at least 55% net greenhouse gas emissions reduction target. The Commission will come forward with the proposals by June 2021.</p>	<p><i>'CS-O-17: It is an objective of the Council to promote sustainable development and transportation strategies in urban and rural areas including the promotion of measures to:</i></p> <p><i>(i) Reduce energy demand in response to the likelihood of increases in energy and other costs due to long-term decline in non-renewable resources;</i></p> <p><i>(ii) Reduce anthropogenic greenhouse gas emissions;</i></p> <p><i>and (iii) Address the necessity of adaptation to climate change.'</i></p> <p>Refer also to the general narrative in Section 8.2: 'Energy'.</p> <p><u>Renewable Energy In General/Wind Energy In Particular</u></p> <p>Support for renewable energy in general, is to be found at Objectives E-O-1, E-O-3 and E-O-4; and Policies E-P-2 to E-P-7 inclusive, and Policy E-P-19.</p> <p>Support for wind energy in particular is contained in Policies E-P-11 to E-P-13</p>
	The EU Strategy on Adaptation to Climate Change 2013	<p>The EU Adaptation Strategy has three objectives.</p> <p>1. Promoting action by Member States: The Commission encourages all Member States to adopt comprehensive adaptation strategies (15 had strategies as of mid-2013) and will provide guidance and funding to help them build up their adaptation capacities and take action. The Commission will also support adaptation in</p>	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<p>cities by launching a voluntary commitment based on the Covenant of Mayors initiative.</p> <p>2. Promoting better informed decision-making by addressing gaps in knowledge about adaptation and further developing the European Climate Adaptation Platform (Climate-ADAPT) as the 'one-stop shop' for adaptation information in Europe.</p> <p>3. Promoting adaptation in key vulnerable sectors through agriculture, fisheries and cohesion policy, ensuring that Europe's infrastructure is made more resilient, and encouraging the use of insurance against natural and man-made disasters.</p>	<p>inclusive, and Policies E-P-15 and E-P-16.</p> <p>Proposed Variation</p> <p>Amendment Item 1 updates the policy context in relation to climate change generally, and Amendment Item 4 updates the policy context re renewable and wind energy specifically. Amendment Item 7 inserts a new objective of the Authority: <i>'To secure the maximum potential from the wind energy resources of the planning authority's area commensurate with supporting development that is consistent with proper planning and sustainable development.'</i></p>
	National		
	Climate Action and Low Carbon Development (Amendment) Bill 2020	<p>Section 3. (1) of the Bill establishes the following National Climate Change objective.</p> <ul style="list-style-type: none"> The State shall pursue the transition to a climate resilient and climate neutral economy by the end of the year 2050 (in this Act referred to as the 'national 2050 climate objective'). 	<p><i>maximum potential from the wind energy resources of the planning authority's area commensurate with supporting development that is consistent with proper planning and sustainable development.'</i></p>
	National Adaptation Framework Planning for a Climate Resilient Ireland	<p>The overall objective of this Framework is to enable the State to pursue the transition to a low carbon, climate resilient and environmentally sustainable economy by 2050.</p>	<p>Finally, Amendment Nos. 10 (Policy) and 20 (Map) provide the broad cornerstone of policy within which windfarm development proposals may be considered. Together, they establish the principle of where such developments will generally be either: 'Acceptable in Principle'; 'Open to Consideration'; or 'Not Normally Permissible'.</p>
	Climate Action Plan 2019	<p>The Climate Action Plan 2019 supports the adoption of an EU net zero greenhouse gas emissions by 2050. The plan also reiterates that Ireland will need to reduce its non-ETS sector greenhouse gas emissions consistent with a 30% reduction by 2030.</p> <p>The full report contains 183 actions to ensure Ireland meets its targets.</p> <p>In 2017, transport accounted for 19.8% of Ireland's greenhouse gases. The Action Plan sets the following targets for the Transport Sector.</p> <ul style="list-style-type: none"> Reduce CO2 eq. emissions from the sector by 45–50% relative to 2030 pre-NDP projections Increase the number of EVs to 936,000, comprised of: 	<p>Together, they establish the principle of where such developments will generally be either: 'Acceptable in Principle'; 'Open to Consideration'; or 'Not Normally Permissible'.</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<ul style="list-style-type: none"> ○ 840,000 passenger EVs ○ 95,000 electric vans and trucks ○ 1,200 electric buses • Build the EV charging network to support the growth of EVs at the rate required, and develop our fast-charging infrastructure to stay ahead of demand • Require at least one recharging point in new non-residential buildings with more than 10 parking spaces • Raise the blend proportion of biofuels in road transport to 10% in petrol and 12% in diesel. 	

Table 6.7: Material Assets Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	National		
	Dept. of Transport, Airports Division policy statement 19 July, 2019. (per Dept. website)	'The overall objective is the sustainable development of airports to ensure appropriate levels of connectivity to support Ireland's economic and social goals in line with the National Aviation Policy.'	<p><u>Existing CDP 2018-2024 (As Varied)</u></p> <p>The existing CDP 'recognises the strategic importance of Donegal Airport and City of Derry Airport' (Section 5.1.3 'Air' refers).</p> <p><u>Proposed Variation</u></p> <p><u>Proposed Mapping Amendments</u></p> <p>The Proposed Variation provides further protections in the context of wind energy development by including buffers of 15 nautical miles around the airports in the 'Open to Consideration' designation of proposed Map 8.2.1: 'Wind Energy'. The extents of the buffers were identified following consultation with the relevant airport authorities.</p> <p>In addition, safeguarding areas for helicopter approaches to Finner Airport and critical low level routes used by Air Corps aircraft including Garda Air Support Unit (GASU), helicopter air ambulance and aircraft operating on security taskings, as identified by the Department of Defence, are similarly identified in the 'Open to Consideration' designation in Map 8.2.1.</p> <p>Identification in this manner ensures that prospective developers are aware of the potential issue, and that airport authorities will be alerted to any such possible developments and thereby given the</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
			opportunity to make submissions in this regard.

Table 6.8: Relevant Cultural Heritage Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	International		
BSCH3 BSCH4	Convention for the Protection of the Archaeological Heritage of Europe (revised) (Valletta, 1992)	Objective is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.	<u>Existing CDP 2018-2024 (As Varied)</u> The CDP already contains in Section 7.2: 'Built Heritage' and Section 7.3: 'Archaeological Heritage' of Chapter 7: 'The Natural and Built Heritage' strong objectives and policies aimed at protecting cultural heritage. The Proposed Variation does not propose to amend or omit any of these objectives and policies and thus the environmental protections provided by them shall remain.
BSCH1 BSCH2	Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985)	The broad objective of this convention is that each party: <ul style="list-style-type: none"> • Take statutory measures to protect the architectural heritage; • Within the framework of such measures and by means specific to each State or region, to make provision for the protection of monuments, groups of buildings and sites. 	<u>General Objectives and Policies</u>
	World Heritage Convention United Nations Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris 1972)	Objectives seek to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage and ensure that effective and active measures are taken for these.	Refer Objectives BH-O-1, BH-O-3, BH-O-4 and BH-O-5, and Policies BH-P-8 in terms of architectural heritage; and Objective AH-O-1 in terms of archaeological heritage. <u>Detailed Objectives and Policies</u>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	National		The following objectives and policies provide protections for specifically-referenced built and archaeological assets.
	National Heritage Plan 2002 – 2007 (to be replaced by Heritage Ireland 2030 – not yet published)	The Government Policy Statement on Heritage, contained in the Plan, states it is an objective of Government to ensure the protection of our heritage and to promote its enjoyment by all.	[Built Heritage]: Objective BH-O-2, and Policies BH-P-1 to BH-P-7 inclusive, and BH-P-9 to BH-P-18 inclusive. The detailed assets addressed include: Protected Structures; Vernacular/Historic Structures Not on RPS; Streetscapes and Historic Shopfronts.
	Heritage Council Strategy 2018-2022	<p>The vision set out in the strategy is that:</p> <ul style="list-style-type: none"> heritage will be at the heart of Irish society and decision-making and that Ireland will be internationally recognised as a centre of excellence in heritage management, conservation and community engagement. 	[Archaeology]: Policies AH-P-1 to AH-P-8 inclusive. The detailed assets addressed include: Archaeological Monuments; Recorded Monuments; and Unrecorded Archaeological Sites/Objects.
BSCH3 BSCH4	Framework and Principles for the Protection of Archaeological Heritage (1999)	The document sets out the basic principles of national policy regarding the protection of archaeological heritage. The document focuses particularly on the principles which should apply in respect of development and archaeological heritage.	<p><u>Proposed Variation</u></p> <p>No measures proposed although it is worth noting that the inclusion of settlement frameworks plus a 500m buffer will ensure the protection of the vast majority of protected structures.</p>

Table 6.9: Relevant Landscape Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	European Union		
BSLD1	European Landscape Convention, 2000	<p>Article 3 of this convention states that:</p> <ul style="list-style-type: none"> The aims of this Convention are to promote landscape protection, management and planning, and to organise European co-operation on landscape issues. 	<p><u>Existing CDP 2018-2024 (As Varied)</u></p> <p>The CDP already contains in Section 7.1: 'Natural Heritage' of Chapter 7: 'The Natural and Built Heritage' strong objectives and policies aimed at protecting the landscape. The Proposed Variation does not propose to amend or omit any of these objectives and policies and thus the environmental protections provided by them shall remain.</p>
	National		
BSLD1	National Landscape Strategy 2015-2025	<p>The objectives of the National Landscape Strategy are to:</p> <ul style="list-style-type: none"> implement the European Landscape Convention by integrating landscape into our approach to sustainable development; establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape; provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of our landscape; ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible. 	<p><u>General Objectives and Policies</u></p> <p>Refer Objectives NH-O-4, NH-O-5 and NH-O-7; and Policies NH-P-6, NH-P-7; NH-P-8; NH-P-13, NH-P-16 and NH-P-17. Those instruments shown in bold specifically reference associated Map 7.1.1: 'Scenic Amenity', which Map influenced the construction of Map 8.2.1: 'Wind Energy' (refer below).</p> <p><u>Proposed Variation</u></p> <p><u>Proposed Textual Amendments</u></p> <p>Amendment Item No. 19 contains proposed clarification of existing Policy NH-P-6 to reinforce the protection given to Especially High Scenic Amenity areas in terms of windfarm development proposals.</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
			<p><u>Proposed Mapping Amendments</u></p> <p>Amendment Item No. 20 contains a new wind energy map – Map 8.2.1: Wind Energy. The map was constructed using a sieve mapping analysis as recommended in the Draft Wind Energy Guidelines leading to the identification of three sub-area designations: ‘Acceptable in Principle’; ‘Open to Consideration’; and ‘Not Normally Permissible’. The landscape of the County was again given strong protection in the construction of the map. Thus the ‘Not Normally Permissible’ designation includes the ‘Especially High Scenic Amenity’ areas contained in Map 7.1.1: ‘Scenic Amenity’. The ‘Open to Consideration’ designation includes: the ‘High Scenic Amenity’ areas contained in Map 7.1.1.</p>

Table 6.10: Relevant Sustainability Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	European Union		
	Seventh Environmental Action Programme to 2020 of the European Community	<p>The Programme identifies 3 key environmental objectives:</p> <ul style="list-style-type: none"> to protect, conserve and enhance the Union’s natural capital 	Sustainable development covers a wide range of environmental criteria. The criterion with the most direct relevance to the Proposed Variation is that of the climate change and renewable energy

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<ul style="list-style-type: none"> to turn the Union into a resource-efficient, green, and competitive low-carbon economy to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing. 	agenda. These issues are addressed above.
	A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development	<p>Section III of said document identified the following key objectives:</p> <ul style="list-style-type: none"> Limit climate change and increase the use of clean energy. Address threats to public health. Improve the transport system and land-use management. 	
	SEA Directive (2001/42/EC)	<p>Article 1 of the directive states that:</p> <ul style="list-style-type: none"> The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment. 	
	Environmental Liability Directive (2004/35/EC) as amended by 2005/21/EC, 2009/31/EC and 2013/30/EU) amended by Regulation - (EU) 2019/1010]	<p>Article 1 of the directive states that:</p> <ul style="list-style-type: none"> The purpose of this Directive is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage 	

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
	National		
	Our Sustainable Future: A Framework for Sustainable Development in Ireland (2012)	<p>This framework sets out a number of principles for sustainable development including:</p> <ul style="list-style-type: none"> • Satisfaction of human needs by the efficient use of resources: Prices should reflect the real costs to society of production and consumption activities and polluters should pay for the damage they cause to human health and the environment. • Respect for ecological integrity and biodiversity: The abundance of wildlife and extent of habitats should be maintained, improved and restored where necessary, through sustainable management. • Respect for cultural heritage /diversity: The quality of landscapes, the heritage of the man-made environment and historic and cultural resources should be maintained and improved. 	

Table 6.11: Relevant Planning-Related Environmental Protection Objectives Established at International, European Union or National Level

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
All	Project Ireland 2040 Our Plan: The National Planning Framework and National Development Plan 2018 – 2027	<p>The National Planning Framework contains the following Environmental Protection Objectives.</p> <p>Natural Heritage</p> <ul style="list-style-type: none"> • NPO 59. Enhance the conservation status and improve the management of protected areas and protected species. <p>Human Health</p> <ul style="list-style-type: none"> • NPO 65: Promote the pro-active management of noise where likely to 	<p>The tables above set out how Natural Heritage, Human Health, Water, Air and climate, Landscape, Built Heritage EPOs have been taken into account during the preparation of the Proposed Variation.</p> <p>The Planning Authorities in N. Ireland have been consulted during the preparation of the Proposed Variation and for the</p>

Chap. 3 Baseline Ref.	Title	Relevant Environmental Protection Objective (EPO)	Relevant Narrative, Policies or Objectives Contained in Existing CDP (As Varied) or included in Proposed Variation
		<p>have significant effects on health and quality of life.</p> <p>Water</p> <ul style="list-style-type: none"> • NPO 57: Enhance water quality and resource management. • NPO 63: Ensure efficient and sustainable, use and development of water resources and water services. <p>Air and climate</p> <ul style="list-style-type: none"> • NPO 54: Reduce carbon footprint by integrating climate action into the planning system. • NPO 55: Promote renewable energy use and generation. • NPO 64: Improve air quality and help people being exposed to unacceptable levels of pollution in our urban and rural areas. <p>Landscape</p> <ul style="list-style-type: none"> • NPO 14: Rural Landscape. • NPO 41a: Costal Resource. <p>Built Heritage</p> <ul style="list-style-type: none"> • NPO 17: Built Heritage. • NPO 6: Natural and Cultural Heritage. <p>Environmental Protection</p> <ul style="list-style-type: none"> • NPO 43: Work with relevant Departments in Northern Ireland for environmental protection and management. • NPO 50: Work with relevant Departments in Northern Ireland ensuring effective management of shared landscapes, heritage, water catchments, habitats, species and transboundary issues in relation to environmental policy. • NPO 52: Planning system to ensure that development occurs within environmental limits. • NPO 58: Integrated planning for green infrastructure and ecosystem services will be incorporated into the preparation of statutory land use plans. 	<p>scoping of this Environmental Report (refer Section 2.2.2).</p>

7 Assessment of Likely Significant Effects on the Environment of Implementing the Proposed Variation

7.1 ASSESSMENT METHODOLOGY

7.1.1 Legislative Requirements in relation to the assessment of 'Likely Significant Effects'

Article 5 of the SEA Directive (2001/42/EC) requires the preparation of an Environmental Report in which the *'likely significant effects on the environment of implementing the plan or programme..... taking into account the objectives and the geographical scope of the plan or programme, are identified, described, and evaluated'*.

Specifically **Annex 1(f)** of said Directive further defines the **range of environmental aspects** which should be considered when assessing the likely significant effects namely *'biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors'*. Annex 1(f) also lists the **types of effects** which should be assessed namely: *'secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.'*

Furthermore **Article 5** of said Directive broadly sets out what is the appropriate **level of assessment** for the Environmental Report stating that it shall include *'the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.'* In this regard as the Proposed Variation to the County Development Plan 2018-2024(as varied) in respect of a Wind Energy Policy Framework is a strategic land use plan the assessment of the likely significant effects of the plan has been conducted at a strategic level and said assessment does not attempt to replicate the more detailed project level assessment of individual projects/developments which will occur as part of the normal development management process.

The requirements of the SEA Directive in relation to 'likely significant effects' have been transposed into and further replicated in Irish Legislation including, inter alia:

- Schedule 2B(f) of the Planning and Development Regulations 2001 (as amended) which requires that the Environmental Report includes an assessment of the *'likely significant effects on the environment'* across the range of environmental aspects listed in Annex 1(f).
- A.14D(1) of said regulations which requires that an Environmental Report in respect of a Local Area Plan *'shall identify, describe, and evaluate the likely significant effects on the environment of implementing the plan'*.
- A.14D(2) of said regulations reiterates the requirements of Article 5 of the SEA Directive in relation to the level of assessment required.

7.1.2 Guidance in Relation to the Assessment of Likely Significant Effects on the Environment in the Environmental Report.

A range of guidance exists on how to assess the likely significant effects on the Environment of a particular plan within the SEA process.

At the European level the publication 'Implementation of the Directive 2001/42 on the assessment of certain plans and programmes on the Environment' inter alia:

- Emphasises the importance of concentrating on issues related to the significant effects on the environment of the plan. (Para 5.19 refers).
- States that environmentally related health issues such as exposure to traffic noise or air pollutants are obvious aspects to study, and emphasises the need for broad and comprehensive information on environmental factors and their interrelationship (Para 5.26 refers)
- Notes that a description of positive effects is essential in order to show the contribution of the plan to environmental protection. (Para 5.26 refers).

At the Irish level the departmental guidelines '*Implementation of SEA Directive (2001/42/EC) Assessment of Effects of Certain Plans and Programmes on Environment – Guidelines for Regional Authorities and Planning Authorities*' advises inter alia that:

- The development **objectives** within the Plan should be **subjected to assessment** in the context of each of the Environmental Protection Objectives selected.
- An **assessment** should also be **carried out on** the detailed **policies** which flow from the strategic objectives.
- The most common approach to demonstrating the results of the assessment to **create a matrix**, whereby the plan's development **objectives** are listed **on one axis** and the various **environmental protection objectives** are (e.g. the various environmental protection objectives) **on the other**.
- **Potential effects** within each box may be categorised into: significant beneficial impact, uncertain impact, significant adverse impact, no relationship or insignificant impact.
- The matrix should include a **comments section** which may indicate the mitigation measures, the change required to the wording of the development objective, or reasons why precise impacts may be difficult to identify.
- Positive impacts should also be identified.
- Significant effects may be assessment in terms of the type/scale of development envisaged by the plan and the sensitivity of the receiving environment.
- The environmental report should explain why certain impacts have been considered to be 'significant' or 'insignificant' and the geographical scale of such impact should be identified

The recently published draft department guidelines 'Strategic Environmental Assessment Guidelines for Regional Assemblies and Planning Authorities' advises inter alia:

- The effects of the plan objectives, policies and standards are normally assessed against the SEOs: this is often termed "objective-led" assessment and is the most frequent SEA method used in Ireland.
- Reporting the results of the assessment of significant effects on the environment has often relied upon a matrix-based approach.
- Matrices may sometimes benefit from supporting text to facilitate comprehension of the overall results by the reader and to ensure that emphasis is made on the more pertinent issues in the proposed plan.

In addition to the above departmental guidance the EPA publication '*Strategic Environmental Assessment Resource Manual for Planning Authorities*' also advises the following in relation to the assessment of the likely significant effects within the SEA process.

- That whilst the abovementioned Department Guidance promotes and objectives led assessment it is also possible to conduct an assessment led by the environmental problems identified in the baseline

(i.e. current state of the environment section). However if the baseline and the environmental protection objectives are intrinsically linked an objectives led assessment will be effective.

- That types of environmental effects which should be considered are outlined in the SEA Directive – **secondary, cumulative, synergistic, short, medium and long term, permanent and temporary, positive and negative effects**, the interrelationship between effects should also be considered.

7.1.3 Assessment Methodology Employed To Assess the Likely Significant Effects

Based on the abovementioned legislative requirements and best practice guidance the following methodology has been employed vis-a-vis the assessment of likely significant effects in this environmental report:

- Each individual variation (i.e. amended or new text, policy, objective, or map) in the overall variation has been subject to assessment in the context of consolidated Environmental Protection Objectives (EPOs) (detailed in Table 7.1 below) covering all of the environmental aspects identified in Annex 1 of the SEA Directive. These consolidated Environmental Protection Objectives (EPOs) are derived from the relevant Environmental Protection Objectives established at International, European Union or National Level listed in Chapter 6 of this report.
 - In this regard as there was significant convergence of EPOs for the same environmental topic (e.g. several overlapping EPO's on Biodiversity) it was necessary to consolidate said EPOs into a more manageable environmental test criteria (i.e. consolidated EPOs) used to assess the likely significant effects of the Proposed Variation on those environmental aspects detailed in Schedule 2B(f) of the Planning and Development Regulations 2001 (as amended). These consolidated EPOs therefore combine the fundamental goals of a number of EPOs into a structured assessment criteria. In this way the assessment in this Environmental Report is directly linked to, and based upon, the relevant EPOs identified in Chapter 6. Moreover as the consolidated EPOs are therefore intrinsically linked to the environmental issues in the baseline it is considered that an objective led assessment will be effective.
- The abovementioned assessment comprises both a **summary assessment matrix** wherein the plan's development **objectives** are listed **on one axis** and the various **consolidated environmental protections objectives** (e.g. Biodiversity, Flora, Fauna, Population, Air, Water, Climate etc) are **listed on the other** and a detailed and comprehensive **written assessment** which underpins this matrix.
- The **summary assessment matrix categorises the impact** of each development objective, policy and land use zoning (including associated land use objective) as follows: significant positive effect, uncertain effect, significant adverse effect, no relationship or insignificant effect.
- The **written assessment** provides a **rationale** for this categorisation and an analysis of the **type of effect** associated with said objectives policies and land use zonings (e.g.: short, long-term permanent and temporary, positive and negative effects). This assessment take into account the current state of the environment, local environment characteristics and the specific environmental issues relevant to Wind Energy (e.g. landscape) detailed in the preceding sections and has involved consultations with relevant competent experts (e.g. Executive Scientist DCC, Local Authorities Water Programme)
- The significance of effects is based on inter alia: the nature and location of development likely facilitated by the proposed variation, the sensitivity and importance of the receiving environmental receptors likely to be affected, existing environmental problems and trends, the probability, duration, frequency, reversibility, cumulative nature and spatial extent of the effects, risks to human health, the value and vulnerability of areas likely to be effected, and likelihood that relevant thresholds/targets will be exceeded.
- Measures to prevent and reduce the significant adverse environmental effects have been factored into the assessment where appropriate.

- As stated above this assessment has been conducted at a strategic level and said assessment does not attempt to replicate the more detailed project level assessment which will be required for individual projects/developments facilitated by the plan.
- The methodology for the assessment of cumulative effects is detailed in Section 7.4.

Table 7.1 Consolidated Environmental Protection Objectives

Environmental Component	Code:	Consolidated Environmental Protection Objective
Biodiversity, Fauna and Flora	BFF	To conserve, protect, maintain, and where appropriate restore biodiversity, flora and fauna, natural habitats and ecosystems particularly species and habitats subject to statutory protection.
Population and Human Health	PHH	To protect populations and human health by: promoting healthy lifestyles and quality of life, tackling socio-economic disadvantage, ensuring the sustainable use of resources, providing clean drinking water and safeguarding humans from environmental threats including air, water and noise pollution, climate change and flooding.
Soil (Including Minerals)	S	To protect soils and geology.
Water	W	<ul style="list-style-type: none"> • Protect, avoid deterioration of and, as appropriate, restore/enhance the quality of surface, ground, and marine waters and their associated ecosystems including limiting the input of pollutants. • Ensure the sustainable use and protection of water resources. • Protect the coastal environment based on an ecosystem approach and taking ecological responsible coastal protection measures.
Air	A	Avoid, prevent and reduce air pollution and environmental noise in order to maintain and improve air quality and reduce harmful effects on human health and the environment.
Climatic Factors	CF	<ul style="list-style-type: none"> • Reduce Greenhouse Gas emissions in order to help mitigate climate change and meet our relevant International, European and National climate change obligations and targets including achieving the National Climate Objective. • Pursue development strategies which increase our ability to adapt to climate change and improve climate resilience.
Material Assets	MA	<ul style="list-style-type: none"> • To sustainably develop existing and new material assets (e.g. the built environment, land and infrastructure) by promoting compact consolidated growth and efficient land use planning. • Avoid inappropriate development in areas at risk of flooding, preventing new developments increasing flood risk elsewhere.
Cultural Heritage	CH	To protect and preserve cultural heritage including architectural and archaeological heritage
Landscape	L	To protect and manage the landscape in a sustainable manner.

7.2 Summary Assessment Matrix of the Likely Significant Effects on the Environment of Implementing the Proposed Variation.

Table 7.2 Summary Assessment Matrix of the Likely Significant Effects of Specific Objectives, Policies, and Land Use Zonings of the Proposed Variation.

Key to Assessment of Likely Significant Effects in Table 7.2

	Significant Positive Effect
	Positive Effect
	No Relationship/Insignificant Effect
	Negative Effect
	Significant Negative Effect
?	Uncertain Effect
N/A	Not Applicable

Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
Part A Section 2A											
1.	Part A Section 2A.1 Page 10 (end of 3 rd Paragraph)	Amend text to state that this approach within the plan is consistent with Project Ireland 2040, National Development Plan; Climate Action and Low Carbon Development Act; Climate Action Plan 2021; the National Energy and Climate Action Plan (NECP) 2021-2030; and the National Adaptation Framework 2018 to ensure a transition to a low carbon and climate resilient society.									
2.	Part A Section 2, Appendix 2	Delete statement in the existing CDP 2018-2024 in relation to compliance of said plan with the Section 28 Wind Energy Guidelines.									
3.	Part A Section 2, Appendix 2	Insert new statement in relation to compliance of the plan as proposed to be varied with the Section 28 Wind Energy Guidelines.									
4.	Part A Chapter 8: Natural Resource Development	Amend background text in Section 8.2.1 to inter alia: <ul style="list-style-type: none"> Update the Energy, Planning and climate frameworks which the wind energy strategy has been prepared in the context of. 									

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Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
	Section 8.2.1 Background, Page 143	<ul style="list-style-type: none"> Emphasise the government's commitment to reduce Ireland's Greenhouse gas emissions. Refer to the climate change objectives contained within Project Ireland 2040. Acknowledge Eirgrid's Strategy 2020-2025. State that the wind energy policies are consistent with the climate objectives in Project Ireland 2040. Note that the Regional Spatial and Economic Strategy places continued emphasis on the provision of sustainable energy. State that the Council acknowledges the importance of wind energy as a renewable energy source and reducing greenhouse gas emissions. Note that the Council's approach has been prepared having regard to draft Wind Energy Development Guidelines, 2019 DHPLG whilst acknowledging there is a need to achieve government climate and renewable targets in a balanced way. State that Map 8.2.1 'Wind Energy' designates areas considered suitable or unsuitable for new wind energy development and provide a summary of how said areas have been identified. Note that said map identifies the following policy area designations 'Acceptable in Principle', 'Open to Consideration', and 'Not Normally permissible' 									
5.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 147	Amend text to state it will be the practice of the Council, in accordance with Article 22A of the Planning and Development Regulations 2001 (as amended) to require all windfarm developers to submit a Community Report with their planning application.									
6.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Objectives page 146	Amend Objective E-O-1 as follows: <i>To develop sustainably a diverse and secure renewable energy supply portfolio to meet demands and capitalize on the County's competitive locational advantage.</i>									
7.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Objectives page 146	Insert new objective <i>E-O-7 To secure the maximum potential from the wind energy resources of the planning authority's area commensurate with supporting development that is consistent with proper planning and sustainable development.</i>									

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Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
8.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies	<p>Insert new policy</p> <p>Policy E-P-22: <i>It is a policy of the Council to ensure that the proponents of wind energy projects have:</i></p> <p><i>a. Meaningfully and properly consulted with the local community and facilitated public participation in developing their proposals; and</i></p> <p><i>b. Demonstrated how the proposed development will be of enduring economic benefit to the communities concerned, through a form of community investment/ownership, benefit or dividend, or similar.</i></p> <p><i>All Applications of this nature shall be accompanied by a 'Community Report' in accordance with the Wind Energy Guidelines 2021, and shall form an essential component of any application subject to 22A of the Planning and Development Act 2000 (as amended).</i></p>									
9.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 147	Delete Policy E-P-12 concerning applications for Repowering, Extension, and Revised proposals in areas where an existing wind farm has been permitted and this permission has expired.									
10	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 146	<p>Insert new Policy</p> <p>E-P-12: It is a policy of the Council that the principle of the acceptability or otherwise of proposed wind farm developments shall be generally determined in accordance with the three areas identified in Map 8.2.1 'Wind Energy' and the specific biodiversity related requirements detailed below:</p> <p><u>1. Areas in Map 8.2.1 Wind Energy:</u></p> <p>(a) Acceptable In Principle Wind energy development shall be generally acceptable in these areas.</p> <p>(b) Open to Consideration Wind energy development shall be generally open to consideration in these areas.</p> <p>(c) Not Normally Permissible</p>									

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Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
		<p>(i) Windfarm development proposals on previously undeveloped sites, inclusive of sites with a lapsed un-implemented permission (and where substantive works have not been undertaken) will not normally be permissible.</p> <p>(ii) The augmentation, upgrade and improvements of: existing windfarms; windfarm developments under construction; developments where permission has lapsed but substantial works have been completed, or on sites with an extant planning permission will be open to consideration where such proposals shall be generally confined to the planning unit of the existing development.</p> <p><u>2. Specific Biodiversity Related Requirements:</u></p> <p>a) Loss of functionally linked habitat Developers of wind energy proposals on greenfield sites shall undertake a pre-construction appraisal of habitats. Should habitats suitable for supporting Special Conservation Interest bird species be present, developers will be required to undertake pre-construction bird surveys to confirm whether the site supports a significant proportion of bird populations (typically taken to be 1% of the population of a SPA, at time of designation). Depending on whether qualifying birds represent breeding or overwintering species, surveys will need to be undertaken in the breeding season or overwintering period (October to March). If a site represents functionally linked habitat, avoidance / mitigation measures will be required and the proposal will need to be supported by a bespoke Appropriate Assessment.</p> <p>b) Mortality due to collision with operational wind turbines Wind energy development proposals shall demonstrate that they can be delivered without resulting in adverse effects on the integrity of European sites. Vantage point surveys will be required to establish a) the overall use of the</p>									

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Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
		<p>development site by Special Conservation Interest birds and b) more detailed usage by Special Conservation Interest birds of the turbine swept area taking account of specifications such as turbine height, blade length, nacelle (blade hub) rotation speed and the number of turbines. Mitigation measures may need to be delivered to ensure that any residual risks are appropriately avoided or reduced.</p> <p>c) Disturbance displacement To avoid potential permanent disturbance displacement impacts on Special Conservation Interest bird species, Donegal County Council will generally not support wind energy proposals within 1km of Special Protection Areas unless clear evidence from the applicant or scheme promoter can demonstrate no adverse effect on site integrity will arise.</p> <p>d) Water quality Any wind energy developments within 1 km of sensitive SPAs / SACs shall ensure that potential adverse impacts on the European sites due to water quality impacts are assessed and, where required, mitigated. Possible assessments and mitigation measures include, but are not limited to, water quality and ecological baseline studies, run-off / leachate modelling, delivery of Construction Environmental Management Plans (CEMPs) and Water Management Plans (WMPs) and compliance with industry good practice.</p>									
11	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 148	<p>Amend policy E-P-13 as follows: <i>Within the areas identified as 'Acceptable in Principle' and 'Open To Consideration' on Map 8.2.1, it is a policy of the Council to encourage the development of community windfarms/co-operatives to enable communities to generate their own electricity, income and to sell surplus back to the grid, in accordance with other objectives and policies of this Plan and the proper planning and sustainable development of the area</i></p>									

**Environmental Report of the Proposed Variation to the County Donegal Development Plan 2018-2024 (As Varied)
in respect of a Wind Energy Policy Framework**

Ref#	Objective, Policy, or Land Use Zoning Ref.	Summary or Text of Proposed Variation	BFF	PHH	S	W	A	CF	MA	CH	L
12	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 148	Delete Policy E-P-16 regarding supporting the strengthening and enhancement of the capacity of existing wind farms within the local environmental capacity.									
13	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 149	<p>Insert new policy and definitions</p> <p>E-P-23</p> <p>It is a policy of the Council that wind farm developments:</p> <p>(1) Must not be located within:</p> <ul style="list-style-type: none"> (a) the zone of visual influence of Glenveagh National Park. (b) the Gweebarra River Basin; (c) areas contained within 'Especially High Scenic Amenity' on Map 7.1.2 'Scenic Amenity'; (d) Freshwater Pearl Mussel Catchments; and (e) St. John's Point. <p>(2) Must:</p> <ul style="list-style-type: none"> a. Meet the requirements and standards set out in the DEHLG Wind Energy Development Guidelines 2021, or any subsequent related Guidelines; and b. Ensure a setback distance for visual amenity purposes of ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation, An exception may be considered for a lower setback requirement from existing or permitted dwellings or other sensitive properties to new turbines where the owner(s) and occupier(s) of the relevant property or properties are agreeable to same and where the noise requirements of the relevant Wind Energy Guidelines are capable of being complied with in all cases. In such exceptional reduced setback situations, the relevant parties must provide written confirmation to the satisfaction of the Planning Authority that they have agreed to a reduced setback and have no objection to the proposed wind energy development. <p>(3) Shall, subject to compliance with sub-paragraphs (1) and (2) above and other relevant policies of this Plan, be acceptable</p>									

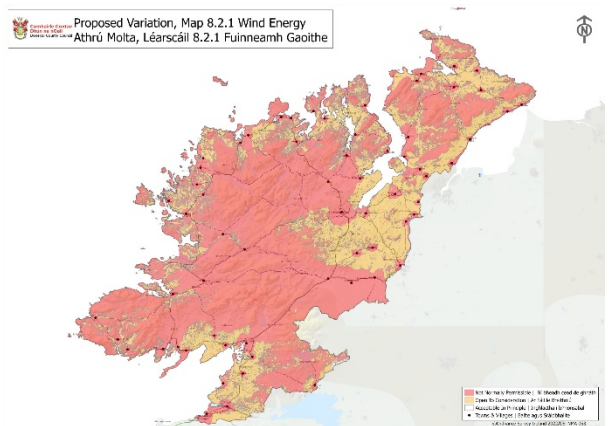
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		<p>where a setback distance for visual amenity purposes of ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation, has been achieved.</p> <p>In all cases, whether in 'Acceptable in Principle', 'Open to Consideration' or 'Not Normally Permissible' areas, compliance with the setback distances required under Policy E-P-23 will be required. For re-powering or augmentation projects, the required setback distance shall be the required multiple of the new turbine height and no allowance shall be made in this regard for the established development.</p> <p>Definitions</p> <p>Glenveagh National Park: Zone of Visual Influence:- The environmental and visual character of Glenveagh National Park consists of the geographic extent of the park and its immediate environs. The implementation of the relevant policy should not be interpreted as relating to lands with limited physical or visual connection to the park. The onus is on the applicant to demonstrate the extent of the potential impact a proposed wind energy development has on the National Park.</p> <p>Centre of Human Habitation:- 'Centre of human habitation' includes schools, hospitals, churches, residential buildings or buildings used for public assembly.'</p> <p>Curtilage: An area immediately surrounding or adjacent to the property which is used in conjunction with the property, other than any part of that area that is a public place. (From Criminal Law (Defence and the Dwelling) Act, 2011).</p>									
14.	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies Page 149	<p>Insert New Policy: E-P-16 It is a policy of the Council to:</p> <p>(a.) only grant planning permission for new wind measuring masts in areas designated as 'Acceptable in Principle' or 'Open to Consideration'.</p>									
15.	Part A Chapter 8: Natural Resource Development	<p>Insert New Policy: Policy E-P-24: It is a policy of the Council that wind farm developments must ensure a setback distance for noise and shadow flicker purposes of</p>									

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	Section 8.2.3 Policies	ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation.									
16	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies	Insert New Policy: Policy E-P-25: It is a policy of the Council to require the preparation and effective implementation of Environmental Management Plans (EMPs) to manage the construction, operation, maintenance and decommissioning of windfarms, and to ensure that the decommissioning, post-operational restoration and restoration of habitats of redundant windfarm developments is achievable and practical once a wind energy development ceases to generate electricity. EMPs shall include monitoring and reporting provisions and mitigation measures and arrangements for supervision/oversight of construction works.									
17	Part A Chapter 8: Natural Resource Development Section 8.2.3 Policies	Insert New Policy: Policy E-P-26: It is the policy of the Council that all applications for wind farm development located on peatland and bog, including the re-powering and augmentation projects, shall be accompanied by a 'Peat Stability Risk Assessment Report'.									
18	Part B: Appendix 3, Development Guidelines and Technical Standards, 6.5 Wind Energy Page 191	Delete technical standard 6.5 regarding inter alia areas where wind turbines must not be located within.									
19	Part B Chapter 7: The Natural and Built Environment Section 7.1.3 Policies Page 132	Amend Policy NH-P-6 as follows: NH-P-6 It is a policy of the Council to protect areas identified as Especially High Scenic Amenity on Map 7.1.1: 'Scenic Amenity'. Within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered. Without prejudice to the generality of the aforementioned, windfarm developments will not be acceptable in Especially High Scenic Amenity Areas save for the limited circumstances set out under the section headed: 'Wind Energy-Context' (para. commencing: 'Map 8.2.1 entitled Wind Energy designates...'), contained within Amendment No.4 above.									

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20		<p>Insert Map 8.2.1 entitled 'Wind Energy'</p> 									
Total Effects of Proposed Variation											
	Total Effects of the plan (including all objectives, policies and zonings)										

7.3 Overall Assessment of Likely Significant Effects on Key Environmental Aspects

7.3.1 Biodiversity, Flora and Fauna

The Draft Wind Energy development Guidelines acknowledge that wind energy developments have the potential to impacts on habitats and species both during both their construction and operational phases and that peatlands, birds and bats (and sites designated for their protection) are particularly sensitive to such development.

The guidelines further highlight that habitats impacted by wind energy developments may include peatlands (mainly blanket bog, heaths, flushes and various other wetland habitats including water courses and lakes), sand dune systems, machair, semi-natural grasslands and woodlands and that upland habitats are particularly sensitive due to their location in high rainfall areas and short growing season. The guidelines state potential impacts on biodiversity that could result in the reduction or loss of biodiversity include:

- Direct loss of habitat to the developments infrastructure, including turbine foundations, buildings, roads, quarries and borrow pits;
- Degradation of habitats through alteration or disturbance, in particular arising from changes to hydrology that may alter the surface or groundwater flows and levels, and drainage patterns critical in peatlands and river headwaters;
- Fragmentation of habitats and increased edge effects; and
- Degradation and loss of habitats outside the development site, especially wetland habitats that may arise from pollution, siltation and erosion originating from within the development site.

An analysis of the qualifying interests of Natura 2000 sites in Donegal available on www.npws.ie indicates that the county contains a range of peatland type habitats which may be impacted by wind energy developments. These include habitats such as: Blanket bogs, Northern Atlantic wet heaths with *Erica tetralix*, Alpine and Boreal heaths, European dry heaths Oligotrophic waters containing very few minerals of sandy plains, Transition mires and quaking bogs, and Alkaline fens.

In relation to Bird and Bat Species the guidelines highlight the following potential impacts:

- Disturbance during the construction and operational phases leading to the temporary or permanent displacement of birds from the development site and its environs;
- Collision mortality, although studies have shown this to be low risk;
- Barotrauma effect, the vortices created by turbines are known to cause injury and mortality of bird and bat species. These vortices extend beyond the physical footprint of the turbine;
- Barrier to movement, although studies have indicated that the response by birds to wind energy development may be variable and related to species and/or season; and
- Direct loss or degradation of habitats for breeding, feeding/ foraging and/or roosting purposes, particularly in wetland, woodland and riparian habitats.

In relation to collision the guidelines indicate that all bird and bat species are at risk (with the extent varying by species, season and location) but that the species most at risk are bats, raptors, swans, geese divers, breeding waders and concentrations of waterfowl.

Bird Sensitivity Mapping for Wind Energy Developments has been prepared by Bird Watch Ireland, is available on <https://maps.biodiversityireland.ie/Map>. The data relevant to Donegal is shown below. Broadly speaking this data indicates that the area having the 'highest' sensitivity to new wind energy development include:

- Upper Lough Swilly, adjoining coastal areas and the Inch Levels.
- New Lake Dunfanaghy.
- Areas in the vicinity Inish Oirthir, Inis Meáin and Gola Island in north west Donegal.

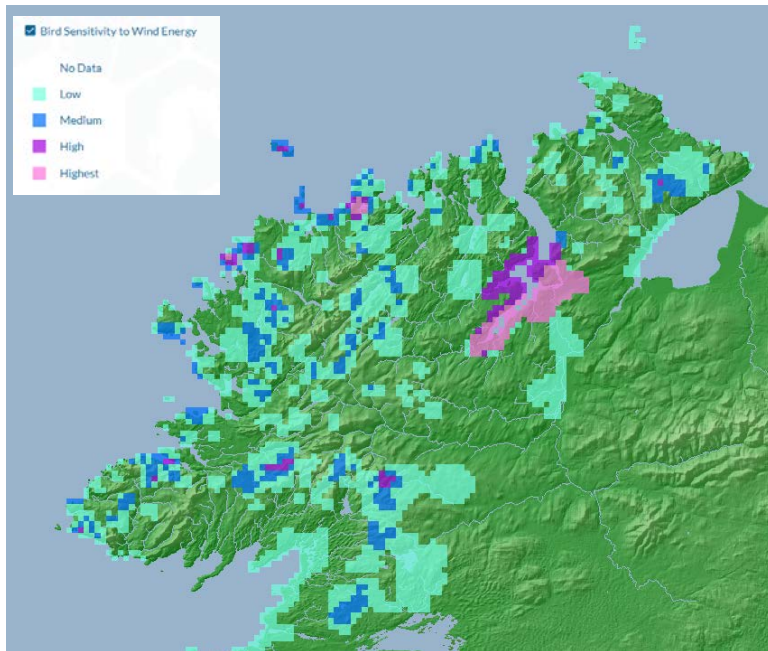


Figure 7.1 Bird Sensitivity to Wind Energy in Donegal (Source: Bird Watch Ireland).

In addition aggregate mapping of all Bat Species from the National Biodiversity Data Centre (an Initiative of the Heritage Council) is available on <https://maps.biodiversityireland.ie/Map>. The data relevant to Donegal is shown in Figure 7.2 below and broadly indicates that Bats are in particular prevalent in the vicinity of Letterkenny, Creeslough/Ards, Carrigart/Downings, Killygordon, Lifford and Donegal Town.

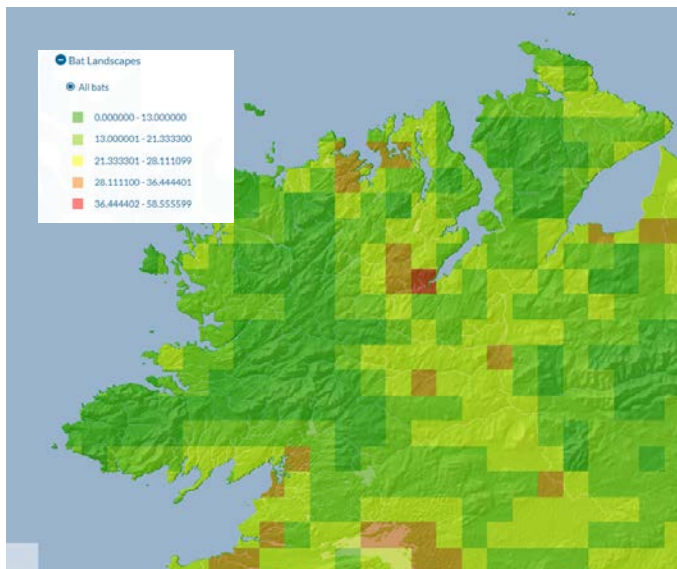


Figure 7.2 Bat Landscapes in Donegal (Source: National Biodiversity Data Centre).

Furthermore Section 3.0 of this report highlights that Donegal contains 6 extensive populations and 7 other known populations of the Freshwater Pearl Mussel (FPM) within 5 of the County's SAC's and located across a number of River Catchments. The FPM is critically endangered in Ireland and across Europe and the 2019 NPWS Article 17 Report indicates that it's conservation status is 'bad' and 'deteriorating' nationally. Said Article 17 Report attributes the poor conservation status and severe decline of the species

to habitat deterioration arising from a combination of hydrological and morphological changes, sedimentation and enrichment. In particular the Article 17 report indicates that pressures impacting on the FPM from a combination and wide variety of sources (e.g. pollution from urban wastewater, development activities, farming and forestry), often quite removed from the habitat of the species. As such Wind Energy Developments have at least the potential to impact on the FPM arising from sedimentation of watercourses during the construction phase or from changes in hydrological flow regimes during the operational phases of such developments.

The above analysis indicates that wind energy developments have the potential to impact on peatland habitats, bats, raptors, swans, geese divers, breeding waders, concentrations of waterfowl and the Freshwater Pearl Mussel. However on the basis that:

- Protected Peatland habitats located within Special Areas of Conservation (e.g. within Cloghernagore Bog And Glenveagh National Park SAC, Lough Nillan Bog (Carrickatlieve) SAC, Slieve Tooley/Tormore Island/Loughros Beg Bay SAC) are included within the 'Not Normally Permissible' wind energy zoning and will therefore not be directly impacted by the Proposed Variation. In this regard the Natura Impact Report for the Proposed Variation concluded that the Proposed Variation will have no adverse effects on the integrity of European Sites.
- A significant portion of other upland peatland habitats which not contained within the abovementioned Special Areas of Conservation are included within the 'Not Normally Permissible' wind energy zoning by virtue of falling within the area Especially High Scenic Amenity of areas of High, Moderately High and Moderately Low landslide susceptibility, and will therefore also not be directly affected by the Proposed Variation.
- Bird Species located within Special Protection Areas (SPAs) will be not significantly impacted by the variation as all SPAs (and a 500m buffer around said areas) are included within the 'Not Normally Permissible' area. In this regard the Natura Impact Report for the Proposed Variation concluded that the Proposed Variation will have no adverse effects on the integrity of European Sites. In addition the Natura Impact Report also recommended that Policy E-P-12 of the Proposed Variation (Amendment No. 10 refers) be amended by the insertion of specific biodiversity related requirements for wind energy developments related to: the loss of functionally linked habitats, mortality due to collision with operational wind turbines, disturbance displacement and water quality and it has been recommended that the Proposed Variation incorporate said specific amendment.
- A significant portion of the areas with the highest bat populations (e.g. around Letterkenny, Donegal Town, Killygordon, Lifford, and Ards/Creeslough) fall within the 'Not Normally Permissible' wind energy zone and such areas will therefore not be impacted by the Proposed Variation.
- Habitat and Species contained within Nature Reserves (e.g. Ard Na Mona, Ballyarr, Inch Levels Wildfowl Reserve, Lough Bara Bog, Meenachullion, Pettigo Plateau and Sheskinamore) are unlikely to be directly affected by the Proposed Variation as such areas are included within the 'Not Normally Permissible' wind energy zone.
- The habitat and species contained within Ramsar Sites (including blanket bogs, heath and fen habitats and species such as the Greenland white fronted goose, European golden plover, Merlin, Barnacle geese Brent geese, and common ringed plover) are unlikely to be directly affected by the Proposed Variation as such areas are included within the 'Not Normally Permissible' wind energy zone.
- Margarifera sensitive areas (i.e. the river catchments containing known extant populations of the Freshwater Pearl Mussel) are very unlikely to be affected by the Proposed Variation as said catchments are included within the 'Not Normally Permissible' wind energy zone.
- In addition to the above Wind Energy Developments throughout the county: will be subject to project level environmental assessment including in particular an assessment of the impact of such development on Biodiversity Flora and Fauna, will in many instances (e.g. over 5 turbines/5 megawatts) be required to submit detailed assessment on the impact on Bird and Bat species as part of Environmental Impact Assessments and will be required to comply with the Natural Heritage Protection Policies of the County Development Plan including (Policy NH-O-1: To protect, sustainably manage and enhance the rich biodiversity of County Donegal).

It is concluded that overall the Proposed Variation will have an insignificant effect overall on Biodiversity, Flora and Fauna.

In relation to specific amendments in the variation it is considered that Amendment No. 10 (E-P-12) and the associated Amendment No. 20 (Map 8.2.1), which effectively provide for the inclusion of Natura 2000 sites, other peatlands habitats, Nature Reserves and Ramsar Sites within the 'Not Normally Permissible' wind energy zoning, will have a positive effect on biodiversity flora and fauna and the other amendments would have an insignificant effect/no relationship on said environmental aspect.

7.3.2 Population and Human Health

The Draft Wind Energy Development Guidelines indicate that noise (both operational and construction) and shadow flicker from such developments may potentially affect human populations through loss of residential amenity.

Noise:

'Noise' is essentially unwanted sound experienced by a listener. Noise is measured in decibels (dB), and human hearing ranges from approximately 0 dB (the threshold of hearing) to 120 dB (the threshold of pain). A change of 3 dB in noise level is just perceptible under normal circumstances and results from doubling or halving the number of noise sources. A change of 10 dB corresponds to an approximate doubling of perceived loudness. Furthermore as the ear is less sensitive at low and high frequencies noise measurements are weighted and therefore the dB(A) noise measurement system is typically used as it corresponds best with human subjective response. In addition as noise varies over time statistical averaging is used to quantify noise levels over a given time period (e.g. dB(A)LAeq,10min represents the ("A" weighted) average noise level over a 10 minute period)⁹. For Example a quiet bedroom may have a noise level of 35 dB(A) whilst a busy office may have a noise of 60 dB(A).

Operational Noise:

Operational Noise from wind turbines is predominately caused by aerodynamic noise generated by the rotation of the turbine blades which generates a broad-band (i.e. spread across the audible frequency range) swishing sound and increases with the speed of the rotation. In this regard large turbines with a significant blade length and rotor diameter can generate significant tip speeds. Most modern wind turbines are pitch regulated variable speed turbines where noise increase with wind speed up to the point until the turbine is generating its maximum rated power above which there is usually no increase in noise. Mechanical noise can also be produced from actuators, brakes, and hydraulics pumps in the nacelle, however improvements in gearbox design and insulated nacelles have significantly reduced said noise.

Special audible characteristics include tonal, infrasonic (low frequency) and amplitude modulation components. Tonal noise arising from mechanical noise has been significantly reduced by improved gearbox design and sound insulation of nacelles. Some early wind turbine designs had blades downwind of the tower which caused low frequency noise called infrasound. However as modern wind turbine have blades upwind of the tower this has largely eliminated infrasound during operation. Consequently there is normally no excessive tonal or low frequency element in the noise from a wind turbine¹⁰. Under certain conditions wind turbines may generate a 'whoomping' or 'thumping' type noise at a distance resulting from amplitude modulation (i.e. a variation in noise level) caused by changes in the rotational speed of blades which may cause more annoyance at lower levels than other turbine related noise.

⁹ Guidance Note on Noise Assessment of Wind Turbine Operations at EPA Licenced Sites (EPA 2011)

¹⁰ Draft Revised Wind Energy Development Guidelines 2021

Noise emissions from a wind turbine increase as wind speed increase however so does background noise tending to mask the turbine noise in higher wind speeds. The impact of noise on noise sensitive receptors (e.g. occupied dwellings) may depend on a range of factors including distance to the receptor, turbine design and scale, background noise levels, wind speed and direction, topography, weather conditions etc. Further there is a human subjective response to noise which can depend on the characteristics of the noise, the duration and time of exposure the activity being carried out during exposure and the personal expectations of the acoustic environment. However any operational noise emissions are likely to be long term and periodic in nature.

However in terms of overall impact the Environmental Noise Guidelines for the European Region (WHO 2018) state that '*the number of people exposed (to wind turbine noise) is far lower than for many other sources of noise (such as road traffic). Therefore, the GDG (WHO Guideline Development Group) estimated the burden on health from exposure to wind turbine noise at the population level to be low, concluding that any benefit from specifically reducing population exposure to wind turbine noise in all situations remains unclear*'. These guidelines further state that 'that evidence on health effects from wind turbine noise (apart from annoyance) is either absent or rated low/very low quality' (p. 84).

Furthermore the Draft Wind Energy Development Guidelines proposes a new relative rated noise limit namely that noise levels from wind energy developments shall not exceed: (1) Background noise levels by more than 5 dB(A) within the range 35-43 dB(A), or (2) 43 dB(A) both measured as $L_{90,10 \text{ min}}$ outdoors at specified noise sensitive locations.

Construction Noise:

Noise is likely to arise during the construction phase of new wind energy developments including: rock breaking/excavation during the construction of access roads turbine bases etc, the movement of heavy machinery (e.g. haulage lorries, excavators dumpers) during such construction, and the operation of diesel generators during same. The impact of noise on noise sensitive receptors may depend on the scale of the development including length of access roads, the scale of hardstanding areas and the level extent and depth of groundworks required. However any construction related noise impacts are likely to be short term and temporary in nature.

Shadow Flicker:

Wind turbines can cast long shadows when the sun is low in the sky. The effect known as "shadow flicker" occurs where the rotating blades of a wind turbine cast a moving shadow onto a property results in a rapid change or flicker in the incoming sunlight. This effect will occur only for a short period under specific concurrent circumstances, namely when:

- The sun is shining and is at a low angle (i.e. after dawn and before sunset), and
- There is sufficient direct sunlight to cause shadows.
- A turbine is directly between the sun and the affected property, and within a distance that the shadow has not diminished below perceptible levels, and
- There is enough wind energy to ensure that the turbine blades are moving.

A number of publications indicate that the impact of shadow flickers diminishes the greater the separation distance between the turbine and the affected property. For example:

- The Onshore Wind Energy Planning Conditions Guidance Note published in the UK in 2007 stated that "shadow flicker has been proven to occur only within ten rotor diameters of a turbine position".
- The Scottish Government Onshore Wind Turbines: Planning Advice (2014) states that "where separation is provided between wind turbines and nearby dwellings (as a general rule 10 rotor diameters), "shadow flicker" should not be a problem".
- The Northern Ireland (NI) Department of the Environment Best Practice Guidance to Planning Policy Statement 18 'Renewable Energy' (2009) states that "At distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low".

Moreover as shadow flicker is a predictable phenomena the potential effects of same can be reduced by avoidance and mitigation during the preplanning and operational phases of wind energy developments. At the preplanning stage computational modelling can be used to predict whether the proposed location of a wind turbine has the potential to cause shadow flicker on properties (including in a worst case scenario) and potential excessive shadow flicker impacts can be avoided by the relocation of turbines. During the operational phase shadow flicker can be further reduced as modern wind turbines have the facility to measure sunlight levels and to reduce or stop turbine rotation if the conditions would lead to shadow flicker.

It is acknowledged that wind energy developments facilitated by the proposed variation have the potential to impact on residential amenity as a result of noise or shadow flicker. However on the basis that:

- There is no strong evidence base to indicate that Wind Energy developments have a negative effect on human health as a result of noise.
- In accordance with amendment no. 13 of the Proposed Variation (which inserts Policy E-P-23) Wind Energy Developments will be required to comply with the new relative noise limit noise limit set out in the Wind Energy Development Guidelines 2021 namely that noise levels from wind energy developments shall not exceed: (1) Background noise levels by more than 5 dB(A) within the range 35-43 dB(A), or (2) 43 dB(A) both measured as $L_{90,10 \text{ min}}$ outdoors at specified noise sensitive locations.
- In accordance with amendment No. 15 of the Proposed Variation (which inserts Policy E-P-24) wind energy developments must ensure a setback distance for noise and shadow flicker purposes of ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation.
- In accordance with amendment No. 20 of the Proposed Variation (which inserts Map 8.2.1) wind energy development would be not normally permissible within a buffer of 500m around settlements which is likely to limit any impact arising from noise and shadow flicker from wind energy developments.
- Noise impacts can be avoided at the preplanning stage by the routine use of noise impact assessments to estimate the impact of proposed wind turbine on noise sensitive receptors and the relocation/removal of turbines as appropriate.
- Excessive shadow flicker can be avoided at the preplanning stage by the routine use of computational modelling for shadow flicker and relocation/removal of turbines as appropriate and at the operational stage by the automated measurement of sunlight levels and the curtailment of turbine operations.

It is considered that wind energy developments facilitated by the proposed variation are not likely to result in excessive noise or shadow flicker and will therefore have an insignificant effect on population and human health overall. Furthermore in relation to the individual amendments it is considered that abovementioned amendment nos. 13, 15 and 20 would have a positive effect on population and human health whilst the other individual amendments would have an insignificant effect or no relationship on same.

7.3.3 Soils and Geology

The SIS soils map indicates that Donegal contains a wide variety of soils types including inter alia: peat soils, NBP 4 - Fine loamy over shale and slate bedrock, Ballywilliam - Coarse loamy drift with igneous and metamorphic stones, and Carrigvahanagh - Peat over lithoskeletal acid igneous rocks.

Of particular relevance to the proposed variation on wind energy are the facts that: 34% of the rural area of Donegal is covered in peat bog, 6% of the county is moors and heath, peat bogs store 53% of all carbon in Ireland and act a significant habitat in their own right.

Wind Energy Development facilitated by the proposed variation has the potential to impact on soils and soil functionality in a variety of ways including:

- Direct loss or removal of soils during construction and the potential of wind energy development to lead to further soil erosion in vulnerable soil environments (e.g. changes/disturbance to the hydrological conditions/flow regimes within peatlands).
- Loss of key soil functionality including: habitat loss, carbon sequestration (including in particular peat soils), food production (through the loss of agricultural lands), flood attenuation, nutrient cycling, water and purification.
- Disturbance and depletion of the overall soil resource arising from construction activities.

The exact severity of these impacts may depend on the specific nature of the development (e.g. the overall amount of excavation required, the amount of surface area removed) and the sensitivity of the affected soil resource (e.g. peat soils may become unstable due to desiccation or over saturation). However where it occurs the loss or removal of soils (in particular peat soils) is likely to have some limited negative, permanent and irreversible effects on habitats, flood attenuation, nutrient cycling, water purification, carbon sequestration and food production.

Notwithstanding these effects, on the basis that:

- The overall amount of the soil resource likely to be lost or removed as a result of wind energy developments facilitated by the proposed variation is a small fraction of the overall soil resource within Donegal.
- The risk of soil/peat erosion has been significantly reduced by the inclusion of Areas of high, moderately high, and moderately low landslide susceptibility within the 'Not Normally Permissible' wind energy category (Amendment No. 20 refers).
- Amendment No. 17 of the Proposed Variation inserts E-P-26 which specifically requires the submission of a 'Peat Stability Risk Assessment Report' for wind energy developments located within peatland and bog.
- Soil erosion avoidance and mitigation measures (e.g. stockpiling of loose materials away from watercourses, reuse of excavated peat and soils for landscaping, reseeding of loose soils and control of surface water runoff such as silt traps, settlement ponds etc) are likely to form an integral part of Wind Energy Developments facilitated by the proposed variation.
- The soils types within Donegal not have any specific statutory protection and there are no specific environmental thresholds set down at either a European or a National level for the protection of soils.

It is considered that the overall effect of the Proposed Variation on soils will be insignificant overall. Furthermore in relation to the individual amendments within the proposed variation it is considered that Amendment No. 17 (the requirement for Peat Stability Risk Assessment Reports in areas of Peatland and bog) and Amendment No. 20 (which includes areas of high moderately high, and moderately low landslide susceptibility in the 'Not Normally Permissible' wind energy zoning) will have a positive effect on soils and that the other individual amendments will have insignificant effect on soils.

The geology in Donegal consists of a wide variety of rock types including inter alia: precambrian gneiss and schists, precambrian quartzite, granite, devonian sandstones, lower Carboniferous sandstones and lower carboniferous limestone. The Geological Heritage Audit of Donegal identified 102 County Geological Sites of which 22 have been recommended as Natural Heritage Areas. In addition the Geological Survey of Ireland Geological Spatial Resources Map Viewer indicates that there are significant areas of Very and High Crushed Rock Aggregate Potential in Donegal

Wind Energy Development facilitated by the proposed variation has the potential to impact on Geology via the direct loss or removal of rock during construction (e.g. for wind turbine bases, access road construction and burrow pits) particularly in upland areas.

The exact severity of these impacts may depend on the location, nature and scale of the proposed wind energy development which will determine the depth and surface area of geology requiring removal. However any such loss or removal of geology will be permanent and irreversible.

However on the basis that:

- The overall amount of loss of any specific area of geology (e.g. schists, quartzites, granites etc) is likely to only represent a small fraction of the abovementioned rock formations within Donegal.
- The geology in Donegal does not have any statutory protection and there are no specific environmental thresholds set down at either a European or a National level for the protection of geology.
- The overall loss of geology is significantly reduced by the inclusion of a significant area of the county within the 'Not Normally Permissible' wind energy category.
- Policy NH-P-19 within the existing County Development Plan will afford a degree of protection to County Geological Sites where they occur outside said 'Not Normally Permissible' areas.

It is considered that the proposed variation, including the individual amendments therein, will have an insignificant effect on the geology within the county overall.

On the basis of the above assessment it is considered that the total effect of the plan on Soils and Geology would be insignificant overall.

7.3.4 Water

It is considered that an assessment of the likely significant effects of the Proposed Variation on water quality should involve inter alia: an understanding of the current state of water quality in Donegal including the key pressures on same, the potential of wind energy developments to cause deterioration in water quality or to exacerbate existing water quality issues, and an assessment of the likely significant effects of the proposed variation having regard to said context, potential effects, and the mitigation measures which may employed to prevent, reduce and offset any such significant effects.

The Water Framework Directive (WFD)¹¹ is the key piece of legislation in relation to the measurement and protection of water quality in Ireland. In summary the WFD: aims to improve the aquatic environment, applies to rivers, lakes, estuaries, coastal waters and groundwater, and requires that Member states achieve at least good status in all waters and must ensure that status does not deteriorate.

Section 3 of this report outlines the current state of water quality in Donegal including setting out that:

- Donegal has a significant amount (468) and range (Rivers, Lakes, Transitional, Coastal, Groundwater) of waterbodies.
- The WFD water quality status of these waterbodies is classified as follows: High (26) Good (142), Moderate (24), Poor (70) Bad (2) and unassigned (205).
- The overall trend in the status of these waterbodies was improved (44), unchanged (178), declined (42) and unassigned (84).
- In particular there were 138 areas in Donegal which are identified as protected areas under the EU Water Framework Directive.

Furthermore in particular an examination of the spatial distribution of these water bodies and their WFD water quality status indicates that in general the poorest water quality generally occurs in the east, north east and south west of the county (See Figure 7.3 below).

¹¹ DIRECTIVE 2000/60/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2000 establishing a framework for Community action in the field of water policy

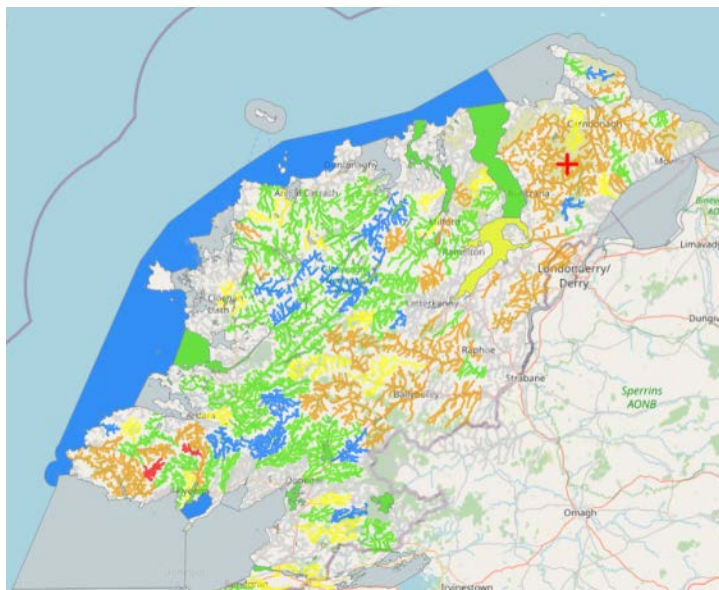


Figure 7.3: WFD Waterbody Status 2013-2018 (Source: <https://gis.epa.ie/EPAMaps/>)

At a national level the EPA Report (Water Quality in Ireland 2013-2018) identifies agriculture, hydromorphology, urban wastewater and forestry as key pressures on water quality Ireland. An examination of the 3rd Cycle Draft Catchment Reports for the river Basin Catchments located wholly within Donegal Indicates that that most significant pressures categories giving rise to water quality issues in at risk waterbodies for each catchment include:

- Doagh Merville Catchment (HA 40): Agriculture (15), Domestic Waste water (7) and other (4).
- Lough Swilly Catchment (HA 39): Agriculture (22), Urban waste water (9), domestic waste water (8) and hydromorphology (7).
- Foyle Catchment (HA 01): Agricultural (23), Forestry (13), Other (6), Peat (5), and Urban waste water (5).
- Donegal Bay North (HA37): Agricultural (14), Forestry (6), and Other (6).
- Gweebarra-Sheephaven Catchment Report (HA 38): Other (12), Agricultural (5), Domestic Wastewater (4), and Hydromorphology (3).

Wind energy developments have the potential to impact on water quality in a number of ways including:

- **Sedimentation/Hydromorphological Impacts:** Wind energy developments may involve significant groundworks (including access road and turbine base construction, burrow pits stockpiling of material etc). In addition such development may also involve the provision of new hard surfaces, drains, bridges culverts etc which may increase or decrease surface water runoff or surface water storage/attenuation patterns. Furthermore such developments are often located in sensitive areas such peatlands which are sensitive to ground disturbance or changes in hydrological conditions (e.g. peat desiccation or saturation). Combined with period of higher rainfall rates this has the potential to result in the release of excess fine sediments into watercourses which in turn can lead to negative ecological impacts for aquatic environments, significantly impact the condition of freshwater habitats, and result in a deterioration of water quality. In this regard sediment can have a greater impact on freshwater insects (key indicators of water quality) than more standard pollutants such as phosphorus and nitrogen. Moreover In some extensive catchments, particularly those that contain sensitive species (e.g. the Freshwater Pearl Mussel), excessive sediment is likely to be the dominant threat to water quality¹². In this regard recent experience has demonstrated that groundworks associated with wind farm development can give rise to peat instability and consequently threats to

¹² <https://www.teagasc.ie/publications/2020/water-quality-the-role-of-sediment-.php>

water quality arising from sedimentation of surface water even in areas classified as having relatively low landslide susceptibility.

- **Hydrocarbon spillages:** The use of mechanical equipment (e.g. excavators, haulage lorries, dumper trucks diesel generators etc) during the construction phases of wind farm development in may requires the onsite storage, refuelling and use of hydrocarbons (e.g. diesels, oils and lubricants). This in turn has the potential to give rise to the unintentional spillage of such substances to local watercourses and result in inorganic pollution.

The potential of the above impacts to cause significant effects on water quality will depend on inter alia: the geomorphological susceptibility of the subject site, the comprehensiveness of peat stability assessments and the appropriate siting of access roads and turbine bases to avoid areas of instability, the design and implementation of best practice construction and environmental management techniques during construction (e.g. the provision of interceptor drains, silt fences, attenuations lagoons, sediment traps, settlement ponds, the stockpiling of material away from watercourses and the suspension of work during heaving rainfall, the bunding of fuel storage areas, and the refuelling of equipment in a sensitive manner away from hydrological receptors), the presence of hydrological pathways between such developments and hydrological receptors and the sensitivity of the such receptors (e.g. 'At Risk' WFD waterbodies, Freshwater Pearl Mussel catchments).

The proposed variation inter alia provides a spatial and policy framework for the development of Wind Energy in Donegal. In particular in relation to the abovementioned potential impacts on water quality it is specifically noted that the following areas are included in the 'Not Normally Permissible' wind energy area.

- Areas of high, moderately high and moderately low landslide susceptibility (as identified in the GSI Landslide Susceptibility dataset) are included within the 'Not Normally Permissible' wind energy area in Map 8.2.1.
- Water sensitive Natura 2000 sites including a 500m buffer around said sites (e.g. Magheradrumman Bog SAC, Fawnboy Bog/Lough Nacung SAC, River Finn SAC, Leannan River SAC).
- Areas at risk of landslides and associated environmental and ecological concerns in the Lifford-Stranorlar MD.
- Margaritifera sensitive areas (i.e. the river catchments containing known extant populations of the Freshwater Pearl Mussel).

The assessment indicates that WFD water quality status is poor in significant areas in Donegal, and there are significant pressures on water quality (e.g. agricultural, forestry, urban and domestic waste water) and there are consequently significant challenges in achieving the requirement of the Water Framework Directive (e.g. achieving good water quality status by 2027). It is also acknowledged that the Wind Energy Developments have the potential to negatively impact on water quality particularly during the construction phases of such development as a result in particular arising from sedimentation of water courses particularly on unstable peat environments. Nevertheless on the basis of the fact that:

- Areas of High, Moderately High and Moderately Low landslide susceptibility (as identified in the GSI Landslide Susceptibility dataset) are included within the 'Not Normally Permissible' wind energy category within the Proposed Variation.
- Water sensitive Natura 2000 sites including a 500m buffer around said sites are included within the 'Not Normally Permissible' wind energy category area within the Proposed Variation.
- Policy E-P-12 of the Proposed Variation requires that applications wind energy developments located on peat and bog shall be accompanied by a 'Peat Stability Assessment Report.
- Margaritifera sensitive areas (i.e. the river catchments containing known extant populations of the Freshwater Pearl Mussel) which include a significant proportion of the river catchments in the County are included in the 'Not Normally Permissible' wind energy zone.
- Larger scale wind energy developments are likely to require the submissions of a detailed Environmental Impact Assessment Report inclusive of the detailing of water quality mitigation measures (e.g. provision of interceptor drains, silt fences, attenuations lagoons, sediment traps,

settlement ponds, the stockpiling of material away from watercourses) which may significantly reduce the likelihood of sedimentation of water courses.

- The abovementioned assessment of the EPA's 3rd Cycle Draft Catchment Reports for each of the 6 water catchments in Donegal indicates that wind energy developments do not represent a significant pressure on water quality in any of the abovementioned catchments.

It is considered that it is likelihood of potential impacts on water quality (e.g. release of sedimentation, hydrocarbons) arising from wind energy developments facilitated by the proposed variation are not significant overall.

In relation to the impact of individual amendments it is specifically considered that amendments Nos. 10 (Policy E-P-12 refers) and 20 (Map 8.2.1 refers) which identifies a significant area of the County including those most susceptible to landslide as 'Not Normally Permissible' and 17 (Policy E-P-26 refers) which introduces the abovementioned requirement for Peat Stability Risk Assessments will have a positive effect on water quality as they are likely to reduce the possibility of sedimentation arising from wind energy developments. Otherwise it is considered that other amendments in the Proposed Variation will have either no relationship with or an insignificant effect on water quality.

7.3.5 Air

The EPA report *Air Quality in Ireland 2020* identified Particular Matter (predominately from the burning of solid fuels for home heating) and Nitrogen Oxides (predominately from traffic emissions) as the key problematic sources of air pollution in Ireland and in particular cites PM_{2.5} and NO₂ as the more harmful versions of these pollutants.

In Donegal air quality is monitored at air quality monitoring stations at Letterkenny, Buncrana and Malin Head. Data from these stations provide an overall indication of existing air quality issues in Donegal. In particular an analysis of EPA Air Quality monitoring data for Letterkenny indicates that in relation to:

- PM_{2.5} the annual mean value in 2020 (11.14µg/m³) exceeded the WHO air quality Guideline mean value of 10 µg/m³ and there were several exceedances of the of the WHO daily mean guideline value of 25µg/m³ and there was a strong correlation between period of colder weather and such pollution.
- PM₁₀ the annual mean value in 2020 (14.74 µg/m³) did not exceed the WHO Air Quality Guideline annual mean value of 20 µg/m³ however there were a number of exceedances of the WHO daily (24hr) mean guideline value of 50 µg/m³ and there was a strong correlation between period of colder weather and such pollution.
- For SO₂ there were no exceedances of the CAFE Daily (24hour) mean limit value of 125 µg/m³ for SO₂ in 2020 however there were a number instances of elevated levels of SO₂ during the winter heating season.
- NO₂ emissions for Letterkenny in 2009 (12.02 µg/m³) was significantly below the CAFE annual mean limit value of 40 µg/m³ and there were also no exceedances of the 1CAFE 1 hour limit value of 200 µg/m³.

This data indicates that PM_{2.5} and PM₁₀ emissions and to a lesser extent SO₂ are key local sources of air pollution in Letterkenny and it is likely that such pollutants are linked to the burning of solids fuels for home heating in periods of colder weather. The data otherwise does not indicate that NO₂ is a significant sources of air pollution in Letterkenny notwithstanding the relatively high volumes of traffic within the town. However it is unlikely that the levels of PM_{2.5} and PM₁₀ and SO₂ air pollution in Letterkenny are replicated in more rural area of Donegal where Wind Energy Developments will be located. Furthermore it is also likely that NO₂ emissions will be significantly lower in such rural areas as such emissions are generally associated with areas of high traffic volumes.

Wind Energy Developments do not emit any significant air pollutants during their operational phase. However short term air pollution including nitrogen oxides (NOx) and particulate matter (PM) pollution (i.e. fine dust) may arise during the construction phase of such developments arising from emissions from construction traffic and machinery (e.g. excavators, haulage lorries, dumper trucks diesel generators etc). However as background levels of NOx and PM pollution in rural areas are likely to be very low it is unlikely that such construction activities will have a significant impact on, or exceed relevant air quality thresholds for PM and NOx pollution in areas where wind energy developments are undertaken. In this regard the publication 'Guidance on the Assessment of Dust from Demolition and Construction' (IAQM, 2014) states that '*Experience of assessing the exhaust emissions from on-site plant (also known as non-road mobile machinery or NRMM) and site traffic suggests that they are unlikely to make a significant impact on local air quality*'.

Furthermore wind energy development may generate short term dust emissions during the construction and decommissioning phases of such project. Dust is generally considered to comprise particulate matter with a particular size of between 1 and 75 microns. Dust may impact on both human and ecological receptors. These emissions may arise from earthworks, trench excavation, road construction, excavation for roads and turbine bases and burrow pits, stockpiling of materials, construction traffic, loading of aggregates and movement of materials around site and loading/unloading of materials. The amount of dust generated and the impact on surrounding areas will vary according to the type and quantity of material, the working methods, the distance between the site and sensitive receptors, and topographical and meteorological conditions. Deposition typically occurs in close proximity (500m) of the dust generating activity as dust particles fall out of suspension in the air. However as on site construction activities related to wind energy development predominately relate to excavation and earth moving dust emissions are more likely to be confined particles of in excess 10 microns which may cause a nuisance but are unlikely to result in any significant health effects or exacerbate any localised PM_{2.5} or PM₁₀ pollution or exceed any associated air quality thresholds. Furthermore the implementation of dust control measures as part of construction and environmental management plan (e.g. location of dust causing activities away from receptors, erection of dust barriers, wetting roads and stockpiles for effective dust/particulate matter suppression, re-vegetation of exposed areas, utilisation of sprinkler/wheel washing systems for construction vehicles etc) may help to mitigate the impact of any such dust emissions which may arise. Otherwise it is considered that the individual amendments in the Proposed Variation would either have no relationship with, or would have insignificant effect, on air.

Consequently on the basis of the above assessment, including in particular: the low levels of ambient air pollution in rural Donegal, the low likelihood that construction related activities related to wind energy developments will result in any exceedance of air quality standards, and the implementation of normal on-site dust control measures, it is considered that the developments facilitated by the Proposed Variation will have an insignificant effect on air quality overall.

7.3.6 Climatic Factors

The Environmental Protection Agency estimates that in 2020 Ireland's Greenhouse gas emissions amounted to 57.70 million tonnes carbon dioxide equivalent (Mt CO₂eq), which is 3.6% lower (or 2.14 Mt CO₂ eq) than emissions in 2019 (59.84 Mt CO₂ eq)¹³. Of this 8.68 Mt CO₂ eq (15%) was emitted from energy industries which includes the electricity generation sector. The Climate Action Plan 2021 specifically aims to increase the proportion of renewable electricity to up to 80% by 2030.

The proposed variation will in effect facilitate onshore wind energy developments, whose primary purpose is to provide electricity to the national grid, within specific locations in the County subject to specific requirements. As a renewable energy source onshore wind energy developments do not produce

¹³ <https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/>

significant quantities of greenhouse houses gases during their operational phases however such emissions may arise over the complete lifecycle of such developments including during component production (including production of the tower, generator, foundation, blade and hub) and to a significantly lesser extent during the assembly and construction phases (see Figure 7.4 below). The draft report *Life Cycle Assessment of Electricity Generation Options* (UN United Nations Economic Commission for Europe, 2021) estimates that the Life cycle impacts from 1 kWh of onshore wind energy equates to 12.4 g CO₂ eq (see Figure below). This is significantly less than for other sources of electricity production including Natural Gas and Coal.

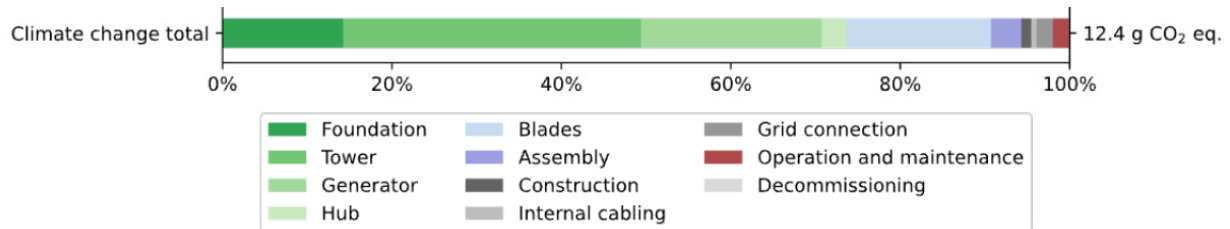


Figure 7.4: Life cycle climate change impacts from 1kWh Onshore Wind Electricity Generation (Source: UN United Nations Economic Commission for Europe, 2021)

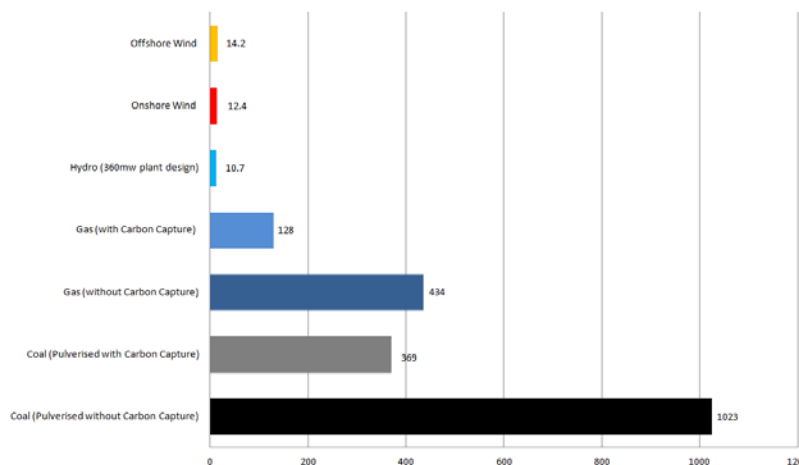


Figure 7.5: Comparison of Life Cycle climate change impacts (g CO₂ Eq.) from 1KWH of various energy sources (Source: UN United Nations Economic Commission for Europe, 2021)

It is not possible to quantify the exact electricity generation capacity of wind energy developments which will be facilitated by the Proposed Variation. However given the significant overall wind resource within the county, the relatively large geographical scale of the 'Open to Consideration' and 'Acceptable in Principle' in Map 8.2.1 within which new wind energy development may be permitted and the government's ambitious 2030 renewable energy targets it is reasonable to assume that the proposed variation would facilitate a considerable quantum of new wind energy development and/or the repowering/upgrading of capacity of existing wind energy developments at certain locations. However it is also reasonable to state that the extent of the 'Not Normally Permissible' may restrict the overall amount of wind energy developments that might otherwise occur.

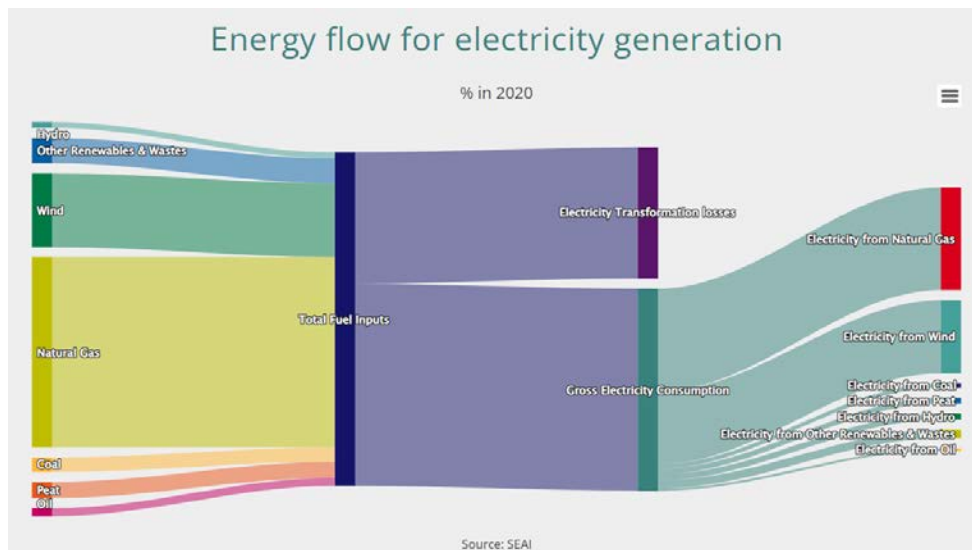


Figure 7.6: Energy Sources for Electricity Production in Ireland in 2020 (Source: SEAI)

However overall it is considered reasonable to conclude that wind energy developments facilitated by the proposed variation will directly contribute to offsetting CO2 emissions which would otherwise have to be produced by non renewable sources of electricity generation (e.g. natural gas and coal) to meet existing and future electricity demands. In this regard it is considered that the proposed variation would directly contribute to the achievement of Ireland greenhouse gas emissions targets and would therefore result in a positive effect on climate mitigation overall.

In relation to impact of specific amendments it is considered that individual amendments which would actively support or facilitate renewable energy/wind energy developments (i.e. Amendment nos. 6 (Objective E-O-1: secure renewable energy supply), 7 (Objective E-O-7: secure maximum potential from wind energy), 10 (Policy E-P-12: wind energy zonings), 11 (E-P-13: encourage community windfarms), 18 (Technical standard 6.5 e.g. the removal on the absolute restriction on wind energy developments in certain Freshwater Pearl Mussels catchments) and 20 (Map 8.2.1 e.g. providing for Open to Consideration Areas for wind farm developments) will have a positive effect on climate mitigation. It is otherwise considered that the other individual amendments will have no relationship or an insignificant effect on climate.

7.3.7 Material Assets

Material Assets includes a wide range of built and natural assets including inter alia: transport, energy/electricity, waste, water and wastewater and green/recreational infrastructure, healthcare, housing, education, retail, commercial developments, agricultural land and quarries.

In terms of existing material assets the wind energy developments facilitated by the proposed variation have the potential to direct or indirectly impact on such assets as agricultural lands, airports/aviation, and existing residential dwellings. However on the basis that:

- Any loss of agricultural land resulting from the land take from such developments (i.e. access roads, turbine bases, hardstanding areas) is likely to amount to an extremely small percentage of the agricultural resource within the county.
- Any interference with the flight paths/functionality of Donegal Airport at Carrickfinn and the City of Derry Airport is likely to be protected by policies T-P-17, T-P-18 and T-P-19.
- In accordance with Amendment No. 13 and No. 15 Wind Energy development will not be permitted within a setback distance of 10 times the proposed wind turbine tip height of residential dwellings.

It is considered that the proposed variation is likely to have an insignificant effect on existing material assets within the County.

In terms of the creation of new materials assets the Proposed Variation is likely to result in new energy generation and transmission infrastructure (i.e. new wind turbines and power lines) which it is considered will have a positive effect overall on Ireland's ability to provide and distribute a secure source of renewable energy. In addition in the future such energy generation assets may also provide opportunities for the co-location of hydrogen production facilities which may provide an additional secure and carbon neutral fuel source to replace hydrocarbons (e.g. diesel) within the public transport and haulage sector. Consequently it is considered that the proposed variation would have a positive effect on the creation of new material assets. In relation to individual amendments it is considered that Amendments No. 6, (new objective E-O-1), No. 7 (new objective E-O-7) No. 10 (new policy E-P-10) No. 11 (amendment of Policy E-P-13), No. 18 (removal of technical standard 6.5) and No. 20 (insertion of Map 8.2.1) would promote the provision of new wind energy developments and therefore have a positive effect on materials assets whilst the other amendments would have an insignificant effect on/no relationship with same.

In relation to flooding it is acknowledged that wind energy developments, like other developments, have the potential to increase the risk of flooding in the long term and such potential risks may include:

- Increased surface water runoff from access roads, hardstanding areas turbine bases etc relative to predevelopment conditions.
- Changes in hydrological flow regimes (e.g. the provision of new drainage channels or other physical hydromorphological changes to streams /rivers which increase the flow of surface water from upland sites).

However on the basis that:

- Wind farm developments are very unlikely to be located in low lying flood zones which generally have the lowest wind resource (as wind increases with elevation).
- The additional hard surface areas (e.g. access roads, turbines bases, hard standing areas) are likely to represent a small proportion of their overall host sites and such developments are in general therefore unlikely to generate a significant amount of additional surface water runoff relative to the predevelopment conditions of such sites.
- The Wind Energy Development Guidelines specifically recommend that such developments demonstrate compliance with the Ministerial Flood Risk Management Guidelines and are accompanied by detailed flood risk statements. In turn amendment No. 13 (Policy E-P-13 of the variation) specifically requires that wind farm developments comply with said guidelines. Furthermore there are practical steps which may be taken (e.g. the provision of surface water attenuation ponds) which can help to avoid and/or mitigate surface water runoff from such sites.

It is not considered that wind energy developments facilitated by the proposed variation will pose a significant flood risk overall.

On the basis of the above assessment it is concluded that the total effects of the plan on material assets will be positive overall.

7.3.8 Cultural Heritage

Donegal contains a range of cultural heritage assets including: archaeological features on the Record of Monuments and Places (RMP), otherwise known as Recorded Monuments, the Register of Historic Monuments (RHM) otherwise known as Registered Monuments and National Monuments and architectural features on the Record of Protected Structures (RPS), and the National Inventory of Architectural Heritage (NIAH).

Wind Energy Developments have the potential to impact on such cultural heritage features in a number of ways:

- Direct Impacts: Loss of cultural heritage during construction of wind turbines, access roads, hardstanding areas or other infrastructure.
- Indirect Impacts: Impacts on the visual settings of cultural heritage features/structures/sites caused by the intrusion of wind energy developments into their visual settings.

The potential and magnitude of such impacts occurring will depend, inter alia, on: the physical location of wind energy developments, the siting and design of individual wind turbines access roads etc, the specific archaeological monitoring undertaken as part of any development, the presence of visual pathways between the proposed wind energy development and affected cultural heritage features and the visual sensitivity of the feature affected. In general wind energy developments are more likely to impact on archaeological rather than architectural heritage due to the fact that they are generally located in more remote rural locations often with considerable setbacks from centres of human habitation.

In relation to cultural heritage the Draft Wind Energy Development Guidelines advise that:

- The potential impact of the proposed wind energy on archaeology should be assessed and notes that the publication *The Framework and Principles for the Protection of Archaeological Heritage* provide the formal policy and standard approaches to dealing with ground disturbance, development impacts on archaeological heritage with an emphasis on mitigating impact on unknown archaeological sites in peatland locations.
- The potential impact of the proposed wind energy development on the architectural heritage of the locality and its landscape context, should be assessed where relevant and this is particularly necessary in the case of structures included in the Register of Protected Structures.

In relation to Archaeological Protection the publication *The Framework and Principles for the Protection of Archaeological Heritage* inter alia states that there should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage and identifies Preservation In Situ (i.e. the actual physical preservation of archaeological sites and monuments, including archaeological deposits, features and structures) as the preferred option for archaeological protection. Furthermore said publication also in, effect states that Preservation by Record (i.e. the carrying out of archaeological excavation and recording of all archaeological deposits and features) should only be considered where the planning authority is satisfied that the development (i) cannot be re-located, (ii) cannot be re-designed to avoid removal of the site or monument (or portions of such), (iii) is really necessary. In addition the existing County Donegal Development Plan 2018-2024(as varied) contains a range of policy measures designed to provide a high level of protection to archaeological heritage including:

- Policy AH-P-1 which states that
It is a policy of the Council to:
 - a) *Protect and enhance the integrity of Archaeological Monuments and to secure the preservation in situ of all archaeological monuments included on the Record of Monuments and Places. Preservation by record shall only be considered in exceptional circumstances where the principles of the Department of Arts, Heritage, Gaeltacht and the Islands publication entitled; 'Framework and Principles for the Protection of Archaeological Heritage' can be satisfied.*
 - b) *Protect the settings of such archaeological monuments save to the extent necessary to allow for the provision of the TEN-T Priority Route Improvement Project, Donegal.*
- Policy AH-P-2 which states that:
It is a policy of the Council to:
 - a) *Protect the character of National Monuments and Recorded Monuments and to manage development which would be considered to (physically) intrude upon or inhibit the enjoyment of the amenities of these sites.*
 - b) *Protect the settings of and views from such archaeological monuments save to the extent necessary to allow for the provision of the TEN-T Priority Route Improvement Project, Donegal.*
- Policy AH-P-4 which states that:

It is a policy of the Council to:

- a) Protect where appropriate, the character of any unrecorded archaeological object or site.*
- b) Protect the settings of such archaeological objects or sites save to the extent necessary to allow for the provision of the TEN-T Priority Route Improvement Project, Donegal.*

And the proposed variation does not make any amendments to said policies.

However on the basis that: the abovementioned legal and policy archaeological protection instruments will help to avoid potential impacts on archaeological features in the first instance, impacts on archaeology may be avoided by use of predevelopment site surveys (routinely undertaken as part of the EIS process) and the subsequent avoidance of any archaeological features in development layouts, archaeological monitoring during construction (which is a routinely made a condition of permission) may help to preserve archaeological remains by record, and a significant portion of archaeological heritage of the County would also in effect be protected by the inclusion of large part of the county in the 'Not Normally Permissible' wind energy category, it is considered that the proposed variation including the individual amendments within same will have an insignificant effect on archaeological heritage.

In relation to architectural protection S.57(10)(b) of the Planning and Development Act 2000(as amended) states that *A planning authority, or the Board on appeal, shall not grant permission for the demolition of a protected structure or proposed protected structure, save in exceptional circumstances.* In addition the existing County Donegal Development Plan 2018-2024(as varied) contains a range of policy measures designed to provide a high level of protection to architectural heritage including:

- Policy BH-P-1 which states that:
It is a Policy of the Council to conserve and protect all structures (or parts of structures) and sites contained in the Record of Protected Structures that are of special architectural, historic, archaeological, artistic, cultural, scientific, social or technical interest.
- Policy BH-P-4 which states that:
It is a policy of the Council to ensure retention of vernacular and/or historic structures (and parts of structures) not included on the Record of Protected Structures, including their functional and decorative details, that are sensitive to traditional construction methods and materials and do not have a detrimental impact on the character or appearance of a structure and are in accordance with current conservation guidelines and best practice. save to the extent necessary to allow for the provision of the TEN-T Priority Route Improvement Project, Donegal.

And the proposed variation does not make any amendments to said policies.

Consequently on the basis that: structures on the Record of Protected Structures are protected by the provisions of S.57 of above act and by Policy BH-P-1 of the existing County Development Plan, structures on the National Inventory of Architectural Heritage are afforded protection by Policy BH-P-4 of the existing plan, impacts on architecture may be avoided by use of predevelopment site surveys which are routinely undertaken as part of the EIS process, and a significant portion of architectural heritage of the County would also in effect be protected by the inclusion of large part of the county in the 'Not Normally Permissible' wind energy category, it is considered that the proposed variation including the individual amendments within same will have an insignificant effect on architectural heritage in the County.

Consequently on the basis of the above assessment it is considered that the proposed variation would have an insignificant effect on cultural heritage overall.

7.3.9 Landscape and Visual

Landscape can be defined as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (European Landscape Convention, Council of Europe 2000). Landscape covers natural, urban, peri-urban and rural areas, encompassing land, inland water,

coastal and marine areas. In contrast visual issues in land use planning generally concern changes to specific views, visual amenity and effects on viewers.

Land and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of effects of changes resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity¹⁴. In broad terms LVIA involves inter alia the defining the scope of the proposed plan/project, the establishment of a landscape and visual baseline and an assessment of the landscape and visual effects. It involves two related but separate assessments, namely:

- **Assessment of Landscape Effects:** Changes to landscape character and landscape resource. This is concerned with the physical landscape and its characteristics.
- **Assessment of Visual Effects:** Changes to views, visual amenity and effect on viewers.

Landscape and Visual Assessment is a qualitative assessment as the consideration of the likely significant landscape and visual effects are not a measurable objective science.

Scope of the Proposed Plan and Associated Potential Impacts

The broad scope of the Proposed Variation including the contents individual amendments have been described in Section 2 of this report. In particular in relation to landscape and visual effects this includes Policy and Spatial Framework which provides for tiered spatial approach to the assessment of new wind energy developments, namely specific zones for where wind energy will be Acceptable in Principle, Open To Consideration and Not Normally Permissible (Amendment No. 10/Policy E-P-12 and Amendment No. 2/Map 8.2.1 refers) and which otherwise provides for a setback distance for visual amenity purposes of ten times the tip height of proposed turbines from the nearest residential properties (Amendment No. 13/Policy E-P-23 refers).

On the basis of their overall height and scale and location Wind Energy Developments have the potential to result in changes to landscape character and resource and bring about changes to views and visual amenity. In this regard the Wind Energy Development Guidelines note that: *Wind turbines are often located in elevated exposed locations to optimise exposure to the wind resource, and their size and appearance mean that all wind turbine development will be prominent within the landscape. (P.91)*. The exact impact of wind energy developments on landscape and visual receptors will depend significantly on their specific location, the scale and layout of wind turbines, the susceptibility and value of the landscape and view in question, and the resultant scale of landscape change, geographical scale over which it is visible, and the duration/reversibility of such effects. In addition the people's perception of the severity of the landscape and visual aspects may also be may also be subjective in nature.

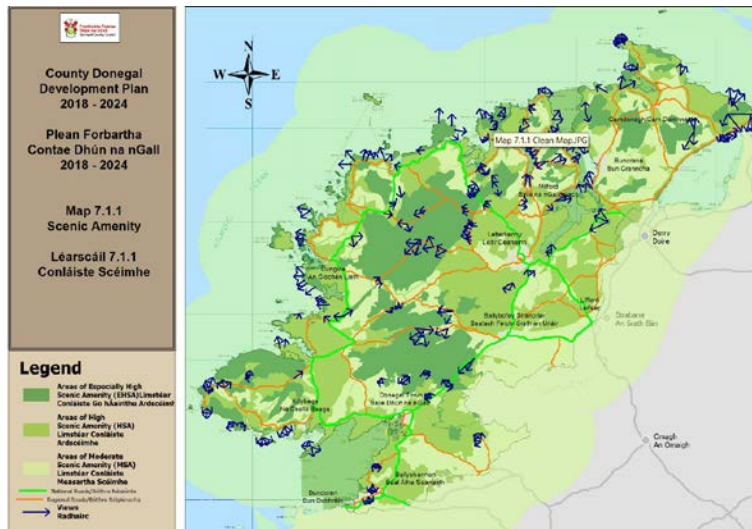
Landscape and Visual Baseline

In relation to the landscape baseline Map 7.1.1 The County Donegal Development Plan 2018-2024(as varied) categorises the County into 3 layers of scenic value namely:

- **Areas of Especially High Scenic Amenity (EHSA):** Sublime natural landscapes of the highest quality synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development.
- **Areas of High Scenic Amenity (HSA):** Landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal. These areas have the capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape, subject to compliance with all other objectives and policies of the plan.
- **Areas of Moderate Scenic Amenity (MSA)** Primarily landscapes outside Local Area Plan Boundaries and Settlement Framework boundaries, that have a unique, rural and generally

¹⁴ Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment, 3rd Edition,

agricultural quality. These areas have the capacity to absorb additional development that is suitably located, sited and designed subject to compliance with all other objectives and policies of the Plan.



In addition a Landscape Character Assessment (LCA) has been prepared for by Donegal County Council. This LCA identifies both landscape 'types' (e.g. mountainous blanket bog, agricultural foothills, agricultural coastal, forest etc) and 'landscape character areas' (e.g. Derryveagh Mountains, Cark Mountain Uplands, Donegal Bay Drumlins, Foyle Valley, Malin Coast etc).

In relation to the visual baseline the following provisions of the above Development Plan are deemed significant:

- Map 7.1.1 of the plan which identifies a range of views within the county (see above).
- Objective NH-O-5: *To protect, manage and conserve the character, quality and value of the landscape having regard to the proper planning and development of the area, including consideration of the scenic amenity designations of this plan, the preservation of views and prospects and the amenities of places and features of natural, cultural, social or historic interest.*
- Policy NH-P-17: *It is a policy of the Council to seek to preserve the views and prospects of special amenity value and interest, in particular, views between public roads and the sea, lakes and rivers.*
- Policy TOU-P-5: *It is a policy of the Council not to permit development which would materially detract from visual and scenic amenities along the route of the Wild Atlantic Way.*

Assessment of Landscape Effects

A broad strategic assessment of the likely significant effects on landscape arising from the Proposed Variation based on the guidance set out in the publication *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition* (Landscape Institute and Institute of Environmental Management and Assessment (LIIEMA), 2013), is set out in Table 7.3 below:

Legend for Assessment of Landscape Effects in Table 7.3

Term	Definition/Explanation (as per LI, IEMA 2013)	Rating												
Sensitivity														
Susceptibility	Ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or achievement of landscape planning policies and strategies.	<table border="1"> <tr><td>Very Low</td><td>Green</td></tr> <tr><td>Low</td><td>Light Green</td></tr> <tr><td>Medium</td><td>Yellow</td></tr> <tr><td>High</td><td>Orange</td></tr> <tr><td>Very High</td><td>Red</td></tr> </table>	Very Low	Green	Low	Light Green	Medium	Yellow	High	Orange	Very High	Red		
Very Low	Green													
Low	Light Green													
Medium	Yellow													
High	Orange													
Very High	Red													
Value	The Value of the landscape receptors on the basis of their Scenic Amenity Value.	<table border="1"> <tr><td>Very Low</td><td>Green</td></tr> <tr><td>Low</td><td>Light Green</td></tr> <tr><td>Medium</td><td>Yellow</td></tr> <tr><td>High</td><td>Orange</td></tr> <tr><td>Very High</td><td>Red</td></tr> </table>	Very Low	Green	Low	Light Green	Medium	Yellow	High	Orange	Very High	Red		
Very Low	Green													
Low	Light Green													
Medium	Yellow													
High	Orange													
Very High	Red													
Magnitude														
Size/scale	<p>The size/scale or change <u>in the landscape</u> that is likely to be experienced as a result of the effect. Including:</p> <ul style="list-style-type: none"> The extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape. The degree to which aesthetic or perceptual aspects of the landscape are altered by the removal of existing landscape components or additions of new ones. Whether this effect changes the key characteristics of the landscape which are critical to its distinctive character. 	<table border="1"> <tr><td>Insignificant Effect</td><td>N</td></tr> <tr><td>Minor</td><td>Yellow</td></tr> <tr><td>Moderate</td><td>Orange</td></tr> <tr><td>Major</td><td>Red</td></tr> </table>	Insignificant Effect	N	Minor	Yellow	Moderate	Orange	Major	Red				
Insignificant Effect	N													
Minor	Yellow													
Moderate	Orange													
Major	Red													
Geographical extent.	The geographical extent over which the landscape effect will be felt (as distinct from the size/scale of the effect)	<table border="1"> <tr><td>Not Applicable</td><td>N/A</td></tr> <tr><td>Site level</td><td>Light Green</td></tr> <tr><td>Immediate Setting of Site</td><td>Yellow</td></tr> <tr><td>Within host LCA Area</td><td>Orange</td></tr> <tr><td>Across several LCA Areas.</td><td>Red</td></tr> </table>	Not Applicable	N/A	Site level	Light Green	Immediate Setting of Site	Yellow	Within host LCA Area	Orange	Across several LCA Areas.	Red		
Not Applicable	N/A													
Site level	Light Green													
Immediate Setting of Site	Yellow													
Within host LCA Area	Orange													
Across several LCA Areas.	Red													
Duration/Reversibility	<ul style="list-style-type: none"> Duration: Timeframe over which landscape effect will be felt (i.e. short, medium or long term) Reversibility: Prospect/practicality of particular effect being reversed within a generation (e.g. housing permanent, Wind energy reversible). 	<table border="1"> <tr><td>Not Applicable.</td><td>N/A</td></tr> <tr><td>Short</td><td>Green</td></tr> <tr><td>Medium</td><td>Yellow</td></tr> <tr><td>Long Term</td><td>Red</td></tr> <tr><td>Permanent</td><td>P</td></tr> <tr><td>Reversible</td><td>R</td></tr> </table>	Not Applicable.	N/A	Short	Green	Medium	Yellow	Long Term	Red	Permanent	P	Reversible	R
Not Applicable.	N/A													
Short	Green													
Medium	Yellow													
Long Term	Red													
Permanent	P													
Reversible	R													
Total Landscape Effects														
	Overall Assessment of landscape effect combining sensitivity and magnitude	<table border="1"> <tr><td>Significant Positive</td><td>Green</td></tr> <tr><td>Positive</td><td>Light Green</td></tr> <tr><td>No Relationship/Insignificant</td><td>Yellow</td></tr> <tr><td>Negative</td><td>Orange</td></tr> <tr><td>Significant Negative</td><td>Red</td></tr> </table>	Significant Positive	Green	Positive	Light Green	No Relationship/Insignificant	Yellow	Negative	Orange	Significant Negative	Red		
Significant Positive	Green													
Positive	Light Green													
No Relationship/Insignificant	Yellow													
Negative	Orange													
Significant Negative	Red													

Table 7.3: Overall Assessment of Landscape Effects on Scenic Landscape Category Areas (Map 7.1.1 of the CDP 2018-2024 (As Varied) refers)

Landscape Receptor	Sensitivity of Receptor		Magnitude of Effect			Overall Landscape Effect	Comment
	Susceptibility	Value	Size/Scale	Geographical Extent	Duration/Reversibility		
Especially High Scenic Amenity (EHSA) and the scenically sensitive Gweebarra River Valley and St John's Point areas.			N	N/A	N/A		<p>Susceptibility: EHSA areas have a very high susceptibility to change arising from wind energy development on the basis that they are described as having '<i>extremely limited capacity to assimilate additional development</i>'. In addition it is considered that the scenically sensitive Gweebarra River Valley and St John's Point areas also have limited capacity to assimilate additional development.</p> <p>Value: EHSA areas have a high value on the basis that they are described as '<i>Sublime natural landscapes of the highest quality synonymous with the identity of County Donegal.</i>' It is also considered that the Gweebarra River Valley and St John's Point areas have a significant scenic value.</p> <p>Size/Scale: On the basis that Proposed Variation includes EHSA areas and scenically sensitive Gweebarra River Valley and St John's Point areas within the 'Not Normally Permissible' wind energy category zoning, does not provide for new wind energy developments in said zoning, and only provides for the augmentation, upgrade and improvements to existing wind farms in said area it is considered that the variation will result in no significant change in the landscape of these areas. In this regard no significant landscape elements of these areas will be lost and no aesthetic or perception aspects of said landscape type will be altered arising from the Proposed Variation.</p> <p>Geographical Extent: Not Applicable. There will be no significant change in the EHSA landscape area arising from the proposed variation.</p> <p>Duration/Reversibility: Not Applicable. There will be no significant change in the EHSA landscape area arising from the proposed variation.</p> <p>Conclusion: Insignificant effect</p>
High Scenic Amenity (HSA)					R		<p>Susceptibility: HSA areas have a medium susceptibility to change arising from wind energy development on the basis that they are described as having the '<i>capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape.</i>'</p>

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Landscape Receptor	Sensitivity of Receptor		Magnitude of Effect			Overall Landscape Effect	Comment
	Susceptibility	Value	Size/Scale	Geographical Extent	Duration/ Reversibility		
							<p>Value: HSA areas have a high value on the basis that they are described as <i>'Landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal.'</i></p> <p>Size/Scale: A significant portion of the HSA landscapes are contained within the 'Open to Consideration' wind energy zoning in the variation. Furthermore Donegal is likely to experience development pressures for further wind energy development in the coming years as a result of the government's Climate and Renewable energy targets. However on the basis that:</p> <ul style="list-style-type: none"> The extent of the individual landscape elements (e.g. the undulating agricultural landscape of good quality pasture and arable land within the Lagan Valley LCA) which will be lost is likely to small relative to the overall extent of such elements in the respective landscape character areas which are contained within the HSA area. The Draft Wind Energy Guidelines 2021 broadly indicate that subject to good siting and design wind energy developments can be accommodated within the 'Hilly and Flat Farmland' and the 'transitional marginal landscape' which make up the vast majority of the HSA landscape area zoned 'Open to Consideration'. In addition individual wind energy developments will be routinely subject to landscape impact assessment as part of the development management process. Furthermore such development must comply with the existing Policy NH-P-7 which requires that only developments <i>'of a nature, scale and location, that allows the development to integrate within and reflect the character of the amenity design of the landscape will be facilitated'</i>. Consequently it is considered that the proposed variation will only have limited impacts on the aesthetic or perceptual aspects or the key characteristics of said HSA landscape. <p>It is considered that the size/scale of the change in the HSA landscape arising from the Proposed Variation is likely to be minor.</p> <p>Geographical Extent: It is acknowledged that wind energy developments have the potential to be prominent within the landscape and therefore the geographical extent over which any landscape effects may be felt/experienced may be extensive. However on the basis that the HSA areas which are zoned 'Open to Consideration' are generally located in the less elevated parts of the County is considered that such landscape effects will generally be confined to the host LCA area.</p>

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Landscape Receptor	Sensitivity of Receptor		Magnitude of Effect			Overall Landscape Effect	Comment
	Susceptibility	Value	Size/Scale	Geographical Extent	Duration/Reversibility		
							<p>Duration/Reversibility: The landscape effects arising from wind energy developments are likely to be medium to long term in duration. Nevertheless as wind energy developments can be decommissioned and removed the effect is potentially reversible.</p> <p>Conclusion: Insignificant effect. It is noted that the HSA area has a medium susceptibility and a high value, the geographical effects of any landscape effects are likely to be relatively extensive and medium to long term in nature. However on the basis that the overall size and scale of the landscape effect is likely to be minor in nature it is considered that the overall effect on the host HSA landscape area will be insignificant overall.</p>
Moderate Scenic Amenity (MSA)					R		<p>Susceptibility: MSA areas have a low susceptibility to change arising from wind energy development on the basis that they are described as having the <i>'capacity to absorb additional development that is suitably located, sited and designed subject to compliance with all other objectives and policies of the Plan'</i>.</p> <p>Value: MSA areas have a medium value on the basis that they are described as <i>'Primarily landscapes outside Local Area Plan Boundaries and Settlement Framework boundaries, that have a unique, rural and generally agricultural quality'</i>.</p> <p>Size/Scale: A significant portion of the MSA landscapes are contained within the 'Open to Consideration' wind energy zoning. Furthermore Donegal is likely to experience development pressures for further wind energy development in the coming years as a result of the government's Climate and Renewable energy targets. However on the basis that:</p> <ul style="list-style-type: none"> The extent of the individual landscape elements (e.g. the undulating agricultural landscape of large square fields of the Finn Valley LCA) which will be lost is likely to small relative to the overall extent of such elements in the respective landscape character areas which are contained within the MSA area. The Draft Wind Energy Guidelines 2021 broadly indicate that subject to good siting and design wind energy developments can be accommodated within the 'Hilly and Flat Farmland' and the 'transitional marginal landscape' which also make up a significant amount of the MSA landscape area zoned 'Open to Consideration'. In addition individual wind energy developments will be routinely subject to

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Landscape Receptor	Sensitivity of Receptor		Magnitude of Effect			Overall Landscape Effect	Comment
	Susceptibility	Value	Size/Scale	Geographical Extent	Duration/Reversibility		
							<p>landscape impact assessment as part of the development management process. Furthermore development must comply with the existing Policy NH-P-7 which requires that only developments <i>'of a nature, scale and location, that allows the development to integrate within and reflect the character of the amenity design of the landscape will be facilitated'</i>. Consequently it is considered that the proposed variation will only have limited impacts on the aesthetic or perceptual aspects or the key characteristics of said MSA landscape.</p> <p>It is considered that the size/scale of the change in the MSA landscape arising from the Proposed Variation is likely to be minor.</p> <p>Geographical Extent: It is acknowledged that wind energy development have the potential to be prominent within the landscape and therefore the geographical extent over which any landscape effects may be felt/experienced may be extensive. However on the basis that the MSA area which are zoned 'Open to Consideration' are generally located in the less elevated parts of the County is considered that such landscape effects will generally be confined to the host LCA area.</p> <p>Duration/Reversibility: The landscape effects arising from wind energy developments are likely to be medium to long term in duration. Never the less as wind energy developments can be decommissioned and removed the effect is potentially reversible.</p> <p>Conclusion: Insignificant effect. The MSA area has a medium value, and the geographical effects of any landscape effects are likely to be relatively extensive and medium to long term in nature. However on the basis that the susceptibility of this landscape to change is low and the overall size and scale of the landscape effect is likely to be minor in nature it is considered that the overall effect on the hose MSA landscape area will be insignificant overall.</p>

Assessment of Visual Effects

Assessment of visual effects deals with the effects of plan/projects on the views available to people and their visual amenity. The abovementioned LIIEMA guidance advises that visual assessment should include inter alia:

- The establishment of a visual baseline, mapping the zone of theoretical visibility, identifying the visual receptors within those zones (i.e. the people that will be affected), identifying key viewpoints and views with said zone (e.g. the public viewpoints, transport route works places).
- The assessment and significance of visual effects including the sensitivity of visual receptors (including the susceptibility of visual receptors to change and the value attached to particular views) and the magnitude of the visual effects (include the size/scale of the visual effect, the geographical extent over which it will be felt, and duration/reversibility of the effects).

In this regard the visual effects of wind energy developments depends on the specific location, nature and extent of individual developments and therefore is largely a matter for project level, rather than strategic level assessment.

Notwithstanding the above on the basis that:

- Amendment No. 10 (Policy E-P-12) and the associated Amendment No. 20 (Map 82.1) provide for a limited geographical scope in which new wind energy developments will be 'Open to Consideration' and 'Permissible In Principle' which in turn is likely to limit the overall visual effects of such developments.
- Amendment No. 13 (Policy E-P-23) of the Proposed Variation requires that wind energy developments ensure a setback distance for visual amenity purposes of ten times the tip height of proposed turbines from the residential properties and is therefore likely to limit the visual effect of wind energy developments on local residents whom are a key visual receptor.
- Key views within the County identified in Map 7.1.1, views and prospects of special amenity value and interest, in particular, views between public roads and the sea, lakes and rivers, and the visual amenity of the Wild Atlantic Way are likely to be protected by the existing Objective NH-O-5, Policy NH-P-17, and Policy TOU-P-5 respectively.
- Wind Energy Developments facilitated by the Proposed Variation will be routinely subject to Landscape and Visual Impact Assessments including photomontages demonstrating the impact of such developments on key views and visual receptors and such assessment are key considerations in planning decisions.

It is considered that the likely significant effects of the proposed variation on visual baseline (including key views, visual amenity and visual receptors) will be insignificant overall.

In relation to the individual amendments it is considered that the abovementioned amendment Nos. 10 (Policy E-P-12), 13 (Policy E-P-23) and 20 (Map 8.2.1) are likely to have a positive effect on the landscape and visual baseline in so far as they exclude wind energy development in EHSA areas and within a distance 10 times tip height of residential properties. Otherwise it is considered that the remaining amendments would have an insignificant effect on the landscape and visual baseline.

Consequently on the basis of the above assessment it is considered that the total landscape and visual effects arising from the proposed variation will be insignificant overall.

7.4 In-combination and Cumulative Impacts

7.4.1 Cumulative Assessment Methodology

Article 5 of the SEA Directive requires that the Environmental Report assesses the likely significant effects of implementing the plan or programme taking account its objectives and geographical scope.

Furthermore Annex I(f) of the directive states that likely significant effects include inter alia cumulative effects. The departmental SEA Guidance advises that SEA '*has the potential to assess cumulative effects which the case-by-case approach of project EIA may not be fully equipped to do*'.

In particular The EPA publication 'Good Practice Guidance on Cumulative Effects Assessment in Strategic Environmental Assessment (January 2020) states that:

- *Cumulative effects result from a combination of two or more individual effects on a receptor. Such effects can occur as a result of plans, programmes, projects and other actions ... in the past, present and the reasonably foreseeable future. They can result from impacts that may be individually insignificant, but collectively significant.*

The guidance notes that cumulative impacts include:

- Additive: Where impacts can be simply added together.
- Synergistic: Where 2 impacts together have a greater impact than adding up the individual impacts.

In summary this guidance advises that Cumulative Effects Assessment should adopt the following approach:

- **Task 1: Identify Receptors:** For example: biodiversity, humans, water quality, climate change, landscape etc, including scoping in impacts that, along might be insignificant but cumulatively may be significant.
- **Task 2: Identify Limits/Threshold/Standards** in relation to the key environmental receptors. (e.g. Climate Change Targets, Natura 2000 sites, Water Framework Directive Targets etc).
- **Task 3:** Discuss the current state of the environment without implementing the plan including:
 - Describing the **current state of the environment** and past trends.
 - **Identifying other actions** that could have cumulative effects. Note: As indicated above this can include plans, programmes, projects and other actions in the past, present and the reasonably foreseeable future.
 - **Describing the *likely environmental impacts* of these other actions.**
- **Task 4: Assess the impacts of the plan plus those of other actions** and compare these against the limits/thresholds to assess significance including:
 - Identifying the total effects of the plan. Note: The total effects of the plan are those of all of the plan policies and subcomponents together.
 - Identifying the cumulative effects (i.e. the total effects of the plan plus the effects of other actions).
- **Task 5: Mitigate** Significant Cumulative Impacts.
- **Task 6: Monitor** for Significant Cumulative Impacts.

The above approach has been used to assess the cumulative effects of the Proposed Variation.

7.4.2 Assessment of Cumulative Effects

Task 1: Identification of Key Environmental Receptors:

The key environmental receptors relevant to specific environmental aspects are identified within the current state of the environment section of this report and are summarised in the table below:

Table 7.4 Key Environmental Receptors.

Environmental Aspects	Key Receptor
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> • Special Areas of Conservation (e.g. within Cloghernagore Bog And Glenveagh National Park SAC, Lough Nillan Bog (Carrickatlieve) SAC, River Finn SAC, Lough Eske and Ardamona Wood SAC). • Special Protection Areas (SPAs) (e.g. Lough Swilly SPA and Horn Head to Fanad Head SPA). • Nature Reserves (e.g. Ard Na Mona, Ballyarr, Inch Levels Wildfowl Reserve, Lough Bara Bog, Meenachullion, Pettigo Plateau and Sheskinamore) • Ramsar sites. • Natural Heritage Areas. • Long established woodlands. • Freshwater Pearl Mussel habitats within river systems. • Aquatic habitats within river systems. • Other upland peatland habitats.
Population and Human Health	Human Populations with rural areas.
Soils and Geology	<ul style="list-style-type: none"> • A range of soil types throughout the county including, inter alia: peat soils, NBP 4 - Fine loamy over shale and slate bedrock, Ballywilliam - Coarse loamy drift with igneous and metamorphic stones, and Carrigvahanagh - Peat over lithoskeletal acid igneous rocks. • A range of geology throughout the county including, inter alia: precambrian gneiss and schists, precambrian quartzite, granite, devonian sandstones, lower Carboniferous sandstones and lower carboniferous limestone.
Water	Water bodies Rivers, lakes, estuaries, coastal waters and ground waters through the county including in particular WFD High status objectives waterbodies, WFD Register of Protected Areas waterbodies and water bodies with poor or moderate WFD status
Air	Humans, Flora and Fauna.
Climatic Factors	Humans, Flora and Fauna.
Material Assets	Dwellings, agricultural lands etc.
Cultural Heritage	<ul style="list-style-type: none"> • Archaeological Monuments: Record of Monuments and Places (RMP), the Register of Historic Monuments (RHM) and National Monuments • Architectural Heritage: Record of Protected Structures (RPS), and the National Inventory of Architectural Heritage (NIAH).
Landscape:	Scenic areas including areas designated as Especially High Scenic Amenity and High Scenic Amenity on Map 7.1.1 of the County Donegal Development Plan 2018-2024(As Varied) and designated views and prospects.

Task 2: Key Limits/Threshold/Standards in relation to the key environmental receptors

The key environmental receptors are identified within the current state of the environment section of this report and are summarised in the table below:

Table 7.5 Key Limits/Thresholds/Standards In Relation To the Key Environmental Receptors.

Environmental Aspects	Limit/Threshold/Standard
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. Article 4(1) of the Bird Directive requires that Annex I species be the subject of special conservation measures and similar measures for regularly occurring migratory species. The Wildlife Act 1976 provides general protection to certain birds, animals and flora.
Population and Human Health	No specific relevant limit/threshold/standard
Soil	No specific relevant limit/threshold/standard
Water	Under the WFD Member states are required to achieve at least good status in all waters and must ensure that status does not deteriorate
Air	WHO and CAFE emission limits values.
Climatic Factors	Paris Agreement, European and national Greenhouse Gas Emission Targets.
Material Assets	No specific relevant limit/threshold/standard.
Cultural Heritage	<ul style="list-style-type: none"> Record of Protected Structures: S.57(10)(b) of the Planning and Development Act 2000(as amended) states that a planning authority shall not grant permission for the demolition of RPS structure save in exceptional circumstances. Record of Monuments and Places: The National Monuments (Amendment) Act 1994 legally protects structures on the RMP.
Landscape:	No quantifiable limit/threshold/standard.

Task 3: Current State of Environment (including Other Relevant Actions which could have cumulative effects and likely environmental impacts of said actions)

- The current state of the environment (including key trends) for the various environmental aspects are detailed for the various environmental aspects in Section 3.
- Other actions which could have cumulative effects with the plan are identified in the above below.

Table 7.6 Other Actions which could have Cumulative Effects With the Plan.

Category	Other Actions
Existing and Permitted rural Developments in areas.	<ul style="list-style-type: none"> Agricultural Developments: These have the potential to facilitate agricultural intensification and associated negative effects on water quality (e.g. nitrogen and phosphorous based nutrient pollution), aquatic biodiversity (e.g. from pollution of watercourses) and climate (e.g. methane emissions from higher cattle herd numbers) and positive effects (e.g. creation of new agricultural assets). Rural Housing: Cumulatively rural housing has the potential to give rise to negative effects on biodiversity (e.g. direct loss and fragmentation of habitat), water quality (e.g. pollution from effluent treatment systems), climate (e.g. transport emissions arising from car dependent dispersed development) and landscape (e.g. impact on landscape character arising from cumulative impact of such developments) and positive effects new material assets (e.g. new housing developments). Quarries: These have the potential to impact on inter alia population and human health (e.g. dust and noise emissions), water quality (e.g.

Category	Other Actions
	sedimentation of water bodies), air quality (e.g. dust emissions), and landscape (e.g. removal of specific landscape elements).
Strategic Projects	<ul style="list-style-type: none"> • TEN-T Priority Route Improvement Project, Donegal: Potential impacts include positive effects on population (e.g. economic growth, quality of life improvement, noise reduction on urban receptors), air quality (e.g. decrease in congestive queuing emissions) and negative effects such as loss of materials assets (e.g. agricultural land and buildings).
Other plans and projects which set the framework for future development consents	<ul style="list-style-type: none"> • National Planning Framework • Regional Spatial and Economic Strategy • Other aspects of the County Development Plan 2018-2024(as varied)

Task 4: Assess the Impact of the Plan plus those of Other Actions

The total effects of the plan were identified and categorised in Table 7.2 and these findings are incorporated into the table below. The total effects of other relevant actions which may also impact on environmental receptors are also detailed, assessed and categorised in the table below. Collectively this facilitates a cumulative assessment (i.e. an assessment of the total effect of the plan plus those of other actions) across a range of environmental categories as detailed in the table below.

Task 5: Mitigation:

The measures envisaged to prevent and reduce any significant adverse effects related to the Proposed Variation are detailed in Section 8 of this report.

Task 6: Monitor

The measures to monitor the effects of the Proposed Variation are detailed in Section 10 of this report.

Table 7.7: Description of Environmental Impacts of Other Actions related to the Proposed Variation

Key

++	Significant Positive Effect
+	Positive Effect
0	No Relationship/Insignificant Effect
-	Negative Effect
--	Significant Negative Effect
?	Uncertain Effect
N/A	Not Applicable

Action Type	Specific Other Action	Biodiversity	Population	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
		Flora Fauna	Human Health								
Existing Permitted Developments Categories i	Agricultural Developments										Agricultural developments (e.g. slatted sheds for cattle) are a significant form of Development in rural Donegal. Such development may facilitate agricultural intensification including herd growth. The cumulative impact of all such developments are likely to have negative effects on biodiversity (e.g. loss of aquatic biodiversity from nutrient pollution of watercourse), water (e.g. nutrient pollution particularly of watercourses with a poor WFD status in the east of the county), climate (e.g. methane emissions from higher cattle numbers) but also positive effects on material assets (e.g. the creation of new agricultural assets). It is considered that the effects on other environmental categories would be insignificant overall.
	Rural Housing										Rural housing particularly one off rural housing constitutes predominant form of new development in rural Donegal and a significant quantum of new rural housing has been permitted in recent years. The cumulative impact of all such developments is likely to have negative effects on: biodiversity (e.g. loss of habitats on marginal land and pollution of aquatic ecosystems), water (e.g. pollution of watercourses from poorly installed or maintained individual effluent treatment systems), climate (e.g. transport emissions arising from car dependent dispersed development), and landscape (e.g. impact on landscape character arising from cumulative impact of such developments). However such development is likely to have a positive effect on material assets (i.e. the creation of new housing assets). It is considered that the effects on other environmental categories would be insignificant overall.

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Action Type	Specific Other Action	Biodiversity Flora Fauna	Population Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
	Quarries										<p>Individually quarries constitute a significant rural development type. Negative effects from quarries may include: biodiversity (e.g. loss of habitat and disturbance to wildlife), population and human health (e.g. noise and dust emissions), air quality (e.g. dust emissions), water (e.g. sedimentation of local water courses) and landscape (e.g. loss of loss of key landscape elements).</p> <p>However on the basis of: the relatively limited number and geographically dispersed nature of quarries within rural areas, the fact that quarries do not constitute a significant water pollution source in the WFD 3rd Cycle catchment assessments, it is not considered that cumulatively such developments have a significant effects on any of the abovementioned environmental categories.</p>
Planned Strategic Level Projects	TEN-T Priority Route Improvement Project, Donegal		?			?	?	?	?		<p>This project is currently at Phase 3 Design and Environmental Evaluation. The finalised design of the project will be subject to detailed project level EIAR. Hence the potential effects on certain environmental aspects are currently uncertain or can only be predicted with a degree of uncertainty.</p> <p>However the Variation to the CDP 2018-2024 in respect of said project, which provided the strategic planning framework for the project, was subject to both an Environmental Report and Natura Impact Report.</p> <p>Said Environmental Report found that the strategic objective providing for the overall project did not identify any conflict with any Strategic Environmental Objective (SEO) which could not be mitigated to an acceptable level and otherwise found a number of uncertain impacts vis-a-vis said SEOs.</p> <p>Said Natura Impact Report concluded beyond reasonable scientific doubt that Variation would not adversely affect the integrity of any Natura 2000 site having regard to the mitigation measures outlined in the report.</p>
National and Regional Planning Frameworks.	National Planning Framework										<p>The Natura Impact Statement (NIS) for the NPF concludes that subject to the mitigation proposed in the NIS being incorporated, there will be no adverse effects on the integrity of any European Sites as a result of implementation of the NPF.</p>

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Action Type	Specific Other Action	Biodiversity Flora Fauna	Population Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
		Yellow	Green	Yellow	Yellow	Light Green	Light Green	Green	Yellow	Yellow	<p>Otherwise the Environmental Report (ER) for the NPF identifies a variety of positive, neutral and negative effects in each of the environmental categories. It is therefore difficult to neatly categorise the effects of the RSES on all environmental categories opposite.</p> <p>On the basis of the abovementioned NIS findings, an analysis Section 8.3.10 of said environmental report and by aggregating the different effects recorded for each NPO across the different environmental topics, it is possible to broadly categorise the overall effect for each environmental topic as shown on the left.</p>
	Regional Spatial and Economic Strategy for the Northern and Western Region	Orange	Light Green	Orange	Orange	Light Green	Light Green	Light Green	Orange	Yellow	<p>The Natura Impact Statement for the RSES concludes that <i>'the NW RSES would not adversely affect the integrity of a European site (whether individually or in combination with other plans or projects) subject to application of all of the mitigation measures identified in this NIR.'</i></p> <p>Otherwise the Environmental Report for the RSES identifies a variety of positive, neutral and negative effects in each of the environmental categories. It is therefore difficult to neatly categorise the effects of the RSES on all environmental categories opposite.</p> <p>However Section 8.4 Cumulative Effects of the Environmental Report for the RSES (which takes into account the 'interaction of regional policy objectives within the RSES') states that: <i>'the greatest cumulative benefit should be in relation to PHH', the overall planning approach in the RSES should also bring positive cumulative impacts to air quality and climate as a result of facilitating increased sustainable transport access with a focus on integrated land use and transport planning'</i> and otherwise states that <i>'there is potential for cumulative negative impacts on receptors such as biodiversity, water, soils, cultural heritage and landscape,'.</i></p> <p>However on the basis of The emphasis on the 'sustainable growth of more compact urban and rural settlements' contained within the RSES it is considered that the strategy will not have a negative effect on landscape receptors in Donegal.</p>

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Action Type	Specific Other Action	Biodiversity Flora Fauna	Population Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
											Consequently the effect of the RSES on landscape has been rated as insignificant.
	County Donegal Development Plan 2018-2024(As varied)										<p>The Natura Impact for the County Donegal Development Plan 2018-2024 concluded a finding of <i>'No Significant Effects following the completion of stage 2 of the process. Any potential impact on the Natura 2000 network has been mitigated against through amendments of existing policies and objectives'</i></p> <p>The Environmental Report for said plan identifies a variety of effects arising from the various objectives and policies of the plan and hence it is possible to neatly categorise the overall impacts of same. However the report concluded that:</p> <ul style="list-style-type: none"> <i>The implementation of the County Donegal Development Plan will have an overall positive effect on the environmental status of the County;</i> <i>Whilst a number of objectives and policies would have an overall positive impact, there may be certain elements of them that could also contain potential for conflict; where this arises the objectives and policies should be mitigated to an acceptable level*;</i> <i>The impact of some objectives and policies may be uncertain;</i> <i>The Implementation of the Plan will not give rise to probable environmental conflicts that are unlikely to be mitigated to an acceptable level*.</i> <p>In addition the addendum to said report in respect of the Material Alterations to the plan stated that said alterations <i>'had Potential Conflict with the status of the SEOs but were likely to be mitigated to an acceptable level through other objectives and policies contained within the Draft Plan.'</i></p> <p>As such it is not possible to neatly categorise the effects of said plan on the various environmental topics overall but said findings have been considered within this overall cumulative assessment</p>
Total Effects Of Other Actions											<p>Biodiversity: Negative effects may arise from agricultural developments, rural housing and certain aspects of the Regional Spatial and Economic Strategy.</p>

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Action Type	Specific Other Action	Biodiversity Flora Fauna	Population Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
											<p>Population and Human Health: The NPF and the RSES will have positive effects on population and human health.</p> <p>Soil: The RSES may give rise to certain negative effects on soil. However overall the total effects on soil are likely to be insignificant.</p> <p>Water: Negative effects may arise from existing and permitted agricultural developments, rural housing and certain aspects of the RSES may give rise to negative effects.</p> <p>Air: Both the NPF and the RSES may give rise to positive effects on air quality as a result of more sustainable development patterns and increased sustainable mobility. However at the local level these are unlikely to result in any significant improvement in air pollution which is primarily related to the burning of fossil fuels for home heating in urban areas.</p> <p>Climate: Negative effects arising from existing and permitted agricultural developments and rural housing may be offset by positive effects arising from the NPF and the RSES which would promote more compact growth and sustainable mobility and therefore reduce greenhouse gas emissions.</p> <p>Material Assets: The NPF, RSES, rural housing and agricultural developments are all likely to have a positive effect on material assets (e.g. new transport infrastructure, housing, agricultural developments etc).</p> <p>Cultural Heritage: Certain aspects of the RSES may give rise to negative effects on cultural heritage. However it is considered that the overall impact of the other abovementioned actions on cultural heritage will be insignificant overall.</p> <p>Landscape: Negative effects may arise from the cumulative impact of existing and permitted rural housing developments.</p>
<p>Total Effects of the Proposed Variation (See Last Row Table 7.2).</p>											<p>The total effects of the Proposed Variation are identified in the last row of Table 7.2 and are replicated opposite.</p>
<p>Cumulative Impact of the Proposed Variation plus Other Actions</p>											<p>It is therefore considered that the cumulative effects of the Proposed Variation and the other abovementioned actions can be categorised as opposite. In this regard in relation to:</p> <p>Biodiversity: Individually the Proposed Variation will have an insignificant effect on biodiversity. However negative effects</p>

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Action Type	Specific Other Action	Biodiversity Flora Fauna	Population Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape	Comments
											<p>may arise from other actions (e.g. negative effects on habitats from rural housing and aquatic species from agricultural development) which may result in additive cumulative negative effects.</p> <p>Population and Human Health: Individually the Proposed Variation will have an insignificant effect on population and human health. However positive effects will arise from the NPF and the RSES which may result in additive cumulative positive effects.</p> <p>Soil: Individually the Proposed Variation will have an insignificant effect on soil. The other abovementioned actions will also have an insignificant effect on soil overall.</p> <p>Water: Individually the Proposed Variation will have an insignificant effect on water. However negative effects arising from agricultural developments and rural housing may give rise to additive and in some limited circumstances cumulative negative effects on water.</p> <p>Air: Individually the Proposed Variation will have an insignificant effect on air. The other abovementioned actions will also have an insignificant effect on air overall.</p> <p>Climate: Individually the Proposed Variation will have a positive effect on climate mitigation. It is considered that the other abovementioned actions will have an insignificant effect on climate overall. Consequently the additive cumulative effect on climate is considered positive.</p> <p>Material Assets: Individually the Proposed Variation will have a positive effect on material assets. The abovementioned other actions (including the NPF, RSES, rural housing and agricultural developments) are all likely to have a positive effect on material assets (e.g. new transport infrastructure housing, agricultural developments etc) resulting in a positive additive cumulative effect.</p> <p>Cultural Heritage: Individually the Proposed Variation will have an insignificant effect on cultural heritage. The other abovementioned actions will also have an insignificant effect on cultural heritage.</p> <p>Landscape: Individually the Proposed Variation will have an insignificant effect on the landscape and visual baseline. However negative effects may arise from the cumulative impact of existing and permitted rural housing developments resulting in an additive cumulative negative effect on landscape.</p>

8 THE MEASURES ENVISAGED TO PREVENT, REDUCE AND AS FULLY AS POSSIBLE OFFSET ANY SIGNIFICANT ADVERSE EFFECTS ON THE ENVIRONMENT OF IMPLEMENTING THE PLAN OR PROGRAMME

8.1 Introduction

Article 5(1) of the SEA Directive requires that an Environmental Report contains the information referred to in Annex 1 of the Directive. In turn Annex 1(g) of the Directive requires that 'the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme' be contained within the Environmental Report. The SEA Guidelines states that where the environmental assessment identifies significant adverse effects consideration should be given in the first instance to preventing such impacts or, where this not possible for stated reasons to lessening or offsetting those effects.

Significant adverse environmental effects can be prevented, reduced and offset through a wide range of plan making and implementation measures including:

- Sensitive **spatial frameworks** which avoid or reduce adverse environmental effects in the first instance (e.g. avoiding developments on or adjacent to Natura 2000 sites, Ramsar Sites, Nature Reserves, Natural Heritage Areas (NHA's), on centres of human population, areas of Especially High Scenic Amenity etc, areas of high, moderately high and moderately low landslide susceptibility etc).
- The formulation and application of environmental protection **policies** (e.g. policies which provide for the protection of environmental or human receptors which are sensitive to Wind Energy Development (e.g. peatlands or visual/noise setbacks).
- The imposition and enforcement of **planning conditions** which prevent or reduce adverse environmental effects during the construction and operational phases of development (e.g. construction management and environmental plans, specific noise conditions, duration of permission and decommissioning conditions).
- The provision of new local **community funding** which may help to offset any potential loss of environmental or visual amenities.

As such the following measures have been taken into account in the plan making phase, and may be taken in the plan implementation phase, to prevent, reduce and as fully as possible offset any significant adverse environmental effects related to the Proposed Variation.

8.2 Measures to prevent, reduce and as fully as possible offset any significant adverse environmental effects related to the Proposed Variation

Avoidance and Reduction of Significant Adverse Environmental Effects through Sustainable Spatial Frameworks

Environmental issues (biodiversity, impacts on human health, landslide susceptibility/water quality, landscape and visual impacts) were fully integrated into the Proposed Variation making process from the outset to ensure that the variation minimises impacts on key environmental receptors/has due regard to environmental constraints and otherwise promotes sustainable development. In this regard SEA scoping with the environmental authorities, desktop assessment, the collation of environmental datasets, has enabled the identification and consideration of potential impacts on key environmental receptors. In addition the plan making team took best practice and planning guidance into account with regard to the promotion of sustainable development (e.g. Draft Wind Energy Development Guidelines 2019). This allowed the formulation of a spatial framework which helps to avoid and reduce

significant adverse environmental effects in particular by including the following within the 'Not Normally Permissible' area for wind energy area:

- Natura 2000 Sites: (e.g. Special Areas of Conservation and Special Protection Areas) which are designated sites protected under both the EU Habitats and Bird Directive.
- Ramsar Sites which are wetland areas of significant value to waterfowl protected under the Convention of Wetlands of International Importance (Ramsar) 1971.
- Nature Reserves identified as areas of National Importance to Wildlife under the both Ministerial orders the Wildlife Acts.
- Natural Heritage Areas (NHA's) a national network of wildlife sites designated to conserve and protect environmentally important landforms, species, communities and habitats under the Wildlife Amendment Act 2000 (as amended).
- Long Established Woodlands which are protected under Article 17 of the Habitats Directive (e.g. Rathmullan Wood, Ballyarr Wood, Ardnamona Wood etc).
- Settlement frameworks (e.g. Letterkenny, Dungloe, Carndonagh, Donegal Town, Glenties etc) and a buffer of 500m around each said framework area as areas not suitable for wind farm development in accordance with the Wind Energy Development Guidelines.
- Glenveagh National Park: The county's only National Park including Glenveagh Castle grounds, Lough Veagh, and much of the Derryveagh Mountains which is protected through both European and National Legalisation.
- Areas of high, moderately high and moderately low landslide susceptibility (often steep upland or peatland areas) which may be susceptible to ground works or changes in hydrological flow regimes as a result of wind energy developments.
- Areas designated as Especially High Scenic Amenity in Map 7.1.1 Scenic Amenity of the County Donegal Development Plan 2018-2024(as varied) which are described as sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal and which have extremely limited capacity to assimilate additional development and the scenically sensitive Gweebarra River Valley and St John's point areas
- Other areas which have been included in the above area on foot of the exceptional landslide event at Meenbog in November 2020.

Avoidance and Reduction of Significant Adverse Environmental Effects through Planning Policies

Environmental protection policies can be important measures in avoiding and reducing adverse environmental effects in both the design and approval stages of new wind energy development public developments. For example:

- At the preplanning stage they can help ensure the formulation of more sustainable siting and design proposals for wind turbines access roads and hard standing areas. For example:
 - Policies requiring Peat stability assessments can help to avoid areas susceptible to mass movements/alterations to hydrological regimes) and thus avoid potential direct impacts on such peatlands and sensitive water features and associated aquatic habitats.
 - Policies requiring noise or visual amenity setbacks can help to identify and protect noise sensitive receptors (e.g. dwellings).
- At planning assessment/approval stage they can be utilised to either modify design proposals (e.g. the relocation of wind turbines, and access roads) to result in more environmentally friendly developments or as appropriate to prevent unsustainable developments occurring.

As part of the plan making process certain policies were devised to help, directly or indirectly avoid or reduce impacts on key environmental receptors including:

- E-P-26: It is the policy of the Council that all applications for wind farm development located on peatland and bog, including the re-powering and augmentation projects, shall be accompanied by a 'Peat Stability Risk Assessment Report'.
- Policy E-P-24: It is a policy of the Council that wind farm developments must ensure a setback distance for noise and shadow flicker purposes of ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation.

Avoidance and Reduction of Significant Adverse Environmental Effects through Planning Approvals

In approving new developments planning authorities have the statutory power to impose environmental protection conditions which can avoid and reduce the environmental effects of such developments.

Examples of the measures contained in such planning conditions include:

- Construction and Environmental Management Plans (i.e. for on-site refuse storage and site effluent treatment during construction, location of onsite parking, and dust and vibration control measures).
- Transport management plan for the delivery of construction materials and oversized loads including haulage routes,
- Adherence to specific mitigation measures set out in Environmental Impacts Statements and Natura Impact Statements including
 - Control measures to avoid/reduce sedimentation of surface waters such as avoiding impacts on existing watercourses, diversion of surface waters away from work area, careful stockpiling of spoil material away from watercourses, silt traps, and sedimentation ponds, controlled release to vegetation etc.
 - Control measures to avoid/reduce water pollution including the provision of bunded storage facilities for hydrocarbons and chemicals significantly removed from watercourses.
 - Adherence of site preparation and construction to best practice and the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites.
 - Direction and interception of surface waters from hardcore/concreted/tarmacadam via serviced sediment and oil interceptor traps.
 - The timing of works to avoid any potential noise impacts on the qualifying interests of Natura 2000 sites (e.g. wintering birds).
 - The timing of construction works to avoid noise impacts on local residential populations (e.g. specific days and times).
 - Invasive species management plans to control the spread of such species.
- Archaeological Conditions: (e.g. monitoring of groundworks, preservation by record of any archaeological materials) which may be of particular importance given the prevalence of archaeological material from the Mesolithic onwards in Donegal including many Megalithic sites.
- Operational noise limit conditions in accordance with the Draft Wind Energy Guidelines (e.g. noise impacts shall not exceed (1) Background noise levels by more than 5db(A) within range 35-43 dB(A) or 43 dB(A) both measured as $L_{90,10min}$ outdoors at specified noise sensitive locations.
- Operational Shadow Flicker Conditions in accordance with the Draft Wind Energy Guidelines (e.g. shadow flicker shall not exceed 30 mins per day or 30 hours per year at existing or permitted dwellings or other sensitive receptors).
- Post construction Bird and Bat monitoring by a suitably qualified and competent ecologist to enable comparison to a predevelopment baseline.
- Landscape and visual mitigation conditions (e.g. wind turbines to be matt grey colour in finish, blades rotating in same direction, undergrounding of cabling etc)
- Aeronautical conditions: As constructed position of turbines and associated aeronautical lighting.
- Duration of Permission and decommissioning conditions including removal of turbines and site restoration and habitats restoration where appropriate.

Measures To Offset Significant Adverse Environment

The proposed variation may also help to offset any potential adverse environmental effects of Wind Energy Developments where they might occur by facilitating funding for sustainable community benefit projects. For example: <https://windfarmcommunityfunds.ie/> which provides funding for inter alia Environment and habitat conservation and energy efficiency and sustainability.

9 AN OUTLINE OF THE REASONS FOR SELECTING THE ALTERNATIVES DEALT WITH, AND A DESCRIPTION OF HOW THE ASSESSMENT WAS UNDERTAKEN INCLUDING ANY DIFFICULTIES (SUCH AS TECHNICAL DEFICIENCIES OR LACK OF KNOW-HOW) ENCOUNTERED IN COMPILING THE REQUIRED INFORMATION

Two alternatives were considered as discussed below.

9.1 SET-BACK DISTANCE

This issue refers to the policy area of imposing minimum setback distances of windfarm turbines from residential receptors. The setback distance ultimately agreed by the Council for inclusion in the Proposed Variation was ten times the tip height of turbines. The alternative setback distance considered was a setback of four times tip height. The ten times tip height alternative was selected by Members having regard to previous decisions of the Authority in relation to this matter. Thus, following extensive consultation and engagement between Members, the public, the Department and the Council Executive, the Members voted to vary the 2012-2018 County Development Plan to among other things, impose a setback distance of ten times tip height from any wind turbine to an area of human habitation. The decision was made having due regard to national guidelines as they were at the time, and taking into account the views of the people of Donegal and to protect the environmental and ecological integrity of the County. Members consider that ten times tip height is a fair set back distance for modern day turbines, some of which extend to 160m, which are of a size and scale not envisaged when the original wind energy guidelines were published in 2006.

9.2 MAP 8.2.1

Alternatives to two aspects of Map 8.2.1 were considered.

Map Alternative 1: Carrickaduff Area

This area is identified in the approved Map 8.2.1 as 'Not Normally Permissible'. The alternative considered by Members was to include this area in the 'Open to Consideration' area. This alternative was rejected due to: concerns around a recent major landslide event in this area and concerns and the impacts on the ecology of the area; and Geological Survey Ireland's National Landslide Susceptibility Mapping, 2007 – 2016 and the identification therein of areas surrounding Meenbog as being of 'Moderately High' and 'Moderately Low' risk; and the rationale of applying the precautionary principle as a result.

Map Alternative 2: Landslide Susceptibility Areas: County-Wide

The approved Map 8.2.1 includes all areas of 'High', 'Moderate' and 'Low' landslide susceptibility in the 'Not Normally Permissible' areas on approved Map 8.2.1. The alternative considered by Members was to include only the 'High Landslide Susceptibility' areas in the 'Not Normally Permissible' areas. This alternative was rejected due to concerns similar to those identified in relation to the 'Map Alternative 1' as referred to above i.e. that the concerns over the risks pertaining to 'Moderately High' and 'Moderately Low' landslide susceptibility areas were as relevant to the remainder of the County, as they were to the area addressed under Map Alternative 1.

10 A DESCRIPTION OF THE MEASURES ENVISAGED CONCERNING MONITORING OF THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF IMPLEMENTATION OF THE PLAN OR PROGRAMME

Legislative Requirements

Article 10 of the SEA Directive requires that member states '*monitor the significant environmental effect of the implement of plan in order to **identify at an early stage unforeseen adverse effects** and to be able to **undertake appropriate remedial action***'. In addition Schedule 2B(i) of the Planning and Development Regulations 2001(as amended) requires the Environmental Report to include '*a description of the measures envisaged concerning monitoring the significant environments effects of the implementation of plan or programme*'.

Why Monitor?

The SEA Guidelines states that primary purpose of monitoring is to cross check significant environmental effects which arise during implementation stage against those predicted during the plan preparation stage. The EPA SEA Guidance document '*Guidance on Strategic Environmental Assessment Statements and Monitoring*' states inter alia that monitoring can reveal the 'real' effects implementing a plan/programme, identify long term positive and negative changes, any unforeseen effects, and the need for additional mitigation measures and inform plan review.

Who Monitors and When?

The SEA guidelines state that planning authorities should be responsible for devising monitoring programmes, collecting monitoring data and evaluating the results and that monitoring should begin when the plan is adopted and should in general continue over the period of the plan.

How and What to Monitor?

The SEA guidelines state that: the scope, depth and method of monitoring will **depend on the type of plan**, monitoring does not necessarily require new research, that **existing sources of information can be used** and that one monitoring arrangement may cover several plans. The guidelines also state that monitoring must be **linked to** earlier stages in the SEA process in particular the **environmental objectives and issues** identified during the preparation of the environmental report and should **concentrate on the significant environmental effects**, and the measures to prevent, reduce and offset any significant adverse effects. Said Guidelines also advise that monitoring is often based on indicators which measure changes in the environment especially changes which are critical in terms of environmental quality (such as air or water pollution levels).

The abovementioned EPA guidance provides a wide range of guidance on SEA monitoring which can be summarised as follows:

- Monitoring typically entails measuring established indicators on a regular basis.
- It should focus on the environmental impacts of the plan rather than plan implementation.
- It should focus on monitoring identified potential significant environmental effects not the strategic environmental objectives used in the assessment.
- It should include a suitably small set of highly relevant and meaningful indicators which monitor/measure potential environment impacts of the plan and which are aligned to the scope and nature of the plan. In this regard local-level plans should focus on both local issues (e.g. specific areas of poor air quality) and larger scale problems that are relevant to the plan area (e.g. proportion of car journeys made by car).
- Utilise existing monitoring programmes and use spatial information for spatial plans.
- It should set out the frequency at which indicators should be monitored.
- It should identify who is responsible for carrying out monitoring.
- It should test and document a plan's impact in relation to targets and thresholds. (e.g. climate, air, water quality) and use international and national thresholds.
- It should set out the thresholds/targets/indicators above which remedial action is required.

- It should define remedial actions should involve and who is responsible.
- It should include a commitment to reporting on findings.
- It should refer to previous monitoring programmes.
- The monitoring programme should be included in the plan.
- Monitoring should not be used as a mitigation measure.

As such monitoring of the implementation of the Proposed Variation is required in order to properly consider the effects of the implementation of the plan, and to identify remedial actions, and areas that need to be considered for review.

In this regard the Variation as it is contained within the County Development Plan is one of many plans and projects which may affect the achievement of specific environment targets (e.g. maintaining and restoring the favourable conservation status of species listed in Habitat Directive or achievement of 'Good' Water Framework Directive Water quality status). Consequently the remedial actions identified below are those in which the Donegal County Council has a direct statutory role in delivering or an indirect role in helping to deliver.

Table 10.1: Monitoring Programme

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
Biodiversity	Maintain or restore of favourable conservation status of the Qualifying Interests of all Natura 2000 sites. (Article 2 of Habitats Directive Refers)	Status and Trends of Qualifying Interests (Habitats and Species) related to Natura 2000 sites detailed in reports and conservation assessments prepared under Article 17 of the Habitats Directive.	NPWS	Article 17 Reporting every 6 years	Rigorous assessment of proposed developments and enforcement of planning requirements related to permitted developments within the zone of influence of Natura 2000 sites or likely to impact upon the Qualifying Interests of Natura 2000 sites.
	Take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level. (Article 2 of Bird Directive refers) Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1 of the Bird Directive. (Article 3 of Bird Directive refers).	Status and trends of bird species related to Natura 2000 sites affected by the Proposed Variation detailed in reports prepared under Article 12 of the Bird Directive	NPWS	Article 12 Reporting every 6 years	Rigorous assessment of proposed developments and enforcement of planning requirements related to permitted developments within the zone of influence of Natura 2000 sites or likely to impact upon the Qualifying Interests of Natura 2000 sites.
	Maintain or Restore the favourable conservation status of the Freshwater Pearl Mussel of all affected Natura 2000 sites.	Freshwater Pearl Mussel status and Trends detailed in reports and conservation assessments prepared under Article 17 of the Habitats Directive.	NPWS	Every 5 Years	
	Ensure conservation of species protected under the Wildlife Act 1976(as amended)	Species data available on the National Biodiversity Data Centre website: https://www.biodiversityireland.ie/	Heritage Council, Department of Housing, Local Government and Heritage	Ongoing	Rigorous assessment of proposed development and enforcement of planning requirements/conditions related to permitted developments in relation to species Protected Under the Wildlife Act.

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	Conserve and restore biodiversity and ecosystem services in the wider countryside and the marine environment in accordance with National Biodiversity Action Plan 2017-2021	Species data available on the National Biodiversity Data Centre website: https://www.biodiversityireland.ie/	Heritage Council, Department of Housing, Local Government and Heritage	Ongoing	Ensure minimal impact on existing biodiversity and provision of additional biodiversity assets through the rigorous protection of biodiversity in the development management and planning enforcement systems.
Population and Human Health	Limit Noise Pollution	Noise Mapping prepared for the Draft Donegal Noise Action Plan 2018-2023.	DCC	Every 5 Years	Ensure full implementation of the measures contained in the Draft Donegal Noise Action Plan 2018-2023 as appropriate and where practicable.
	Air Quality	See Section on Air Quality			
	Water Quality	See Section on Water Quality			
Soil	To Protect Soils and Geology	EPA/Teagasc Soil Mapping Project. Geological Heritage Sites	Teagasc, Geological Survey of Ireland		Ensure minimal impact on soils and geology through rigorous assessment of new development proposals within the development management system.
Water	<ul style="list-style-type: none"> Compliance with the Water Framework Directive in respect of surface waters, transitional bodies and ground water including achieving 'good' status in all waters and otherwise ensuring that water quality does not deteriorate. 	<ul style="list-style-type: none"> Water Framework Directive Surface Water and At Risk Status for the: 	EPA and DCC Irish Water DCC DCC	Every 5 Years Annual Ongoing Ongoing	
Climate	<ul style="list-style-type: none"> Contribute toward achievement of International, European and National Greenhouse Gas Emission targets (e.g. 51% reduction in Greenhouse gases by 2030 and a climate neutral economy by 2050) Transition to a climate resilient economy by 2050. 	<ul style="list-style-type: none"> National greenhouse gas emission 	EPA CSO DCC DCC DCC	Annual Ongoing Biennial Biennial Biennial	

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Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
Material Assets	Protection of aeronautical safety of airports.	Cases where such safety is compromised.	DCC and Dept. of Defence.	Ongoing	
Cultural Heritage	<ul style="list-style-type: none"> ○ Protect and preserve architectural heritage including structures on the Record of Protected Structures, vernacular and historic structures. ○ Protect and enhance the integrity of Archaeological Monuments. 	<ul style="list-style-type: none"> ○ No. and condition of structures on the Record of Protected Structures and other vernacular and historic structures. ○ 	DCC, Department of Housing, Local Government and Heritage	Ongoing	<ul style="list-style-type: none"> ○ Ensure compliance of new developments proposals with built heritage protection policies of the plan through the development management process. ○ Time efficient use of the planning enforcement system to prevent unauthorised loss of built and archaeological heritage.
Landscape	To protect and manage the landscape including landscape and visual features.	Impact of new developments on landscape and visual features elements and characteristics.	DCC	Biennial	<ul style="list-style-type: none"> ○ Ensure rigorous assessment of development proposals in sensitive areas.

11 A NON-TECHNICAL SUMMARY OF THE INFORMATION PROVIDED UNDER THE ABOVE HEADINGS

11.1 Introduction

This Chapter provides a brief background regarding why the Variation is required (arising from a successful legal challenge to the key Wind Energy policy content of the CDP 2018-2024 (As Varied), and the SEA process to-date (Screening and Scoping stages). It summarises submissions received on foot of the scoping exercise and the response to them. The Chapter then sets out the statutorily required contents of an ER and the next steps in the Variation process inclusive of public participation opportunities/requirements. The Chapter concludes by noting that the Variation must be prepared in the context of national and regional Planning policy, and refers also to the need for a further statutorily-required, Appropriate Assessment. That assessment focuses on EU Natura designations.

11.2 An Outline of the Contents and Main Objectives of the Variation and Relationship with Other Relevant Plans

This Chapter notes that there are 19 textual amendments and 1 mapping amendment to the CDP. Principal among the textual changes are a policy that is linked to the mapping amendment and notes that the principle of the acceptability or otherwise of windfarm development will be determined by which of three mapping designations a site falls into. Other key amendments include policies requiring that windfarm developments are set back a minimum of ten times the tip height of proposed turbines from residential receptors for, inter alia, noise and shadow flicker reasons.

The relationship with other relevant plans are summarised in Section 2.2 of this Environmental Report. Plans and Programmes established at international, EU and national level, their Environmental Protection Objectives (EPOs), and how these plans and programmes have informed the development of the Strategic Environmental Objectives (SEOs) used in the environmental assessment of the CDP and this proposed variation are identified in Section 6.

11.3 Relevant Aspects of the Current State of the Environment

This section of the Environmental Report describes the relevant aspects of the current state of the environment within the study area of the Proposed Variation. The baseline environmental information of relevance is presented in Sections 3.1 to 3.10 and provides the environmental context for the Proposed Variation. The current state of the environment of the Proposed Variation is considered under the environmental headings as outlined in the SEA Directive, as follows: • Biodiversity, Fauna and Flora • Population • Human Health • Soil and Geology • Water • Climate Change and Air Quality • Climate Change, Marine and Coastal Management • Noise • Material Assets • Cultural, Archaeological and Architectural heritage • Landscape and Visual

Likely Evolution of the Environment Without Implementation of the Proposed Variation

The SEA Directive requires the consideration of the likely evolution of the environment in the absence of the implementation of the Proposed Variation. The Chapter concludes that in absence of implementing the Proposed Variation the likelihood of new windfarm developments being granted would be low, although projects to re-power, re-configure or the augmentation of existing windfarm developments could still be considered under existing policy.

11.4 Environmental Characteristics of the Areas Likely to be Significantly Affected by the Proposed Variation

This Chapter establishes that the areas most likely to be affected are those areas designated on foot of a detailed mapping exercise as being 'Open to Consideration' for windfarm developments, or areas where such developments would be 'Acceptable In Principle'. The Chapter sets out how these areas were designated i.e. by the application of a sieve-mapping analysis that considered a wide range of environmental and aeronautical data-layers.

11.5 Existing Environmental Problems of Relevance to the Proposed Variation

The principal such problems identified are:

- at a global scale, the climate change agenda; and
- at a more local scale: the status of sites of importance for nature conservation, particularly European-designated Natura 2000 sites, and within that cohort of sites, the County's raised bogs; potential impacts of windfarms on humans, such impacts including noise and the effects of the rotation of the blades on households – known as shadow flicker
- other issues considered include potential problems with soils and geology, water and landscape.

11.6 Environmental Protection Objectives of Relevance to the Proposed Variation

The Environmental Report identifies a diverse range of Environmental Protection Objectives established at International, European Union and national level which are relevant to the proposed variation and detailed the way those EPOs were taken into account during the preparation of the Proposed Variation. In many cases, there is significant overlap between different EPO's for the same environmental criteria. In turn these EPOs have directly informed, and formed the basis of, consolidated Strategic Environmental Objectives (SEOs) which are, in effect, the environmental test criteria used to assess the likely significant effects of the proposed variation on the various environmental aspects detailed in Schedule 2B(f) of the Planning and Development Regulations (as amended). In this regard the consolidated SEOs combine the fundamental goal of a number of EPOs into single manageable assessment criteria.

11.7 Assessment of Likely Significant Effects on the Environment of Implementing the Variation

This section outlines the assessment methodology including detailing the consolidated Environmental Protection Objectives (EPOs) which are used as the Environmental Test Criteria for the assessment and are derived from the wide variety of EPOs for each environmental topic. This section also provides an assessment of the likely significant effects of the plan in relation to key aspects of the environment including in combination with other relevant actions. The conclusions of this assessment are summarised in text the table below and are also colour coded on the basis of their overall cumulative effect (in combination with other actions).

Key Environmental Aspect	Summary of Assessment of Likely Significant Effects of the Proposed Variation (including cumulatively in combination with other relevant actions).
Biodiversity, Flora & Fauna	<p>Individually the Proposed Variation will have an insignificant effect on biodiversity. In this regard: protected peatland habitats (i.e. within SACs), a significant portion of other peatland habitats, Special Protection Areas for bird species, the most significant concentrations of bat habitats, Nature Reserves, and Ramsar sites, and Freshwater Pearl Mussel catchments will all be located within the 'Not Normally Permissible' wind energy zoning in the Proposed Variation.</p> <p>However negative effects may arise from other actions (e.g. negative effects on habitats from rural housing and aquatic species from agricultural development) which may result in additive cumulative negative effects.</p>
Population/ Human Health	<p>Individually the Proposed Variation will have an insignificant effect on population and human health. In this regard: there is no strong evidence that wind energy developments have a negative effect on human health from noise, wind energy developments will be required to the comply with the new relative noise limit noise limit set out in the Wind Energy Development Guidelines, under the Proposed Variation wind energy developments must ensure a setback distance for noise and shadow flicker purposes of ten times the tip height of proposed turbines from the nearest residential properties and would not be normally permissible within a buffer of 500m around settlements, and noise and shadow flicker can be avoided in the preplanning and planning stages of wind energy developments through predevelopment assessments and appropriate siting.</p> <p>However positive effects will arise from other actions such as the NPF and the RSES which may result in additive cumulative positive effects.</p>

Key Environmental Aspect	Summary of Assessment of Likely Significant Effects of the Proposed Variation (including cumulatively in combination with other relevant actions).
Soil and Geology	<p>Individually the Proposed Variation will have an insignificant effect on soil and geology. In this regard: the amount of soil and geology likely to be lost is likely to be an insignificant amount of the overall soil and geological resource, the risk of peat/soil erosion has been significantly reduced by the inclusion of Areas of high, moderately high, and moderately low landslide susceptibility within the 'Not Normally Permissible' wind energy zoning, the Proposed Variation requires the submission of a 'Peat Stability Risk Assessment Report' for wind energy developments located within peatland and bog, soils and geology within Donegal not have any specific statutory protection and there are no specific environmental thresholds set down at either a European or a National level for the protection of same.</p> <p>Other actions will also have an insignificant effect on soil and geology overall.</p>
Water	<p>Individually the Proposed Variation will have an insignificant effect on water. In this regard: areas of High, Moderately High and Moderately Low landslide susceptibility, Water sensitive Natura 2000 sites including a 500m buffer around said sites and Freshwater Pearl Mussel catchments are included within the 'Not Normally Permissible' wind energy zoning, larger scale wind energy developments are likely to require the submissions of a detailed EIARs inclusive of the detailing of water quality mitigation measures, the EPA's 3rd Cycle Draft Catchment Reports for each of the 6 water catchments in Donegal indicates that wind energy is not a significant pressure on water quality.</p> <p>However negative effects arising from agricultural developments and rural housing may give rise to additive and in some limited circumstances cumulative negative effects on water.</p>
Air	<p>Individually the Proposed Variation will have an insignificant effect on air. In this regard: wind energy Developments do not emit any significant air pollutants during their operational phase, and air pollution from the construction phase of such developments is likely to be low and is unlikely to cause any exceedances of relevant air quality thresholds in rural Donegal.</p> <p>Other actions will also have an insignificant effect on air overall.</p>
Climate	<p>Individually the Proposed Variation will have a positive effect on climate mitigation. In this regard the proposed variation will directly contribute to offsetting CO2</p>

Key Environmental Aspect	Summary of Assessment of Likely Significant Effects of the Proposed Variation (including cumulatively in combination with other relevant actions).
	<p>emissions which would otherwise have to be produced by non renewable sources of electricity generation (e.g. natural gas and coal) to meet existing and future electricity demands and would therefore directly contribute to the achievement of Ireland greenhouse gas emissions targets and would therefore result in a positive effect on climate mitigation.</p> <p>The combined effect of other plans and projects will have an insignificant effect on climate overall. Consequently the additive cumulative effect on climate is considered positive.</p>
Material Assets	<p>Individually the Proposed Variation will have a positive effect on material assets. In this regard: any loss of agricultural land is likely to be insignificant relative to the overall agricultural resource within the county, wind energy developments will not be permitted within a setback distance of 10 times the proposed wind turbine tip height of residential dwellings, the proposed variation will create new renewable electricity generation and distribution assets and is unlikely to give rise to additional flooding.</p> <p>Other actions (including the NPF, RSES, rural housing and agricultural developments) are all likely to have a positive effect on material assets (e.g. new transport infrastructure housing, agricultural developments etc) resulting in a positive additive cumulative effect.</p>
Cultural Heritage	<p>Individually the Proposed Variation will have an insignificant effect on cultural heritage. In this regard: archaeology and architectural features benefit from existing legal and policy protections, impacts on archaeology may be avoided by use of predevelopment site surveys (routinely undertaken as part of the EIS process) and the subsequent avoidance of any archaeological features in development layouts, archaeological monitoring during construction (which is a routinely made a condition of permission) may help to preserve archaeological remains by record, and a significant portion of the archaeological/architectural heritage of the County is included within the 'Not Normally Permissible' wind energy zoning.</p> <p>Other actions will also have an insignificant effect on cultural heritage.</p>
Landscape and Visual	<p>Individually the Proposed Variation will have an insignificant effect on the landscape and visual baseline. In this regard: areas of Especially High Scenic Amenity and</p>

Key Environmental Aspect	Summary of Assessment of Likely Significant Effects of the Proposed Variation (including cumulatively in combination with other relevant actions).
	<p>other scenically sensitive areas are included in the 'Not Normally Permissible' wind energy zoning, the Draft Wind Energy Guidelines 2021 broadly indicate that subject to good siting and design wind energy developments can be accommodated within the 'Hilly and Flat Farmland' and the 'transitional marginal landscape' which make up the vast majority of High Scenic Amenity and Moderate Scenic Amenity landscapes within the county, the Proposed Variation requires that wind energy developments ensure a setback distance for visual amenity purposes of ten times the tip height of proposed turbines from residential properties, key views within the County are likely to be protected by the existing policies and objectives, and Wind Energy Developments will be routinely subject to Landscape and Visual Impact Assessments.</p> <p>Negative effects may arise from the cumulative impact of existing and permitted rural housing developments resulting in an additive cumulative negative effect on landscape.</p>

11.8 Measures Envisaged to Prevent, Reduce and as Fully as Possible Offset Any Significant Adverse Environmental Effects on the Environment of the Proposed Variation

Measures are required to prevent, reduce and as fully as possible offset any significant adverse effects on the environment as a result of implementation of the Proposed Variation. This Chapter sets out the following mitigation measures:

- Avoidance and Reduction of Significant Adverse Environmental Effects through Sustainable Spatial Frameworks.
- Avoidance and Reduction of Significant Adverse Environmental Effects through Planning Policies.
- Avoidance and Reduction of Significant Adverse Environmental Effects through Planning Approvals. In approving new developments planning authorities have the statutory power to impose environmental protection conditions which can avoid and reduce the environmental effects of such developments
- Measures To Offset Significant Adverse Environment. The proposed variation may also help to offset any potential adverse environmental effects of Wind Energy Developments where they might occur by facilitating funding for sustainable community benefit projects.

11.9 Selection of Alternatives to the Proposed Variation

Two alternatives were considered. Firstly, in terms of the mapping/designation of areas for wind energy development, an alternative was considered that would have seen a reduced 'Not Normally Permissible' area included. The reduction would arise from 'High Landslide Susceptibility Areas' only being included, whereas the final map included not just the aforementioned, but also 'Moderately High' and 'Moderately Low' areas. Another aspect of the alternative mapping was in relation to an area along part of the Stranorlar/Fermanagh and Omagh District Council boundary.

The second alternative was in relation to policies dealing with mandatory setback distance of windfarm turbines from residential receptors. The relevant distance included in the Proposed Variation was ten times the tip height of turbines. An alternative considered was four times, in line with Government Draft Policy as contained in the Draft Wind Energy Guidelines, August 2021.

11.10 Monitoring of Significant Environmental Effects

Monitoring of the implementation of the Proposed Variation is required in order to properly consider the effects of the implementation of the Proposed Variation and to highlight areas that need re-assessed and /or considered for review. This Chapter sets out how such monitoring will be conducted.

APPENDIX A
[SCOPING SUBMISSIONS]

From: Environmental Co-ordination (Inbox) [Environmental_Co-ordination@agriculture.gov.ie]
Sent: 07 January 2022 08:36
To: MAEVE MC ELROY
Subject: RE: SEA and AA Scoping exercise in respect of the Proposed Variation to the County Donegal Development Plan 2018-2024 (As Varied) in respect of a Wind Energy Policy Framework

CAUTION: This email originated from outside of Donegal County Council. Do not click links or open attachments unless you recognise the sender and are sure that the content is safe.

Good Morning

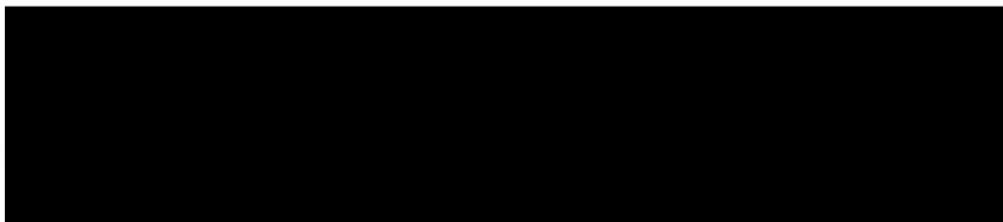
Please see below comments from the Department of Agriculture, Food & Marine regarding commercial fisheries and the proposed variation to the Donegal County Development Plan.

We note this wind energy policy framework is predominantly regarding land based installations. However, in the event that offshore renewable energy installations, such as offshore windfarms, tidal or wave generators and other areas potentially affecting offshore commercial fisheries are being considered, we have the following comments: Commercial sea fishing is a long standing, pre-existing and traditional activity in the marine environment. The evaluation and consideration of potential impacts on any commercial sea fishing activities needs to be given consideration in relation to the proposed Variation to the Donegal County Development Plan 2018-2024 in respect of its Wind Energy Policy Framework. It is essential that any negative impacts on fisheries are avoided. The evaluation of potential impacts on any commercial sea fishing activities needs to be given consideration as part of any planning/proposal process and during the development process itself. It is imperative that engagement should be sought with the fishing industry and other relevant stakeholders at as early a stage as possible to discuss any changes that may affect them to afford a chance for their input. Fishers' interests and livelihoods must be fully recognised, supported, and taken into account.

It is worth including offshore commercial fisheries as a material asset in the marine waters off County Donegal. Where relevant, impacts on the material assets of offshore commercial fisheries should be minimally impacted by these plans.

Regards

An tAonad um Chomhordú Timpeallachta, An Rannóg um Athrú Aeráide agus Beartas Bithfhuinnimh, Environmental Co-ordination Unit | Climate Change & Bioenergy Policy Division |
An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine
Pailiún A, Páirc Gnó Grattan, Bóthar Átha Cliath, Port Laoise, Co Laoise, R32 K857
Pavilion A, Grattan Business Park, Dublin Road, Portlaoise, Co Laois, R32 K857
T +353 (0)57 868 9915 environmentalco-ordination@agriculture.gov.ie
www.agriculture.gov.ie



file:///C:/CPU/CDP%202018-2024%20Wind%20Energy%20Variation/SEA/1.%... 24/01/2022



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications



Central Planning Unit
Donegal County Council
County House
Lifford
Co Donegal, F93 Y622

06 January 2022

Re: SEA and AA Scoping exercise in respect of the Proposed Variation to the County Donegal Development Plan 2018-2024 (As Varied) in respect of a Wind Energy Policy Framework

**Your Ref: CPU 243/ (VAR.2) Wind Energy Policy Framework
Our Ref: 21/475**

Dear Sir/Madam,

Geological Survey Ireland is the national earth science agency and is a division of the Department of the Environment, Climate and Communications. We provide independent geological information and advice and gather various data for that purpose. Please see our [website](#) for data availability. We recommend using these various data sets, when conducting the EIAR, SEA, planning and scoping processes. Use of our data or maps should be attributed correctly to 'Geological Survey Ireland'.

With reference to your email received on the 17 December 2021, concerning the SEA and AA Scoping exercise in respect of the Proposed Variation to the County Donegal Development Plan 2018-2024 (As Varied) in respect of a Wind Energy Policy Framework, Geological Survey Ireland would encourage use of and reference to our datasets. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment. The remainder of this letter and following sections provide more detail on some of these datasets.

Geoheritage

In the Introduction and Explanation document, we note the proposed inclusion of County Geological Sites (CGSs) shapefiles within the spatial data map, in Ref 26, 'Table 2: Individual Spatial Data Layers Used In the Construction of 'Open to Consideration' Areas', within the proposed variation of the Wind Energy Policy Framework.

We welcome and support this proposed inclusion of County Geological Sites in the Wind Energy Policy Framework. The Geological Heritage Programme views the Local Authorities as critical partners in protecting, through the planning system, those CGS which fall within their county limits. The following points are suggested as appropriate context within which to address the need to protect geological heritage in any one of Ireland's local authority areas.

- Listing CGSs in the CDP provides protection of the sites against potentially damaging developments that normally require planning permission, such as building, windfarms, quarrying, landfilling or forestry.
- In many cases CGSs are also sites of high amenity or educational value, already zoned or listed in the CDP.
- It is also important that the democratic process of public consultation and approval by councillors of the CDP means that stakeholders in the CGSs and all of the local community can buy into the process.
- CGSs have been adopted in the National Heritage Plan, and will form a major strand of geological nature conservation to complement the various ecological and cultural conservation measures.
 - It is important to note however, that management issues for the majority of geological heritage sites may differ from ecological sites, and in some cases development may facilitate enhanced geological understanding of a site by exposing more rock sections - for example, in a quarry extension.
 - Consultation at the earliest stages can identify any issues relevant to an individual site or proposed development.
- County Geological Sites are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest.

Geological Survey Ireland, Beggars Bush, Haddington Road, Dublin D04 K7X4, Ireland.

Suirbhéireacht Gheolaíochta Éireann, Tor an Bhacailigh, Bóthar Haddington, Baile Átha Claith D04 K7X4, Éire.

T +353 (0)1 678 2000 **LoCall / LóGhlao** 1890 44 99 00 www.gsi.ie *Fáiltítear roimh comhfhreagras i nGaeilge*



- It would also be necessary to include a policy objective to protect geological NHAs as they become designated and notified to the Local Authority, during the lifetime of the Plan.

As always, we are available if you require any further information, please feel free to contact Clare Glanville (Clare.Glanville@gsi.ie).

Geohazards

In the Introduction and Explanation document, we are pleased to see use of our Landslide Susceptibility map in Ref 10, 'Table 1: Individual Spatial Data Layers Used In The Construction of 'Not Normally Permissible' Areas'.

However we would like to offer clarification in relation to the following statement in the document: statement "GSI officials provided an opinion that only areas identified as being of 'High Landslide Susceptibility' should be included in the 'Not Normally Permissible' designation."

When Geological Survey Ireland staff met with Donegal Co Co officials we advised that the National Landslide Susceptibility map and Landslide Database should be considered with respect to planning and future developments. The advice provided was based on what the map represents i.e. the factors of terrain used in the methodology and the density of landslides which provides the classification of landslide susceptibility. We also recommend that the regional scale of the map should also be considered.

We also note the decision by the Plenary Council Meeting members to include the 'Moderately High' and 'Moderately Low' Susceptibility layers within the 'Not Normally Permissible' designation. It is important to note, and we would emphasise that, while areas of moderately high to high susceptibility are more likely to experience landslides the areas of low to moderately low susceptibility should also be examined as these areas can experience landslides in certain conditions e.g. the Meenbog area. Geological Survey Ireland did not advise on what should or shouldn't be included in the designation of "not normally permissible" as we did not perform this analysis. Geological Survey Ireland provided a baseline dataset for inclusion in that analysis only.

I hope that these comments are of assistance, and if we can be of any further help, please do not hesitate to contact me Clare Glanville, or my colleague Trish Smullen at GSIPlanning@gsi.ie.

Yours sincerely,

Clare Glanville
Senior Geologist
Geological Survey Ireland

Enc: Table - Geological Survey Ireland's Publicly Available Datasets Relevant to Planning, EIA and SEA processes.



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Inniscarra,
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Mr Paul Christy
Senior Executive Planner
Central Planning Unit
Donegal County Council

4th January 2022

Our Ref: SCP211203.1

Re. SEA Scoping for Proposed Variation to the Donegal County Development Plan 2018-2024 in respect of a Wind Energy Policy Framework

Dear Mr Christy,

We acknowledge your notice, dated 10th December 2021, in relation to the SEA Scoping for the Proposed Variation to the Donegal County Development Plan 2018-2024 in respect of a Wind Energy Policy Framework (the 'Variation').

The EPA is one of the statutory environmental authorities under the SEA Regulations. In our role as an SEA environmental authority, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into the Variation and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the plan. Our functions as an SEA environmental authority do not include approving or enforcing SEAs or plans.

As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via the attached guidance document ['SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'](#). This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use Plans. We recommend that you take this guidance document into account in preparing the Variation and SEA.

In preparing the Variation, Donegal County Council should also ensure that the Variation aligns with key relevant higher-level plans and programmes and is consistent with the



relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategy for the Northern & Western Region.

Specific Comments on the Variation

Proposals for renewable energy developments (wind & solar) should be subject to the relevant environmental assessments, including Environmental Impact Assessment, Appropriate Assessment and visual impact assessment, as appropriate. A commitment to that effect should be given in the Variation.

Climate Change Adaptation

The need for all future renewable energy developments to be climate resilient and able to adapt to the effects of climate change (extreme weather events, increased runoff, erosion/landslides etc.) should be considered. Areas where windfarm developments occur (upland areas, raised and blanket bogs, cutaway bogs) can be particularly vulnerable. The relevant obligations of the National Adaptation Framework, the Climate Action Plan 2021 and forthcoming regional, local and sectoral adaptation plans should be acknowledged in the Variation.

Water Related Considerations

The Variation and SEA should consider the obligations of the Water Framework Directive (WFD) and the National River Basin Management Plan and associated Programme of Measures. You should ensure that a commitment is included to protect water quality status and associated habitats and species in implementing the Variation.

Our WFD Application provides a single point of access to water quality and catchment data from the national Water Framework Directive monitoring programme. The Application is accessed through EDEN <https://wfd.edenireland.ie/> and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website.

Water Framework Directive protected areas (including salmonid rivers, nutrient sensitive rivers, freshwater pearl mussel rivers etc.) and High-Status water bodies should be afforded particular protection in implementing the Variation.

The relevant OPW Flood Risk Management Plans and associated flood mapping should also be referenced. The second cycle of Flood Risk Assessment has commenced and will consider the implications of flooding in rural areas as well as the risk to critical infrastructure.

Biodiversity

The potential impact on designated national and international nature conservation sites (Natura 2000, NHA's, pNHAs, Nature Reserve) both within and adjacent to the Variation area should be assessed. A clear commitment should be given to require screening for Appropriate Assessment to be carried out for all wind and solar energy developments, which may arise in the implementation of the Variation with potential for likely significant effects on Natura 2000 sites. Appropriate Assessment, where required, should



be carried out in accordance with the Habitats Directive and in-line with the NPWS and DHPLG *Appropriate Assessment Guidance for Planning Authorities*.

The Variation should take account of the National Biodiversity Action Plan, as well as any existing Heritage/Biodiversity Action plans and available habitat mapping and these should be integrated as appropriate in the Variation. The potential impact on protected species including birds, bats, flight paths etc. should also be assessed.

The National Peatland Strategy, National Raised Bog SAC Management Plan and National Raised Bog NHA Review should be considered, as appropriate. A National Blanket Bog SAC Management Plan and associated NHA review is under consideration. If prepared within the lifetime of the Variation, the Variation should include a commitment to incorporate the relevant aspects of these plans.

Landscape Considerations

The National Landscape Strategy should be referred to and considered as appropriate. The National Planning Framework and the Northern and Western Regional Spatial and Economic Strategy both include provisions for protecting and managing our landscape resources, and should also be acknowledged.

Environmental Management Plans

The Variation should address the need for the preparation and effective implementation of Environmental Management Plans (EMPs) to manage the construction, operation, maintenance and decommissioning phases of wind and solar energy developments. The Variation should describe the information to be included in the EMPs including monitoring and reporting provisions and mitigation measures as well as supervision/oversight of construction works. This should ensure the potential for adverse environmental effects are minimised and provisions for remedial actions are included.

The EPA may provide additional comments upon receipt of the SEA Scoping Report for the Variation.

Available Guidance & Resources

Our website contains various SEA resources and guidance, including:

- SEA process guidance and checklists
- Inventory of spatial datasets relevant to SEA
- topic specific SEA guidance (including *Good practice note on Cumulative Effects Assessment* (EPA, 2020), *Guidance on SEA Statements and Monitoring* (EPA, 2020), *Integrating climatic factors into SEA* (EPA, 2019), *Developing and Assessing Alternatives in SEA* (EPA, 2015), and *Integrated Biodiversity Impact Assessment* (EPA, 2012))

You can access these guidance notes and other resources at: <https://www.epa.ie/our-services/monitoring--assessment/assessment/strategic-environmental-assessment/sea-topic-and-sector-specific-guidance/>



Environmental Sensitivity Mapping (ESM) Webtool

The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100 datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at www.enviromap.ie.

EPA SEA WebGIS Tool

Our SEA WebGIS Tool has been updated recently and is now publicly available at <https://gis.epa.ie/EPAMaps/SEA>. It allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area. It is intended to assist public authorities in SEA screening and scoping exercises.

EPA WFD Application

Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN <https://wfd.edenireland.ie/> and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website.

EPA AA GeoTool

Our AA GeoTool application has been developed in partnership with the NPWS. It allows users to select a location, specify a search area and gather available information for each European Site within the area. It is available at: <https://gis.epa.ie/EPAMaps/AAGeoTool>.

State of the Environment Report – Ireland’s Environment 2020

In preparing the Variation and SEA, the recommendations, key issues and challenges described within our State of the Environment Report [Ireland’s Environment – An Assessment 2020](#) (EPA, 2020) should be considered, as relevant and appropriate to the Variation. This should also be taken into account, in preparing the Variation and SEA.

Transition to a low carbon climate resilient economy and society

You should ensure that the Plan aligns with national commitments on climate change mitigation and adaptation, as well as relevant sectoral, regional and local adaptation plans.

Environmental Authorities

Under the SEA Regulations, you should consult with:

- Environmental Protection Agency;
- Minister for Housing, Local Government and Heritage;
- Minister for Environment, Climate and Communications; and
- Minister for Agriculture, Food and the Marine.



- any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.

If you have any queries or need further information in relation to this submission, please contact me directly. I would be grateful if you could send an email confirming receipt of this submission to: sea@epa.ie.

Yours Sincerely,

A handwritten signature in black ink that reads 'David Galvin'.

David Galvin
SEA Section
Office of Evidence and Assessment
Environmental Protection Agency

Your Ref
Our Ref DCC Consultation
Date 20 January 2022
Email planning@fermanaghomagh.com



Alison McCullagh
Chief Executive

Planning Department

Paul Christy
Senior Executive Planner
Central Planning Unit
Donegal County Council
County House
Lifford
Co Donegal
Republic of Ireland

By email only

Dear Mr Christy,

Re: Proposed Variation to the County Donegal Development Plan 2018-2024 (As Varied) in respect of a Wind Energy Policy Framework.

Thank you for the above consultation received on the 10 December 2021, and the opportunity for Fermanagh and Omagh District Council (FODC) to comment on the proposed variation. This was tabled for discussion at the Council's Regeneration and Community Committee meeting on the 18 January 2022, and FODC have the following comments to make.

DCC has been consulted on the FODC Local Development Plan 2030 - draft Plan Strategy. Officers feel that it is important to request that DCC has regard to the objectives and policies within our draft Plan Strategy as part of their consideration of the variation and the implementation of the policies within.

In terms of wind energy development in this cross-border area, officers would refer DCC to the FODC Local Development Plan 2030 – Draft Plan Strategy which contains Draft Policy TOU01 - Protection of Tourism Assets and Tourism Development. This policy states that "The Council will not permit any form of development that would, in itself or in combination with existing or approved development, have an adverse impact on the intrinsic character or quality of a tourism asset or any part thereof, or diminish its tourism value, or part thereof".

The Council welcome the approach of DCC to wind energy development, which includes consideration of environmental sensitivities, scenic and cultural quality, Natural Heritage Areas, flying constraints, Geological Heritage Sites; Freshwater

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Pearl Mussel Catchments; Peat Bogs (outside of Natura sites); Natura 2000 site buffers; and High Scenic Amenity areas.

The Council would also highlight the importance of the impacts on public health and animal health, in particular from low frequency noise and infrasound. These matters should be an important consideration by DCC to wind energy development.

Whilst there are differences in approach in relation to identifying areas of capacity for wind energy, both FODC and DCC aim, through their development plans, to support wind energy development while taking into consideration environmental, landscape and visual and amenity impacts and, as such, in a strategic context there is no significant conflict in the approaches.

The Council has raised concerns previously about the potential visual impact of any new wind farm developments in the vicinity of our proposed Areas of High Scenic Value in particular Lower Lough Erne. In addition, the Council raised concerns that the approach to wind energy along the Council boundary could additionally affect the setting of the village of Belleek, which is an important tourist destination in the district.

These concerns remain and DCC should ensure that their Development Plan policies recognise the impact that wind energy proposals can have on our Council area and its tourism potential. DCC should ensure that such developments are sensitively located so as not to create an overbearing affect or demonstrable harm to the local landscape including iconic views, environmental impact and impact on amenity within the FODC area.

The Council encourage DCC to have regard to the studies, which support the FODC Local Development Plan, the Landscape Wind Energy Capacity Study, Landscape Character review and Landscape Designation review as part of this Plan Variation and the implementation of the policies within.

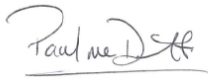
The Council would be of the opinion that landscape character designations should align across adjoining Council areas, and there should not be different designations across the same landscape as a result of a Council boundary.

The Council note the additional data layer 'Lifford-Stranorlar Municipal District Areas at Risk of Landslides and Associated Environmental and Ecological Concerns' due to the landslide event at the adjacent Meenbog windfarm site.

DCC should consult DAERA on the SEA and AA, in its role as a statutory nature conservation body as it has overall responsibility for designation, management and monitoring of European sites, if it has not done so already.

The Council also welcome consultation on any significant planning applications or other planning matters of mutual interest, which may be proposed adjacent to Fermanagh and Omagh's district council boundary.

Yours sincerely

A handwritten signature in black ink, appearing to read "Paul Mc Dermott". The signature is written in a cursive style and is positioned above a thin horizontal line.

Paul Mc Dermott MRTPI
Lead Principal Planning Officer (Interim)
Fermanagh and Omagh District Council

APPENDIX B

[PROPOSED NATURAL HERITAGE AREAS]

Table B1: Proposed Natural Heritage Areas

Area	Proposed Natural Heritage Area (pNHA)
Aran Island (Donegal) Cliffs	000111
Ballintra	000115
Ballyarr Wood	000116
Bulbin Mountain	000120
Croaghonagh Bog	000129
Derekmore Wood Nature Reserve	000131
Donegal Bay (Murvagh)	000133
Durnesh Lough	000138
Erne Estuary/Finner Dunes	000139
Fawnboy Bog/Lough Nacung	000140
Gannivegil Bog	000142
Greer's Island (Massmount), Mulroy Bay	000146
Horn Head and Rinclevan	000147
Illancrone	000148
Inishbofin (Donegal)	000150
Inishkeeragh	000152
Inishtrahull	000154
Lough Akkibon and Gartan Lough	000158
Lough Derg (Donegal)	000162
Lough Eske and Ardnamona Wood	000163
Lough Nagreany Dunes	000164
Lough Nillan Bog (Carrickatlieve)	000165
Lough Swilly Including Big Isle, Blanket Nook & Inch Lake	000166
Lough Unna/Lough Unshagh Bogs	000167
Magheradrumman Bog	000168

Area	Proposed Natural Heritage Area (pNHA)
Meenaguse/Ardbane Bog	000172
Meentygrannagh Bog	000173
Port Lough	000180
Rathlin O'Birne Island	000181
Sessiagh Lough	000185
Slieve League	000189
Slieve Tooley/Tormore Island/Loughros Beg Bay	000190
St. John's Point	000191
Tory Island	000193
Tranarossan And Melmore Lough	000194
West Of Ardara/Maas Road	000197
Lough Melvin	000428
Ballymastocker Dunes	001089
Ballyness Bay	001090
Carndonagh Wood	001098
Crolly Bridge Woods	001102
Coolvoy Bog	001107
Derriscligh Bog	001114
Derryfad Bog	001117
Derrylaggy Woods	001118
Drumeasan Bog	001122
Dunragh Loughs/Pettigo Plateau	001125
Feddyglass Woods	001129
Galwolie Bog	001132
Glashedy Island	001135
Gweedore Bay And Islands	001141
Inishbarnog	001142

Area	Proposed Natural Heritage Area (pNHA)
Inishbeg	001143
Kindrum Lough	001151
Leannan Valley Woods	001155
Lough Fad West	001161
Lough Fern	001162
Lough Finn	001163
Cronaquiggy Bog	001176
Meenybraddan Bog	001177
Muckish Mountain	001179
Sheephaven	001190
Termon Strand	001195
The Point, Mulroy	001196
Tullytresna Bog	001870
Meenaguse Scragh	001880
Coguish Bog	001938
Ballyhoorisky Point To Fanad Head	001975
Tamur Bog	001992
River Swilly Valley Woods	002011
North Inishowen Coast	002012
Owendoo And Cloghervaddy Bogs	002046
Cloghernagore Bog And Glenveagh National Park	002047
Carlan Isles (Mulroy Bay)	002055
Old Rectory, Fahan	002056
Ramelton Mill	002057
River Foyle, Mongavlin To Carrigans	002067
Carricknahorna Lough And Lough Gorman	002068