

OBSERVATION/SUBMISSION TO PLANNING APPLICATION

Case Reference: 323761

Martin Bermingham

Imanemore

Barnaderg

Galway

To: An Coimisiún Pleanála

64 Marlborough Street

Dublin 1

D01 V902

Date: 07 November 2025

Re: Observation/Submission to proposed wind energy development at Cooloo Wind Farm

Location: Cloondahamper, Cloonascragh, Elmhill, Cooloo, Lecarrow, Dangan Eighter, Lissavally, Slievegorm
- Co. Galway

Applicant: Neoen Renewables Ireland Limited

Dear Sir/Madam,

We are a 4th generation farming family living in Imanemore. We have three young children one of which has additional needs (sensory). As a family we are very concerned about this proposed development and its potential impact on our family and our community. Our nearest turbine is T7 and we are approximately 2km from this site. We object strongly to this development based on the reasons stated and those below:

Planning Framework and Guidelines

The application depends upon the 2006 Wind Energy Development Guidelines (WEDG), which are nearly twenty years old. These guidelines were written when onshore turbines rarely exceeded 100 metres in height. The proposed turbines, however, are approximately 180 metres tall, almost double that scale, yet the same 500-metre setback is applied. This outdated standard fails to reflect advances in turbine design, the increased magnitude of visual, noise and shadow impacts, or current scientific understanding of low-frequency sound and health. Comparable European jurisdictions apply height-based setbacks (for example, 10 times turbine height or a minimum of 1–2 km). Proceeding under static 2006 standards is inconsistent with international best practice and contrary to the precautionary principle enshrined in Article 191 of the Treaty on the Functioning of the European Union (TFEU). By relying on obsolete national guidance, the proposal fails to

satisfy the Galway County Development Plan 2022–2028 (GCDP) objectives to preserve landscape character and protect residential amenity (Policies LCM 1 and LCM 2).

Barnaderg Gortbeg Group Water Scheme

I use the water from Barnaderg Gortbeg Group Water Scheme as my main source of drinking water for my household. The water is of excellent quality and I am very concerned that pollution of various types such as silt, sediment and other contaminants will enter the water source, causing me and my family harm. With the location of two Turbines within the Source Protection Area (SPA) I believe the Cooloo Windfarm should not be granted permission whatsoever, especially in such a highly karsified and hydrologically sensitive area.

Right to Own/Transfer Property

Article 43.1.2 of Bunreacht na hÉireann provides that “the State accordingly guarantees to pass no law attempting to abolish the right of private ownership or the general right to transfer, bequeath, and inherit property.” Granting permission for this wind farm development would effectively undermine this constitutional protection. Landowners and farmers within the affected area would face significant restrictions, as land situated near turbines would become unsuitable for residential development. This would prevent families from transferring land for the purpose of building homes for future generations, thereby eroding their practical rights of ownership and inheritance.

Furthermore, Article 43.2.1 acknowledges that the exercise of property rights must be regulated by the principles of social justice. However, this proposed development cannot be regarded as socially just. It disproportionately burdens local residents while providing little to no direct benefit to the community. Those of us living in the area would experience substantial and lasting impacts — including increased traffic and road closures during construction, ongoing noise pollution, shadow flicker, and significant visual intrusion on our landscape. In addition, there remains insufficient scientific evidence to conclusively demonstrate that large-scale wind farms pose no long-term health risks to nearby residents. In these circumstances, permitting this development would be neither fair nor consistent with the principles of social justice recognised under Article 43.

Property Devaluation

It is fair to surmise that people will not want to live near an industrial wind farm. There is growing evidence of loss of value and depreciation in the marketability of houses which are located near wind farms. The knock-on effect is that people will not move to the area or the local schools, and the community will wither. Rural Ireland still has a strong thriving support network of neighbours and community which will fundamentally be put at risk by imposing an industrial wind farm in the midst of 400 homes.

Noise

The proposed Cooloo Wind Farm should be refused planning permission, citing the Irish High Court case *Byrne & Moorhead v ABO Energy* [2025] IEHC 330, in which wind turbine noise was legally recognized as a private nuisance, leading to the permanent shutdown of turbines in County Wexford. The objection highlights that the Cooloo proposal fails to address proven low-frequency and amplitude-modulated noise impacts similar to those measured in the Wexford case, where sound levels far exceeded safe limits and caused serious disturbance to residents living over a kilometre away. The Cooloo project’s reliance on outdated ETSU-style noise standards, which disregard low-frequency and tonal effects, is therefore deemed inadequate to protect public health and residential amenity.

The proposed turbines at Cooloo—significantly larger than those involved in the Wexford case—are likely to generate even stronger low-frequency noise that travels farther and fluctuates more intensely under local

atmospheric conditions. This increases the risk of nuisance and potential legal liability for both developers and planning authorities. Ireland's 2006 wind energy guidelines are outdated and fail to reflect modern scientific understanding of turbine acoustics. Until revised national standards are adopted, approving large-scale wind farms under obsolete criteria would be unsafe and contrary to the public interest. Planning permission should therefore be refused due to the clear and foreseeable risk of harm to residential amenities, the inadequacy of current noise controls, and the legal precedent confirming wind turbine noise as a substantial nuisance.

Impact of Wind Turbines on the Neurodiverse within the Community

Numerous studies and planning inspectors with An Coimisiún Pleanála have acknowledged that wind turbines can have negative effects on neurodiverse individuals. Research by Howell (2015) found that people with autism are more sensitive to environmental noise, experiencing higher rates of sleep disturbance, cognitive difficulties, and stress due to low-frequency noise (LFN). The neurodiverse community often struggles to filter background sounds, and constant turbine noise and vibration could cause pain, anxiety, and loss of concentration, reducing quality of life.

These impacts extend to education. Local schools and preschools, including Brierfield National School which has a special class for children with autism, would be particularly affected. Senior planning inspectors have previously noted that facilities for children with additional educational needs may become unviable near large-scale wind farms due to such disturbances.

Shadow flicker poses further risks, as studies (Becchio et al., 2010) show that individuals on the autistic spectrum may fixate on spinning movements, heightening distress. Those with epilepsy or neurological conditions may also be affected.

Ireland's obligations under the UN Convention on the Rights of Persons with Disabilities require protection from harm and equal enjoyment of rights. Allowing this development would contradict those principles.

While more research is needed, there is no definitive evidence proving that wind farms are safe for, and do not significantly impact, the neurodiverse community—and the absence of evidence is not evidence of absence.

References:

- An Bord Pleanála. (2016). PA0041 – Assisting report to Senior Inspector [PDF].
<https://www.pleanala.ie/anbordpleanala/media/abp/cases/reports/pa0/rpa0041a.pdf>
- An Bord Pleanála. (2015). Inspector's report: ABP-PA0038 [PDF].
<https://www.pleanala.ie/anbordpleanala/media/abp/cases/reports/pa0/rpa0038.pdf>
- Howell, G. (2015). Autism and the effect of introducing a new noise source into quiet rural communities: risk factor from industrial wind power generation
- Becchio C, Mari M, Castiello U (2010) Perception of Shadows in Children with Autism Spectrum Disorders. PLoS ONE 5(5): e10582.
<https://doi.org/10.1371/journal.pone.0010582>

Barnaderg National School

Barnaderg National School is located approximately 2.49 km from Turbine No 1.

The turbines being this close to the school will no doubt have an impact on the education of the children in Barnaderg NS. The school will suffer from noise pollution and infrasound. In addition to this, during the construction phase and while laying cabling the roads to and from the school will be impacted by road closures, traffic, additional noise and dust. Again, all of this will impact on the children of the school.

I am also concerned that if t planning permission is granted less people will be moving to or building in the

area of Barnaderg. This will lead to fewer children in the community and may lead to the school losing teachers, and ultimately the school closure.

Farming

There are dairy and dry-stock farmers in Barnaderg, Cooloo and the surrounding areas, both full-time and part-time. Holdings vary in size. Many of these farmers depend on their livestock performing well in order to pay their bills. Also, those who are farming in the area enjoy the work they do, in the absence of shadow flicker, noise or visual pollution. If this development is granted their livelihoods will be impacted.

The 'Importance of Noise Hygiene in Dairy Cattle Farming – A Review' (Published November 1st of 2023 by Dimo Dimov, Toncho Penev and Ivaylo Marinov) details how vibration and noise from a milking parlour can negatively impact the milk yield and milk quality of a dairy cow. The paper also discusses how exposing animals to noise from an unfamiliar source can cause them stress.

It is also important to note that the developer has not taken into account the ways in which farmers depend on the local roads for moving cattle and for access to their land when going about their daily tasks within their farms.

Reference:

Dimov, D., Penev, T., and Marinov, I. (2023) 'Importance of Noise Hygiene in Dairy Cattle Farming – A Review'. Featured Position and Review Papers in Acoustics Science.

Available at: <https://www.mdpi.com/2624-599X/5/4/59>.

Biodiversity impact

I object to the proposed development on the grounds of its significant and permanent impact on biodiversity, including legally protected habitats and species.

The project's Environmental Impact Assessment Report (EIAR) acknowledges a residual adverse effect on Degraded Raised Bog (habitat 7120), a habitat of County Importance with capacity for natural regeneration (EIAR Ch. 6, p. 142). Construction of the proposed floating access road between turbines T7 and T9 will directly remove approximately 0.18 ha of this sensitive peatland and disrupt its hydrological balance (EIAR Ch. 6, Sec. 6.5.2.1.1). This is contrary to the conservation obligations set out under the EU Habitats Directive (92/43/EEC).

The site supports cutover bogs (PB4) and Marsh Fritillary (*Euphydryas aurinia*), an Annex II species protected under European law. Breeding webs were recorded near turbine T5 within metres of proposed construction works (EIAR Ch. 6, Sec. 6.4.3.3). The disturbance, dust, and drainage changes associated with turbine and road construction threaten the species' survival locally, directly conflicting with Ireland's duty to maintain favourable conservation status for Annex II species.

The EIAR highlights potential effects on hydrology and connected wetland systems that could degrade otter (*Lutra lutra*) habitat and aquatic fauna (EIAR Ch. 6, Sec. 6.5.2.1.1 and 6.2.2). Otters are also protected under Annex II of the Habitats Directive, and any degradation of their habitat represents a breach of Ireland's legal obligations.

These outcomes are inconsistent with the objectives of the National Biodiversity Action Plan 2023–2030, which seeks to prevent net biodiversity loss. Allowing this development to proceed would contradict national policy commitments and international conservation obligations.

Given the acknowledged residual adverse effects on protected habitats and species, I respectfully request that An Coimisiún Pleanála refuse permission for this development. The permanent loss and degradation of biodiversity cannot be justified, particularly where protected species and habitats are involved.

References:

- EU Habitats Directive (92/43/EEC)
- National Biodiversity Action Plan 2023–2030
- EIAR Chapter 6 (Biodiversity)
- An Coimisiún Pleanála Case 323761

Extra construction traffic

I strongly object to this proposal due to the major disruption and safety risks it poses to our local community during the construction phase. The Traffic Management Plan fails to provide clear information on delivery schedules, routes or mitigation for abnormal turbine loads. Our rural roads are narrow, shared by farm machinery, school buses and local traffic, and cannot safely accommodate such heavy haulage without damage or obstruction. The application states that there will be approximately 14 extra return trips made by trucks carrying materials. This is vastly underestimated for a project of this size. There are no binding guarantees on road repairs, traffic management or timing of deliveries to avoid peak community use. Residents, farms and schools in Barnaderg, Cooloo and surrounding areas will face delays, dust, noise and restricted access. This plan does not adequately safeguard community safety, local livelihoods or the integrity of rural infrastructure. Permission should not proceed without full, enforceable traffic controls and local protection measures.

Climate impact

As a local farmer, I am deeply concerned that the Cooloo Wind Farm will lead to further peat drainage and the felling of productive forest land. This will increase national land-use emissions and make it harder for Ireland's agriculture and forestry sectors to stay within their climate ceilings. Under the Climate Action and Low Carbon Development Act 2021, every sector must remain within its own emission limits. Projects that raise LULUCF emissions add to future pressure on rural landowners, who may face restrictions such as mandatory rewetting or livestock reductions to make up the shortfall. This proposal benefits energy targets but harms the land sector and undermines fair burden-sharing under national climate law.

Battery storage and substation safety risks

I object on the grounds of unacceptable risks to public health, fire safety, and water contamination posed by the proposed substation and Battery Energy Storage System (BESS).

The developer's own Appendix 12-3 Battery Storage Noise Assessment (Sept 2025) identifies fifteen CATL EnerC+ battery containers containing lithium-ion (LiFePO₄) systems manufactured by CATL. Predicted operational noise levels reach up to 31 dB LAeq at nearby homes, representing an increase of +11 to +14 dB above background levels. The report itself classifies this as a "significant adverse impact" on residential amenity. Scientific research shows that chronic noise above 30 dB can raise risks of cardiovascular disease and sleep disturbance.

Lithium-ion Battery Energy Storage System (BESS) installations worldwide have experienced fires and explosions that release toxic gases such as hydrogen fluoride and hydrogen cyanide. Research shows that fire-water run-off from lithium-ion battery fires can contain hydrofluoric acid, dissolved metals, and fluorinated organic compounds, which may contaminate nearby soil and waterways if not properly contained.

This proposed Substation and BESS would have a major impact on The Lough Corrib Special Area of Conservation, as a nearby stream eventually flows into Lough Corrib, potentially harming aquatic life and drinking water sources.

Based on the absence of any Fire Safety Management Plan within Appendix 12-3, it appears that nearby fire services are not equipped or trained to respond effectively to large-scale lithium-ion battery fires.

In *Grace & Others v. An Bórd Pleanála* (2017), the Supreme Court ruled that a residence within one kilometer of a proposed development site had standing to argue against consent. This case emphasizes the significance of thoroughly evaluating related infrastructure such as the substation and BESS, which ought to be included in the same consenting procedure as the wind farm itself.

With homes, farmland, and livestock within a few hundred metres of the proposed site, this industrial-scale development poses an unacceptable risk to community health, safety, and environmental integrity. Until independent noise, fire-safety, and hydrological risk audits are completed and verified by competent authorities, I urge An Bord Pleanála to refuse this application in accordance with the Precautionary Principle.

References:

- National Fire Protection Association (NFPA) (2020) Hazard Assessment of Lithium-Ion Battery Energy Storage Systems
- TNEI Ireland (2025) Appendix 12-3 Battery Storage Noise Assessment
- World Health Organization (WHO) (2018) Environmental Noise Guidelines for the European Region
- Irish Legal News (2017) Supreme Court: Challenge to wind farm development referred to CJEU

Bird collision risk

I object to the proposed development on the grounds that the Collision Risk Assessment (Appendix 7-6, MKO 2025) is methodologically and scientifically inadequate to protect legally protected bird species.

The assessment relies on the theoretical Band Model, which assumes fixed avoidance rates and static behaviour, without validation using telemetry or local field data. Survey coverage is temporally and spatially limited, missing key migration and nocturnal flight periods. This approach fails to capture the real-world behaviour of birds in the area.

The use of a 99.5% avoidance rate for Whooper Swans, without local validation, significantly underestimates the risk of collision. Evidence from Irish Wetlands Bird Survey (I-WeBS) and BirdWatch Ireland indicates that Whooper Swans routinely commute between Horseleap Lough and surrounding feeding areas at low altitudes that overlap turbine rotor heights. The conclusion of 'negligible risk' is therefore unsupported and unreliable.

The report fails to consider cumulative impacts with other regional wind farms or infrastructure, contrary to EU Directive 2009/147/EC (Birds Directive) and Article 6(3) of the Habitats Directive. This is a serious omission given the presence of multiple wind energy developments in the region.

Mitigation measures are undefined and untested. Key figures such as flightline maps (e.g., Figure 7-6-1) are omitted, hindering independent review and transparency. Without clear, evidence-based mitigation strategies, there is no guarantee that collision risks can be managed effectively.

Under the Birds Directive (2009/147/EC) and the Habitats Directive, Ireland has a legal obligation to protect migratory and resident bird populations. The assessment as presented does not provide sufficient evidence that these obligations can be met.

I respectfully request that the planning authority reject or defer this application pending an independent, peer-reviewed reassessment. This should include:

- Full telemetry and radar data for local bird populations
- Expanded seasonal coverage including migration and nocturnal periods
- Transparent disclosure of all field survey data and model assumptions
- Cumulative impact assessment with regional wind farms
- Defined, evidence-based mitigation strategies

References:

- MKO (2025). Appendix 7-6 Collision Risk Assessment, Cooloo Wind Farm EIA
- Band, W., Madders, M. & Whitfield, D. (2007). Developing field and analytical methods to assess avian

collision risk at wind farms

- Scottish Natural Heritage (2018). Avoidance Rates for the Onshore Wind Farm Collision Risk Model
- NatureScot (2021). Research Report 909: Using a collision risk model to assess bird collision risks

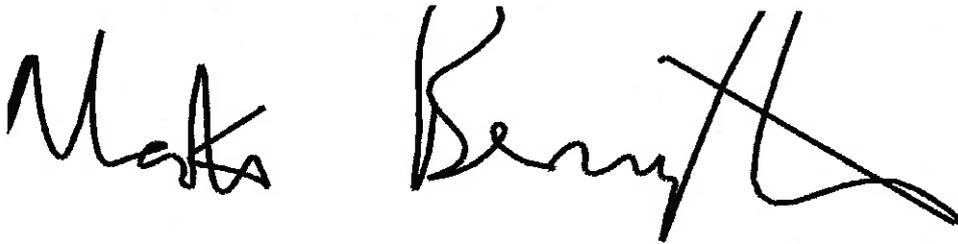
onshore wind farms

- Rees, E. (2006). Whooper Swans: Biology and Conservation. T & AD Poyser
- Crowe, O. et al. (2019). Migration and Roosting of Whooper Swans. Irish Birds 43
- BirdWatch Ireland (2024). Whooper Swan Species Profile & Irish Wetlands Bird Survey (I-WeBS)
- European Commission (2021). Wind Energy and Natura 2000

Conclusion

In light of the serious concerns outlined above I urge An Coimisiún Pleanála to refuse permission for this development. This proposal has also divided our community and in time, if this development is allowed to go ahead, it will destroy relationships within the community and no doubt have an impact on the population of the community. In addition it will no doubt result in further action to legally stop the windfarm from operating as a result of its impact on the community. An Coimisiún Pleanála must listen to the concerns of our community and act accordingly.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Martin Bermingham'. The signature is fluid and cursive, with a large, sweeping flourish at the end.

Name: Martin Bermingham

Date: 07 November 2025