OBSERVATION/SUBMISSION TO PLANNING APPLICATION

Case Reference: 323761

Patrick Joyce

Tygreenane

Barnaderg

Tuam

Galway

To: An Coimisiún Pleanála

64 Marlborough Street

Dublin 1

D01 V902

Date: 09 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 wish to lodge my formal objection to the proposed Cooloo wind farm and all associated works.

I live with my wife Catriona and our 4 young children. We have lived in Barnaderg all our lives and we are deepley worried about the effects the proposed windfarm will have on our health & well being.

Barnaderg to us is a beautiful village, very well kept and it will be destroyed if this proposed windfarm gets the go ahead.

Living very close to this proposed development has us extremely worried about the noise, the shadow flickers and the enormity of size of the turbines which will be a complete eyesore.

As a landowner in Dangan, where my children intend to build their future homes, it is now very worrying as these giant turbines will be just metres away and they will not be able to build on their own land. The proposed substation and Battery Storage will also be located close to our land in Dangan. This is another very worrying aspect to this development.

As a fulltime farmer with cattle and sheep, I am again deeply worried for them on my lands in Dangan. My lands in Dangan are part of my place of work and the construction of this Wind Farm will affect my day to day operation of the farm bith during construction and when in operation

It is deeply concerning the amount of work that will be involved in this proposed project with the traffic on already narrow roads. Huge machinery, noise pollution, houses metres away from it with small kids, the elderly, the list really is endless. It is without doubt, extremely frightening, and a very worrying time for all of us.

I urge An Coimisiún Pleanála to refuse planning permission for the Cooloo Wind Farm and I am objecting on the following grounds

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 Killererin Community Council and Killererin 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 ongoing reliance on the Wind Energy Development Guidelines 2006 is increasingly inappropriate given the advancements in wind energy technology almost twenty years ago. At the time, turbines rarely exceeded 100 metres in height and produced 1–2 MW of power. In contrast, the turbines proposed in this development will reach 180 metres and generate approximately 6 MW, resulting in significantly greater impacts than those envisaged by the 2006 Guidelines.

These guidelines have repeatedly been acknowledged in the Dáil as outdated. In 2013, Deputy Micheál Martin informed then-Taoiseach Enda Kenny that the guidelines did not account for contemporary technology. In 2025, Tánaiste Simon Harris reiterated in the Dáil that the guidelines remain outdated.

Accordingly, it is unreasonable and inconsistent with principles of proper planning and sustainable development for An Coimisiún Pleanála to rely solely on the 2006 Guidelines. Any decision must be informed by current standards and technological realities.

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.

Right to Peaceful Enjoyment of Property

Article 1, Protocol 1 of the European Convention on Human Rights (ECHR) protects 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."

Granting permission for this wind farm development would seriously interfere with my right to the peaceful enjoyment of my property as a landowner and farmer. My land is not only my livelihood but also my home and heritage, and its value lies in its usability, productivity, and tranquillity. The construction and operation of large-scale wind turbines would bring constant noise, vibration, and shadow flicker, making it extremely difficult to work or live on the land without disruption.

During the lengthy construction period, the constant movement of heavy machinery, road congestion, and elevated noise levels would disturb livestock, damage rural roads, and make normal farm operations significantly harder to carry out. Once operational, the turbines would permanently alter the landscape, impacting both animal welfare and the environment in which I work daily. The cumulative effects of noise, flicker, and visual dominance would deprive me of the peaceful enjoyment and practical use of my land.

Such disruption cannot reasonably be regarded as proportionate or justified in the public interest, and therefore would constitute a breach of the protections guaranteed under Article 1, Protocol 1 of the ECHR.

Property Devaluation

A study from the University of Galway and international research indicates that homes within 1 km of wind turbines experience adverse effects on property value, with reductions of up to 14.7%. My home falls within

this range, and I am deeply concerned about the financial and emotional impact this will have on my family and our future prospects. The planning application does not appear to address or mitigate this issue.

https://www.universityofgalway.ie/media/researchsites/ceris/files/WP-2023-01.pdf

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

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

I am deeply concerned about the impact this proposed windfarm will have on the farmers in Barnaderg, Cooloo, and the surrounding areas. Many of these are full-time and part-time dairy and dry-stock farmers, with holdings of varying sizes, and their livelihoods depend directly on the health and productivity of their animals. Farming in this area is not just a way to make a living—it is a way of life, a source of pride and satisfaction. The presence of shadow flicker, excessive noise, and visual intrusion from turbines would seriously disrupt this, affecting both our work and our well-being.

Scientific research underscores this concern. The study - 'Importance of Noise Hygiene in Dairy Cattle Farming – A Review (Dimov, Penev & Marinov, 2023)' highlights that exposure to noise and vibration—even from sources like a milking parlour—can reduce milk yield, lower milk quality, and stress the animals. Turbine noise represents a new, unfamiliar source that could have similar or worse effects on livestock.

Additionally, the developer has not addressed the practical realities of farming life. Farmers rely heavily on the local roads for moving cattle and accessing their land every day. These essential activities could be disrupted by construction traffic, turbine maintenance, or other project-related impacts, further jeopardizing livelihoods. For these reasons, I strongly object to the proposed windfarm.

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.

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 ($LiFePO_4$) 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

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.

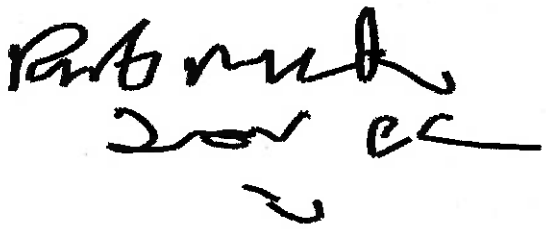
The local wind farm's size and visual impact are excessive and inconsistent with the character of the area. While supporting renewable energy, developments must respect the local landscape — this project does not. The proposal should therefore be refused on the grounds of unacceptable visual and landscape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

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,



Name: Patrick Joyce
Date: 09 November 2025