

OBSERVATION/SUBMISSION TO PLANNING APPLICATION

Case Reference: 323761

Thomas Herwood
Tygreenan
Barnaderg
Tuam
Galway

To: An Coimisiún Pleanála
64 Marlborough Street
Dublin 1
D01 V902

Date: 14 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,

My home is 1.74 km from proposed turbine T3. The proximity of turbines to residential dwellings at this distance raises concerns about operational noise, low frequency hum and shadow flicker. Such disturbances can have measurable effects on the health and wellbeing and quality of life of nearby residents. A major concern is the proximity of these turbines to local schools with children with special needs and sensory issues, the huge impact they would have, and of course for any child in the area around them with issues. I also suffer with tendentious myself and am very concerned that the infrasound effect of the windfarms will have on my condition and my future quality of life.

I strongly urge An Coimisiún Pleanála to refuse this windfarm planning application for these reasons and the reasons outlined below.

Community Consultation and Engagement

The consultation led by Neoen and MKO for the Cooloo Wind Farm was deeply flawed and misleading. It does not meet the standards of genuine public engagement expected by An Bord Pleanála.

Notices appeared in the Irish Examiner while the Tuam Herald, the community's main news source, was ignored.

There was only a single public consultation meeting which was held outside Moylough, even though seven of nine turbines are proposed there. The plans have also changed significantly since this original meeting.

Despite claims of outreach to community groups, neither Killarinerin Community Council nor Killarinerin GAA were consulted. Only 55 homes were visited during 'door-to-door' engagement and ten written responses were received which is evidence of a process that failed to inform or involve the community. With poor broadband limiting access to online materials, and many residents not having the skills or technical knowledge to access online content, many locals were effectively excluded.

This was not meaningful consultation but a box-ticking exercise which did not provide the community with a fair chance to participate. These failures must carry serious weight in An Bord Pleanála's consideration of the application.

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 karstified and hydrologically sensitive area.

Right to Peaceful Enjoyment of Property

Article 1, Protocol 1 of the European Convention on Human Rights (ECHR) safeguards every individual's right to the peaceful enjoyment of their possessions. It provides that: "Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law."

Approval of this proposed wind farm would constitute a clear interference with this right. If the development proceeds, I will be deprived of the peaceful enjoyment of my home and property. The construction and operation phases would bring significant and continuous disturbance — including persistent noise pollution, low-frequency noise (LFN), shadow flicker, and heavy vehicle movements. The tranquillity and visual amenity of my surroundings, which form an intrinsic part of my home environment and well-being, would be irreversibly diminished.

During construction, the constant flow of heavy machinery and associated noise would cause ongoing

disruption and stress, further impacting daily life. Once operational, the presence of industrial-scale turbines dominating the landscape would permanently alter the character of the area, stripping residents of the quiet enjoyment of their homes and lands. This level of intrusion cannot be considered proportionate or justified in the public interest, and therefore conflicts with the protections afforded under Article 1, Protocol 1 of the ECHR.

Noise

Planning permission for the proposed Cooloo Wind Farm should be refused on the basis that it poses a clear and foreseeable risk of substantial interference with the normal use and enjoyment of nearby homes. In *Byrne & Moorhead v ABO Energy* [2025] IEHC 330, the Irish High Court found that wind turbine noise—specifically low-frequency and amplitude-modulated sound—constituted a private nuisance under common law, as it significantly disrupted residents' ordinary domestic life. The Court held that such noise amounted to an unreasonable and continuous intrusion, preventing the quiet occupation of the home and resulting in the permanent shutdown of three turbines in County Wexford.

The Cooloo proposal relies on outdated ETSU-based noise criteria that fail to account for the same low-frequency and modulated noise effects found to cause substantial nuisance in the Wexford case. Given the proposed turbines' greater height and rotor size, the likelihood of these harmful acoustic effects occurring at Cooloo is even higher. Approving this development under obsolete standards would disregard the High Court's findings and expose local residents to predictable and legally recognized interference with their right to the peaceful enjoyment of their homes. Planning permission should therefore be refused in full on these grounds.

Shadow Flicker

Given this proximity and the extraordinary scale of the proposed turbines, I believe the shadow flicker standards outlined in the Wind Energy Development Guidelines (2006) issued by the Department of Housing, Local Government and Heritage are no longer adequate to protect residential amenity or public health.

The proposed turbines represent a dramatic escalation in size compared to those contemplated in 2006:

- Tip Height: 180 meters
- Rotor Diameter: 162 meters
- Hub Height: 105 meters
- Swept Area: Over 20,000 m² per turbine

These dimensions significantly increase the area affected by moving shadows, extending the reach and intensity of shadow flicker events. The 2006 Guidelines do not account for turbines of this magnitude, nor the cumulative impact of multiple units in close proximity to residential receptors.

The Guidelines permit up to 30 hours of shadow flicker per year at any dwelling. This threshold is:

- Arbitrary and unsupported by contemporary health research
- Uniformly applied without regard to turbine scale or proximity
- Silent on cumulative exposure from multiple turbines

No scientific basis is provided for the 30-hour limit, and no differentiation is made between single-turbine exposure and multi-directional flicker from clustered arrays.

Shadow flicker is often dismissed as a minor nuisance, yet growing evidence suggests more serious implications:

- Annoyance and Stress: The U.S. Department of Energy's WINDEXchange notes that even limited flicker can create persistent discomfort, especially during sensitive times of day.
- Sleep Disruption: A 2013 report commissioned by the Scottish Government (University of Salford) found

that shadow flicker may contribute to sleep disturbance and reduced sleep quality.

- Photosensitive Epilepsy: Although rare, flicker frequencies between 3–30 Hz can pose risks. Complex interactions between blade movement, sun angle, and window geometry may approach sensitive thresholds.
- Motion Sickness-like Symptoms: The ClimateXChange report noted symptoms such as dizziness and nausea linked to visual stimuli like flicker.
- Mental Health and Quality of Life: A 2023 article by Fritz Energy documented community complaints about anxiety, reduced concentration, and general decline in wellbeing.
- The Guidelines make no distinction between general receptors and vulnerable groups (children, elderly, or those with neurological conditions).
- In ABP Case 318943, shadow flicker was cited as a material concern, particularly where receptors were located within 500m of turbines. The Environmental Impact Assessment recommended turbine-specific control measures.

The 2006 Wind Energy Development Guidelines offer minimal direction on how shadow flicker should be assessed, modelled, or mitigated. This omission is particularly problematic in the context of modern turbine arrays, where cumulative impacts and technological scale far exceed what the original standards contemplated.

The Guidelines do not specify:

- Which modelling tools should be used (e.g. WindPRO, WAsP, or bespoke GIS-based systems)
- What input parameters are required (e.g. rotor dimensions, sun path algorithms, terrain shading)
- Whether modelling should account for worst-case scenarios or realistic exposure windows

This opens the door to inconsistent and potentially misleading assessments. Developers may use optimistic assumptions (e.g. average sunshine hours, limited exposure angles) that understate the true impact on nearby dwellings.

There is no requirement to assess:

- Overlapping flicker events from multiple turbines
- Multi-directional exposure due to turbine layout
- Seasonal variation in sun angle and flicker duration

The Guidelines do not require developers to implement or even consider:

- Automated curtailment systems that shut down turbines during predicted flicker windows
- Physical shielding (e.g. planting, screens) to block flicker paths
- Real-time monitoring or complaint-based response protocols

This leaves residents like us with no enforceable protection. Even if flicker exceeds tolerable levels, there is no mechanism to compel mitigation unless it's voluntarily offered by the developer or imposed by planning conditions.

Other jurisdictions have moved beyond static thresholds:

- Germany requires modelling based on actual sunshine hours and mandates curtailment if flicker exceeds 30 minutes per day.
- Scotland recommends site-specific modelling and mitigation, especially near sensitive receptors.
- The Netherlands uses dynamic modelling and requires flicker-free zones around homes.

Ireland's 2006 Guidelines fail to reflect these advances, leaving communities exposed to outdated standards that do not match the realities of modern turbine design.

The shadow flicker provisions in the 2006 Wind Energy Development Guidelines are outdated and insufficient for assessing the impacts of modern wind farms, particularly in residential settings like mine. The scale and proximity of the turbines proposed near my home significantly increase the risk of adverse effects, yet the current standards offer no meaningful protection.

I respectfully urge the planning authority to:

- Apply a precautionary approach
- Require robust modelling and mitigation
- Consider the lived experience of residents
- Reject applications that fail to demonstrate compliance with updated standards

References

- Wind Energy Development Guidelines (2006) – Department of Housing, Local Government and Heritage
- ABP Case 318943 – Chapter 11: Shadow Flicker
- WINDEXchange – U.S. Department of Energy
- ClimateXChange – Report on Health Impacts of Wind Turbines (2013)
- Fritz Energy – Wind Turbines and Shadow Flicker (2023)
- Clean Power – Wind Turbines and Public Health

Biodiversity Impact - Bats

I object on the grounds that the assessment of bat mortality risk is inadequate and fails to meet current scientific standards for acoustic monitoring and mitigation.

Wind turbines are well-documented sources of bat mortality through collision and barotrauma. Recent peer-reviewed research by Behr et al. (2023, *Mammal Review*, 53: 65–71) confirms that bat fatalities can be reliably estimated only where standardised, referenced acoustic monitoring protocols are applied. The Cooloo Wind Farm EIA does not demonstrate compliance with these standards.

- No evidence of standardised, referenced acoustic monitoring at nacelle level
- Ground-level acoustic surveys and short-term transects are insufficient and cannot predict turbine-specific collision risk
- The proposed tall, large-rotor turbines increase collision risk and monitoring uncertainty
- No commitment to validated curtailment systems (such as ProBat) which have been shown to substantially reduce bat mortality
- Absence of site-specific validation and continuous monitoring means bat fatalities may be severely underestimated

Under the EU Habitats Directive (Articles 12 and 16) and the Wildlife Acts 1976–2018, all Irish bat species are strictly protected. Developers and planning authorities have a legal duty to ensure projects do not result in deliberate killing or disturbance of bats or deterioration of their breeding or resting sites. The absence of scientifically robust, standardised acoustic monitoring represents a significant procedural and ecological shortcoming.

I respectfully request that An Coimisiún Pleanála require:

- Standardised, referenced acoustic monitoring following international best practice
- Nacelle-mounted, calibrated detectors to monitor bat activity continuously throughout operation
- Validated curtailment systems (e.g. ProBat) to automatically shut down turbines during high bat activity
- Independent review and public reporting of all monitoring protocols and data
- Precautionary curtailment during high-risk seasons until adequate local reference data are available

Reference:

- Behr, O., Brinkmann, R., Mages, J., Niermann, I., Korner-Nievergelt, F., & Voigt, C. C. (2023). Standardised and referenced acoustic monitoring reliably estimates bat fatalities at wind turbines. *Mammal Review*, 53(1), 65–71. <https://doi.org/10.1111/mam.12302>

Conclusion

For all of the reasons set out in this submission, it is clear that this windfarm would cause more harm than benefit to our area. This community values its peace, safety, and way of life. The proposed windfarm threatens all of these. I ask An Coimisiún Pleanála to listen to the genuine concerns of local people and to reject this development in the interest of protecting our environment, our homes, and our future.

If permission is not refused outright, I request that an oral hearing be held so that I as a local can have my concerns about this development heard.

Yours Sincerely,

Thomas
HERWOOD

Name: Thomas Herwood
Date: 14 November 2025