OBSERVATION/SUBMISSION TO PLANNING APPLICATION

Case Reference: 323761

James Hughes

Dangan

Tuam

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,

Dear Sir/Madam,

I would like to object to the above proposed development. My family have lived and farmed in this area for generations. I live in the area with my wife and two small children. My five year old son attends one of the three local schools in the area and my daughter will be starting playschool in the local playschool next September. My parents and brother also live in the area.

We are not against renewable energy and to the contrary in recent years we have carried out a deep retrofit of our home up to and including 20 PV panels (8.2kW system), installed a heat pump, heat exchanger system etc. which have significantly reduced our energy bills.

However in addition to the issues listed below I am deeply concerned about the impact this development including its construction will have on the area, safety of our children traveling to & from school, the security of our water source, visual & noise impact from the turbines etc.

All the farmland in this area (including the areas where the turbines are proposed) are currently classed by the department of agriculture as areas of natural constraints. Farmers receive payments as farming land in these designated areas face significant hardships from factors such as remoteness, difficult topography, climatic problems and poor soil conditions. Farmers work hard to produce food in these areas while also protecting and encouraging wildlife. I don't believe these lands are suitable for the extensive and invasive construction that will be required to construct the infrastructure for these turbines. In addition the programme outlined by the developer in my opinion is extremely ambitious and in order to meet this timeline more damage is likely to be caused to this difficult topography.

A number of these lands are also currently in other environmental schemes such as ACRES (Agri-Climate Rural Environment Scheme). These schemes have seen high participation in this area and have been very successful in addressing biodiversity decline, improving climate, air and water quality. These schemes have been particularly successful in combating the decline of biodiversity and supporting actions that create and enhance habitats. The reports commissioned by the developer have highlighted the rich biodiversity that exists in this area which is in no small part due to these government & EU funded schemes. I therefore believe it would be counterproductive and undo all the great work, which was publicly funded, by placing such a large scale development in this area. It is indisputable that irrespective of whatever mitigation measures the developer proposes to put in place that significant damage, destruction and displacement of habitats would not take place.

On the application submitted by the developer part of the site and some of the turbines are located within an area designated as generally discouraged in the current Galway development plan. This was raised by the council in preplanning meetings and discussions. However the developer hasn't given any clear rationale in any of the process to date as to why this is so. They haven't taken any steps to address this in my opinion. I don't see any reason why planning should be granted generally however particularly in this area.

I object to the development of cooloo windfarm based on the following reasons and those stated above.

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 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.

Brierfield Group Water Scheme

I use the water from the Brierfield and District Group Water Scheme as my main source of drinking water for my household. 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.

Brierfield and District GWS's Spring at Pollifrin is considered to be part of the same zone of contribution (ZOC) as the Mid Galway PWS and Barnaderg Gortbeg GWS as they all form part of the same groundwater flow system - 'EPA report Establishment of Groundwater Source Protection

Zones - Mid Galway Public Water Supply Scheme (May, 2012)'. However, there is no mention of the Brierfield and District GWS in Chapter 9 section 9.3.15.1 Public/Group Water Schemes.

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 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.

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

The EIAR's treatment of shadow flicker fails to meet statutory and international standards for the assessment and mitigation of human health and residential amenity impacts. It relies on outdated guidelines, applies over-simplified modelling assumptions, and does not provide adequate protection to the large number of dwellings and receptors affected.

The EIAR confirms that:

- 218 residential receptors are located within 1.62 km of proposed turbines,
- 171 of these are predicted to experience shadow flicker, and
- 43 receptors are within 1 km of a turbine.

These figures demonstrate that the project is situated in a densely inhabited rural area, yet the assessment dismisses the significance of impact based solely on a theoretical model rather than verified site conditions.

By any reasonable measure, 171 dwellings affected by a rotating shadow intrusion constitutes a major residential amenity and public health concern, not a negligible effect.

The EIAR applies the 2006 DoEHLG Wind Energy Development Guidelines, which allow up to 30 minutes per day or 30 hours per year of shadow flicker at any dwelling.

However:

- The 2019 Draft Wind Energy Development Guidelines (and reiterated in the 2025 Climate Action Plan Annex) require that no occupied dwelling or sensitive receptor experiences any shadow flicker through the use of automatic turbine control systems.
- The EIAR itself acknowledges that turbine software could achieve this standard but chooses to assess impacts under the obsolete 2006 thresholds.

This approach is contrary to current best practice and fails to future-proof the development in line with national policy on renewable energy development and community protection. Although the EIAR cites various international studies (some over a decade old) claiming no proven medical link between shadow flicker and disease, it fails to address contemporary health guidance:

- The World Health Organisation (2018) recognises annoyance and sleep disturbance as legitimate health effects of environmental light and noise intrusions.
- The HSE's own scoping response (2023) requested an assessment of all likely significant impacts on sensitive receptors, including shadow flicker, along with proposed mitigation.
- The EIAR's discussion focuses on whether shadow flicker can cause seizures (which is rare), but ignores chronic stress, fatigue, and loss of amenity due to regular flicker events within residential interiors.

The result is a narrow and outdated view of human health inconsistent with EPA (2022) guidance, which defines health as "a state of complete physical, mental and social well-being."

The shadow flicker assessment in the Cooloo Wind Farm EIAR is deficient, outdated, and incomplete. It underestimates the true scale of residential intrusion and fails to apply the precautionary principle required under both EU and Irish environmental law.

Given:

- 171 dwellings predicted to experience flicker
- Outdated 2006 guideline thresholds
- Absence of enforceable mitigation and cumulative analysis

this development cannot be deemed to have no likely significant effect on human health or amenity.

National Schools

The presence of wind turbines near schools can have a range of impacts on students, staff, and the overall learning environment. Wind turbines produce both audible noise and low-frequency infrasound, which can be noticeable inside buildings, which can cause a distraction. This constant distraction will interfere with children's attention and overall cognitive performance, making it more difficult for students to focus on learning.

- Cooloo NS is 1.59km away from the nearest wind turbine.
- Brierfield NS is 1.35 km away from the nearest wind turbine.
- Barnaderg NS is located approximately 2.49 km from the nearest wind turbine.

Shadow flicker caused by rotating turbine blades can create intermittent light in classrooms, which can be distracting and, in some cases, uncomfortable or stressful for children. The noise and shadow flicker will also greatly impact on the children in the school who have an additional need. There is a lack of research to state the impact on these children.

In addition to the above, 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. While the severity

of these impacts depends on distance from the turbines, it is clear that wind turbines in close proximity to schools have the potential to disrupt learning, reduce student wellbeing, and interfere with the overall educational experience.

Brierfield National School

Brierfield National School is 1.35 km away 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 Brierfield NS. The school will suffer from noise pollution, infrasound and shadow flicker. 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.

Brierfield NS also has a special class for children with Autism. These children process noise and light differently to other children. The noise, infrasound and shadow flicker will no doubt impact on their daily lives in school.

I am also concerned that if planning permission is granted less people will be moving to or building in the catchment area of Brierfield NS. 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

Lack of detailed traffic management plan

This submission objects to the proposed development due to insufficient traffic management and risk assessment in Appendix 15-2 (Traffic Management Plan). The plan omits essential quantitative data—such as expected abnormal load numbers, peak-phase traffic volumes, and route-specific scheduling—required to evaluate construction impacts. Narrow rural roads near Barnaderg and Cooloo lack the capacity for large turbine transport without pre-works strengthening or verge reinforcement. No detailed programme for road condition monitoring or reinstatement is provided. The TMP also fails to model cumulative or worst-case haulage scenarios, nor does it include enforceable mitigation measures for school transport, farm access or local business continuity. In the absence of these specifics, the project's potential impacts on road safety, infrastructure integrity and rural amenity remain unacceptably high. The application states that locals will kept informed about traffic construction. Judging by how poorly locals were informed about the windfarm initially, I would be very sceptical as to whether we would be kept informed once construction was to commence. The Board should refuse permission or impose strict, verifiable traffic and haulage conditions.

Climate impact

From a scientific standpoint, developing the Cooloo Wind Farm on peat and forested land will create significant carbon losses from disturbed soils and vegetation. The Environmental Protection Agency already reports over 7 Mt CO_2e annually from the LULUCF sector. Any further increase breaches the intent of Ireland's carbon budgets and the EU LULUCF Regulation, which requires no net debit from land use. The Climate Action and Low Carbon Development Act 2021 obliges decision-makers to act consistently with these limits. Replacing intact carbon sinks with infrastructure and limited native replanting does not align with the national climate objective of net zero by 2050. This project should be refused unless it fully restores and rewets the affected peatlands to avoid additional emissions.

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. 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 have no doubt that if this development is allowed to go ahead it will result in nuisance actions being brought, and ultimately a permanent injunction to shut down the windfarm. I therefore strongly object to this proposal and I feel that given all of the facts An Coimisiún Pleanála has no choice but to refuse the planning permission.

Yours Sincerely,

James Hughes

Name: James Hughes
Date: 07 November 2025