

STATEMENT ON TRANSBOUNDARY ENVIRONMENTAL EFFECTS

AS PART OF THE
STRATEGIC ENVIRONMENTAL ASSESSMENT

OF THE
GOVERNMENT OF IRELAND'S

**DRAFT WIND ENERGY DEVELOPMENT GUIDELINES
2019**

for: Department of Housing, Planning and Local Government

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Dublin 1



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1. Introduction

This is a Statement on Transboundary Environmental Effects as part of the Strategic Environmental Assessment (SEA) of the Government of Ireland's Draft Wind Energy Guidelines 2019.

The purpose of this statement is to provide a clear understanding of the potential for transboundary environmental effects to occur in Northern Ireland as a result of the implementation of the Draft Guidelines.

2. The Draft Wind Energy Guidelines 2019

The Department of Housing, Planning and Local Government (DHPLG) is currently conducting a review of its Wind Energy Development Guidelines 2006 with the intention to produce revised Wind Energy Development Guidelines 2019. This work is being carried out in association with the Department of Communications, Climate Action and the Environment (DCCA) which is responsible for renewable energy policy. The 2019 Guidelines will apply to future planning applications, including the repowering and renewal of existing developments, for onshore wind energy developments.

The 2006 Guidelines offer advice to planning authorities on planning for onshore wind energy through the development plan process and in determining applications for planning permission. The Guidelines are also intended to ensure a consistency of approach throughout the country in the identification of suitable locations for wind energy development and the treatment of planning applications for wind energy developments. They should also be of assistance to developers and the wider public in considering wind energy development proposals.

The review of the Guidelines is being undertaken to reflect technological developments in the wind energy sector and to strike a balance between the concerns of local communities and the need to invest in indigenous energy projects which support Ireland's renewable energy targets. The draft Guidelines have had regard to best international practice and seek to be consistent with World Health Organisation (WHO) Guidance in relation to noise emanating from wind turbines.

This review builds upon the public consultation on the targeted review of the Guidelines that commenced in late 2013. The draft revisions at that time focused on noise, proximity, and shadow flicker. The present review has been expanded to consider the strengthening of provisions relating to community consultation, community dividend, grid connections, as well as addressing a separate issue relating to the application of the Environmental Impact Assessment Directive on projects.

It is intended that once the review is complete, the 2019 Guidelines will be issued by the Minister for Housing, Planning and Local Government under Section 28 of the Planning and Development Act 2000, as amended (the Act). The Guidelines will contain some 'specific planning policy requirements' under Section 28(1C) of the Act. Planning authorities and An Bord Pleanála will be required to have regard to these Guidelines and to apply any 'specific planning policy requirements' of the Guidelines in carrying out their functions. The Guidelines include two technical appendices to assist planning authorities in relation to noise assessment, monitoring and the setting of planning conditions. The Guidelines will apply to all future wind energy development proposals.

3. SEA Scoping Consultations

As part of the scoping of the SEA, the Northern Ireland Environmental Agency made written submissions on the scope of the SEA with respect to topics including Biodiversity Flora and Fauna, Marine and Historic Environment. The submissions and the issues raised have been taken into account in the undertaking of the SEA.

4. Overall SEA Findings (including Transboundary)

The Draft Wind Energy Guidelines 2019 provide sectoral advice to planning authorities on planning for wind energy through the development plan process and in determining applications for planning permission. Such processes are subject to their own environmental assessment (SEA, AA and EIA) processes as relevant.

As detailed in the National Planning Framework, the forthcoming Renewable Electricity Policy and Development Framework will aim to identify strategic areas for the sustainable development of renewable electricity projects of scale, in a sustainable manner, compatible with environmental and cultural heritage, landscape and amenity considerations. The development of the Renewable Electricity Policy and Development Framework will also facilitate informed decision making in relation to onshore renewable energy infrastructure. This Framework will be subject to its own environmental assessment (SEA and AA) processes as relevant.

Although the Guidelines do not provide for the spatial location of wind energy development, they include various measures that will contribute towards environmental protection and management and form part of the wider sectoral planning framework¹ in relation to wind energy development. The Guidelines provide a balance between:

- Developing sufficient wind energy capacity to facilitate contributions towards meeting renewable energy generation and greenhouse gas emission targets set in binding EU requirements; and
- Ensuring environmental protection and management, including with respect to the issues of noise/sensitive locations, shadow flicker/human health and visual amenity.

The Department of Housing, Planning and Local Government have integrated all recommendations arising from the SEA and AA processes into the Guidelines.

Table 1 identifies the likely environmental effects of wind energy development under the revised Draft Guidelines, in combination with the wider sectoral planning framework. The effects are categorised as significant positive effects, significant adverse effects if unmitigated and residual adverse non-significant effects after mitigation.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors.

The scope of the assessment (including description of baseline, the relationship to other plans and programmes and the evaluation of effects) has considered the environment of both Ireland and Northern Ireland. SEA Scoping was undertaken in conjunction with the designated environmental authority for Northern Ireland – the Northern Ireland Environment Agency – who provided an SEA Scoping submission including suggestions that have been integrated into the SEA. Taking into account, *inter alia*, the detailed mitigation which has been integrated into the Guidelines, it has been determined that significant residual adverse environmental effects will not occur in either Ireland or Northern Ireland.

¹ Further details are provided on this wider sectoral planning framework in the SEA Environmental Report.

Table 1 Overall Evaluation (including transboundary) – Likely Environmental Effects arising from the Draft Guidelines, in combination with the wider planning framework

Environmental Component	Likely Environmental Effects in combination with the wider planning framework			
	Significant Positive Effect	Significant Adverse Effect, if unmitigated	Neutral Effects	Residual Adverse Non-Significant Effects
Population and Human Health		<ul style="list-style-type: none"> Potential human health interactions with environmental vectors, including with respect to issues including noise, shadow flicker, visual amenity disturbance, water quality, air quality, flood events and soil stability issues Loss of amenity usage and access 	<ul style="list-style-type: none"> Contributes towards protection of human health Contributes towards protection of human health by protecting environmental vectors, including soil, water and air Contributes towards the protection of amenity usage and access 	<ul style="list-style-type: none"> Potential interactions with residual effects on environmental vectors. This has been mitigated by provisions that have been integrated into the Guidelines, including those at: Chapter 5 "5.7 Noise from Wind Energy Development"; Chapter 5 "5.8 Shadow Flicker"; Chapter 5 "5.4 Ground Conditions/ Geology"; Chapter 6 "6.18.1 Appropriate Setback"; and Chapter 4 "4.10.5 Aircraft Safety".
Biodiversity, Flora and Fauna		<p>Arising from both construction and operation of wind energy development and associated infrastructure such as access routes, grid connections and substations:</p> <ul style="list-style-type: none"> Loss of/damage to biodiversity in designated sites (including European Sites and Nature Conservation Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; Habitat² loss, fragmentation and deterioration, including patch size and edge effects; and Disturbance and displacement of protected species³ such as birds and bats. 	<ul style="list-style-type: none"> Contributes towards protection of biodiversity in designated sites (including European Sites and Nature Conservation Sites) and Annexed habitats and species (including birds and bats), listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna. Contributes towards protection of ecology as a result of contributing towards the protection of environmental vectors, such as water and soil. 	<ul style="list-style-type: none"> Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. Losses or damage to ecology (these would be in compliance with relevant legislation).

² The main potential impacts on habitats that can result in the reduction, or loss, of biodiversity are:

- 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.

³ The main potential impacts to birds from wind energy developments have been identified as:

- 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.

Collision risk species include all bird and bats species present in Ireland. The extent to which birds will be impacted by wind energy developments will vary depending on species, season and location, and these impacts may be temporary or permanent. Those species groups considered to be most at risk are bats, raptors, swans, geese, divers, breeding waders and concentrations of waterfowl. Potential impacts on migratory species and local species movements between breeding, feeding/ foraging and roosting areas require careful consideration.

The potential impact on other rare flora, mammals, birds, and amphibians and fish including those listed for protection in the Flora (Protection) Order 2015, would also need to be assessed at project level.

Environmental Component	Likely Environmental Effects in combination with the wider planning framework			
	Significant Positive Effect	Significant Adverse Effect, if unmitigated	Neutral Effects	Residual Adverse Non-Significant Effects
Soil		<ul style="list-style-type: none"> • Adverse effects on designated geological heritage sites • Loss of soil/subsoil/geological stability • Erosion of peatlands as a result of wind farm and ancillary infrastructure (e.g. roads) development, alone and in combination with forestry • Damage to the hydrogeological and ecological function of the soil resource • Loss of potential in mineral/aggregate areas 	<ul style="list-style-type: none"> • Contributes towards protection of designated sites of geological heritage, soil stability, peatlands, areas of significant mineral or aggregate potential and the hydrogeological and ecological function of the soil resource 	<ul style="list-style-type: none"> • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.
Water		<ul style="list-style-type: none"> • Adverse effects on the status of water bodies arising from changes in quality, flow and/or morphology • Adverse effects on entries to the WFD Register of Protected Areas (ecological and human value) • Increase in the risk of flooding arising from wind farms and any ancillary infrastructure such as access roads • Drainage issues, including quality of run-off, arising from wind farms and any ancillary infrastructure such as access roads 	<ul style="list-style-type: none"> • Contributes towards hydrological and hydrogeological regime, including water quality and supply • Contributes towards the protection of water-based designations • Requires appropriate site drainage • Contributes towards flood risk management 	<ul style="list-style-type: none"> • Increased loadings as a result of development to be in compliance with River Basin Management Plan. • Flood-related risks remain due to uncertainty with regard to extreme weather events.
Air and Climatic Factors	<ul style="list-style-type: none"> • Contributions towards reductions in greenhouse gas and other emissions to air and associated achievement of legally binding targets (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating wind energy development • Contributions towards reductions in consumption from non-renewables and associated achievement of legally binding renewable energy targets, including sectoral targets for electricity (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating wind energy development • Contributions towards reducing emissions of pollutants to air • Positive interactions with human health (see neutral effects) arising from taking into account noise emissions 	<ul style="list-style-type: none"> • Noise emissions from wind energy developments and potential interactions with human health • Pollution as a result of construction emissions, back-up generators • Carbon emissions occur when the development of wind farms requires peat extraction 	<ul style="list-style-type: none"> • Requires consideration of carbon emissions balance when the development of wind farms requires peat extraction - may be positive in some cases but occurrence depends on the merits of the particular application 	<ul style="list-style-type: none"> • An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by the Guidelines, which will help to facilitate the development of wind energy capacity that will contribute towards meeting renewable energy generation and greenhouse gas emission targets.

Environmental Component	Likely Environmental Effects in combination with the wider planning framework			
	Significant Positive Effect	Significant Adverse Effect, if unmitigated	Neutral Effects	Residual Adverse Non-Significant Effects
Material Assets		<ul style="list-style-type: none"> • Potential effects on road networks as result of the movement of the component parts of turbines at construction and decommissioning stages • Residual wastes from construction and wastes post-decommissioning 	<ul style="list-style-type: none"> • Facilitates reuse of existing infrastructure • Makes recommendations on management of traffic • Contributions towards energy security (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating wind energy development • Residual wastes from construction and wastes post-decommissioning to be disposed of in line with higher level waste management policies 	<ul style="list-style-type: none"> • Residual wastes to be disposed of in line with higher level waste management policies.
Cultural Heritage		<ul style="list-style-type: none"> • Potential effects on designated and unknown archaeological heritage including entries to the Record of Monuments and Places, underwater archaeology, entries to the Northern Ireland Sites and Monuments Record and Northern Ireland Areas of Significant Archaeological Interest and Archaeological Potential • Potential effects on architectural heritage as designated or included within the National Inventory of Architectural Heritage, Records of Protected Structures, Architectural Conservation Areas and Northern Ireland's Listed Buildings, Conservation Areas and Historical Parks and Gardens • Potential effects on context of archaeological and architectural heritage • Potential effects on intervisibility and interrelationships between monuments and structures within the wider landscape, including cross-border intervisibility and interrelationships 	<ul style="list-style-type: none"> • Contributes towards protection of cultural heritage by facilitating compliance with legislation and recommending planning authorities to take account of a variety of designations and in their decision making • Contributes towards ensuring intervisibility and interrelationships between monuments and structures within the wider landscape, including cross-border intervisibility and interrelationships 	<ul style="list-style-type: none"> • Potential alteration to the context and setting of architectural heritage however these will occur in compliance with legislation. • Potential alteration to the context and setting of archaeological heritage however this will occur in compliance with legislation. • Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Guidelines.
Landscape		<ul style="list-style-type: none"> • Occurrence of adverse visual impacts on landscape designations such as landscape character areas (including Northern Ireland Regional Landscape Character Areas), landscape sensitivity and value areas, high amenity zones, scenic views and prospects and land use objectives relating to landscape protection, National Parks, Special Amenity Order Areas and UNESCO World Heritage Sites • Occurrence of adverse visual impacts in marine and island areas where there may be limited assimilative capacity 	<ul style="list-style-type: none"> • Contributes towards protection of landscape and landscape designations • Contributes towards the protection of amenity usage and access 	<ul style="list-style-type: none"> • Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

5. Next Steps

The SEA Directive and transposing Regulations in Ireland (Statutory Instrument No. 435 of 2004, as amended) require Northern Ireland to be sent a copy of the Draft Guidelines and the SEA Environmental Report where:

- Where the Department considers that the Guidelines would be likely to have significant environmental effects in Northern Ireland; or
- Where Northern Ireland would be likely to be significantly affected and so requests.

The range of likely significant environmental effects specified by the SEA Directive and transposing Regulations is complete and covers "*secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects*". The emerging overall findings of the SEA (see also Table 1) are that significant environmental effects will not occur in Northern Ireland as a result of implementing the Guidelines. However, given the neutral effects identified by the SEA in relation to contributing towards the protection and management of various environmental components, the Department are sending Northern Ireland a copy of the Draft Guidelines and associated SEA ER to offer an opportunity to enter consultations.

In an instance that Northern Ireland indicates that it wishes to enter consultations, the Department would facilitate this. The Northern Ireland environmental authorities and public would be given an opportunity to voice their opinion on the Draft Guidelines and associated SEA within a reasonable timeframe. Submissions made would be taken into account in the finalisation of the Guidelines.