

OBSERVATION/SUBMISSION TO PLANNING APPLICATION

Case Reference: 323761

Richard McWalter

Tygreenane

Barnaderg

Tuam

Galway

To: An Coimisiún Pleanála

64 Marlborough Street

Dublin 1

D01 V902

Date: 20 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,

I have lived in Tygreenane all my life, and I have been farming in the area. I live in close proximity to turbine number 3 and turbine number 6. I am worried about the impact of this development and the construction phase on the water which flows through drainage systems on our land. There is a spring well on the farm close to the bog. As someone who lives less than 1.5km from the development I don't feel the consultation process was adequate. I am concerned about the devaluation of my home and land, and potential future impacts on my ability to sell. I wish to strongly object to this development.

Community Consultation and Engagement

The basis that the community consultation process was carried out by Neoen and MKO for the proposed Cooloo Wind Farm has been fundamentally inadequate and does not meet the standards of meaningful public engagement required under the Draft Revised Wind Energy Development Guidelines (2019) or An Bord Pleanála's Strategic Infrastructure Development protocols.

The consultation was poorly publicised, using the Irish Examiner, a Cork-based paper with minimal reach in

north-east Galway, for statutory notices instead of the Tuam Herald, the area's primary local newspaper. This choice deprived many residents of awareness and opportunity to participate.

Claims of engagement with "local groups, clubs and schools" are inaccurate. Key organisations such as Killenerin Community Council and Killenerin GAA received no correspondence or invitations to contribute. Furthermore, no public consultation meeting was held in Moylough, where seven of the nine turbines are proposed, further excluding the most affected residents.

Reported "door-to-door engagement" reached just 55 homes within 1 km of the turbines, yielding only ten written responses which is an unacceptably low level of participation for a project of this scale. Reliance on online materials was ineffective given poor broadband in the area.

Overall, the process was selective, poorly targeted, and misleading in its presentation of local engagement. These failings undermine the project's compliance with public participation standards and should be given significant weight in An Bord Pleanála's assessment.

Planning Framework and Guidelines

The continued reliance on the Wind Energy Development Guidelines 2006 is no longer appropriate or proportionate given the significant evolution of wind energy technology and the clear advancements in scientific understanding since their publication nearly two decades ago. The 2006 Guidelines were developed in an era when turbines were typically less than 100 metres in height and generated 1–2 MW of power. The turbines in this proposed development will be 180 metres and produce approximately 6 MW of power. This will result in greater visual, acoustic, and environmental impacts than those contemplated in 2006.

The fact that the Wind Energy Development Guidelines 2006 has been acknowledged in the Dáil many times by many different people. In 2013 Deputy Michéal Martin told, the then Taoiseach, Enda Kenny that the guidelines were outdated and were never framed in the context of the new technology. Yet in 2025 Tánaiste Simon Harris is still saying in the Dáil that he acknowledges that the guidelines are outdated and that there is a specific commitment from the Government to prioritise the publication of new guidelines.

It is therefore unreasonable and contrary to the principles of proper planning and sustainable development for An Coimisiún Pleanála to continue to rely solely on the 2006 Guidelines. An Coimisiún Pleanála must make sure that any decision made is not based on outdated standards.

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.

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

National Schools

I am concerned that the presence of the wind turbines so close to the three local schools will have an impact on students, staff and the overall school community. All of the schools are less than 3.5 km away from a turbine. Turbines are known to create noise, low frequency infrasound and shadow flicker. These issues will no doubt impact on the students in the local schools.

Also during the construction phase and while laying the cabling, the roads will experience increased traffic and road closures. This will impact children travelling to and from school. I am also concerned that if Cooloo Wind Farm is granted planning permission less people will be moving to or building in the area. This will lead to fewer children in the community and may lead to schools losing teachers, and ultimately school closures.

Barnaderg National School

Barnaderg National School is located approximately 3.49 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 - 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>

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

Visual Impact

The proposed turbines would be highly intrusive and visually dominant, overwhelming the existing rural character of the local landscape. Their visibility from multiple vantage points would transform a natural and agricultural setting into an industrial-scale development.

The proposal is out of scale with the surrounding environment. The turbines' extreme height and size would cause visual clutter and a loss of scenic amenity, remaining visible even at long distances and creating continuous visual intrusion.

When combined with existing or approved wind farms in the region, this development would lead to visual saturation and skyline dominance, further eroding the landscape's character and reducing its recreational value.

The developer's visual impact assessment understates the visibility and significance of the turbines. Photomontages appear selective and fail to represent the true extent of visual intrusion likely to be experienced by residents and visitors.

The proposal would diminish the rural amenity, tranquillity, and identity of the local region. It threatens the area's sense of place and the quality of life for residents who value the natural and agricultural landscape.

The local wind farm's size and visual impact are excessive and inconsistent with the character of the area. While supporting renewable energy, developments must respect the local landscape — this project does not. The proposal should therefore be refused on the grounds of unacceptable visual and landscape impacts.

Project Splitting

The applicant proposes to seek planning consent for the nine turbines at this stage, while deferring a separate application for the substation, BESS, and grid connection. This approach amounts to project splitting, which is contrary to proper planning practice and should not be permitted.

These elements are integral and interdependent components of a single development. They cannot function in isolation, nor can the community have their say on the development unless it is seen as one complete project. The entire scheme must therefore be evaluated as one complete project under a single planning process.

Conclusion

In light of the serious concerns outlined above I respectfully urge An Coimisiún Pleanála to refuse permission for this development. The proposal is not compatible with the principles of proper planning or sustainable development and would have lasting negative effects on local residents, farmers, and the wider community. I therefore strongly object to this proposal and ask that it be refused in full.

If permission is not refused outright, I request that an oral hearing be held so that local residents, farmers, and the wider community can have our say on the impacts of this development.

Yours Sincerely,

A handwritten signature in black ink, appearing to read "Richard McWalter". The signature is written in a cursive style with some stylized flourishes.

Name: Richard McWalter

Date: 20 November 2025