

Letter of the Objection to Cooloo Windfarm Planning Application

An Bord Pleanála Case Reference: PAX07.323761

from Local Residents:

Caroline and William Ward, Brierfield, Moylough, Ballinasloe, Co. Galway.

Date 20/11/2025

We are a family of four who live in Brierfield 1.6km from the nearest turbine which is turbine 1. We are and have always been strong believers in climate initiatives and supporters of green energy. We have two children, 13 and 15 yrs, both are enthusiastic students who are supporters of climate initiatives. However, having looked at this planning application in full we do not believe this is a green initiative and request that An Bord Pleanála refuse planning. We wish to object on the following grounds.

- 1. Destruction of EU Annex 1 Protected Habitats**
- 2. Repetition of Derrybrien Failures - ECJ Case C-215/06**
- 3. Unacceptable Impacts on Protected Birds Species**
- 4. Post Construction Nuisance Risk-High Court Precedent**
- 5. Incomplete Environmental Impact Assessment**
- 6. Inadequate Assessment -Reliance on Outdated Methodologies**
- 7. Unacceptable Risk to Public Water Supply**
- 8. Inadequate Infrasound and Low Frequency Noise Assessment**
- 9. Flicker and disruption to everyday enjoyment of property**
- 10. Inadequate Fire Safety Assessment**
- 11. Massive Carbon Release Negating Climate Benefits**
- 12. Misleading Representation of Project Duration and decommissioning.**
- 13. Systematic Peat Stability Assessment Failures**
- 14. Karst Risk Assessment Failures**
- 15. Road Closures and Traffic Management Failures**
- 16. Unassessed Grid Constraints and Curtailment Burden**
- 17. Final Statement.**

1. Destruction of EU ANNEX 1 Protected Habitats

The applicant's Natura Impact Statement (Page 50) explicitly admits:

"A section of approximately 580m of the proposed new floating road between T7-T9 will be located within the mapped Article 17 habitat [Active Raised Bog 7110]."

This constitutes admitted, direct destruction of an EU Annex I priority natural habitat type (7110 Active Raised Bog), which is afforded the strictest protection under the EU Habitats Directive (92/43/EEC).

An Active Raised Bog (7110) is listed as a priority habitat in Annex I of the Habitats Directive. Priority habitats require the highest level of protection under EU law. The development proposes to construct industrial infrastructure directly through this protected habitat. This is not indirect impact or peripheral disturbance; this is direct destruction by admission.

Total Floating Road Construction: 2.1 Kilometres

"Of the proposed new access tracks, 7.2km are expected to comprise founded construction, with the remaining 2.1km expected to comprise floated construction."

Total floating roads: 2.1 km (2,100 meters)

Section through Active Raised Bog (T7-T9): 580 meters (28% of floating road)

Founded construction requiring peat excavation: 7.2 km

Total new access tracks: 9.3 km

The 580m section through Active Raised Bog represents only a portion of the extensive floating road network crossing sensitive peatland habitats.

Additional EU Protected Habitats Impacted

There are additional EU Annex I protected habitats on site:

Degraded Raised Bogs Still Capable of Natural Regeneration (7120) - EU Annex I
1. Alkaline Fen (7230) 2. Wet Heath - Supporting habitat

The NIS (Page 52-53) admits:

"In order to fully assess whether the location of the proposed floating road between T7 and T9 is located within a habitat that corresponds to the Annex I habitat 7120... a full in-depth hydrological assessment of the physical conditions must be assessed... In the absence of this hydrological data, it is not possible to definitively state whether this habitat would have the capability of regeneration."

The applicant cannot determine if the development impacts habitat 7120 because

critical hydrological assessment has not been completed. The Board cannot make an informed decision without this fundamental data. This violates the requirement for “complete, precise and definitive findings” (ECJ Case C-441/17)

Crossing of Intact Raised Bog with Deep Peat

Chapter 8 identifies: “A 0.5 km section of intact raised bog is crossed by the proposed access road to T7. That road segment lies over deep peat (6.8 m recorded) ... The EIAR fails to demonstrate a safe, acceptable method to traverse this feature without irreparable harm.” The deepest peat recorded is 6.8 meters on site, the Intact Raised Bog will be disturbed, 0.5km of road will cause unavoidable destruction and there is no demonstrated safe construction method.

Violation of EU Habitats Directive

This development violates multiple provisions of the Habitats Directive:

Article 6(2) - Deterioration Prevention: “Member States shall take appropriate steps to avoid... the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated.”

Article 6(3) - Assessment of Implications: The assessment must enable “complete, precise and definitive findings” capable of “removing all reasonable scientific doubt” (ECJ Case C-258/11).

The NIS fails this test by: Admitting missing hydrological data,

Deferring critical assessments to post-consent, Inability to definitively rule out impacts on habitat 7120

No Assessment of Alternative Sites

The applicant has not demonstrated that: Alternative sites were considered that would avoid EU Annex I habitats entirely, there is no alternative route for the access road that avoids Active Raised Bog, the development cannot be redesigned to prevent habitat destruction. Under the Habitats Directive, avoidance must be prioritized over mitigation. The direct destruction of 580m of Active Raised Bog cannot be “mitigated”, it is permanent and irreversible.

2. Repetition of Derrybrien Failures - ECJ Case C-215/06

Background: The Derrybrien Disaster

On 16 October 2003, the Derrybrien Wind Farm in County Galway experienced a catastrophic peat slide that: Released 450,000 m³ of peat into the Owendalulleagh River, Caused severe pollution and fish kills, Damaged Special Area of Conservation (SAC) habitat, Led to European Commission v Ireland (Case C-215/06), Resulted in a €5 million fine plus €15,000 per day penalty, Condemned Ireland for approving development without proper EIA

The European Court of Justice held that Ireland breached the EIA Directive by granting permission based on inadequate environmental assessment, qualitative risk analysis, and deferred mitigation planning.

Direct Comparison: Cooloo vs. Derrybrien

technical review providing a systematic comparison:

Dimension	Derrybrien (2003)	Cooloo (2025)	Assessment
Location	Galway peatland	Galway peatland	Identical terrain type
Peat Depth	<=6 m	<=6.8 m	Same/worse conditions
Slope Angles	10-15°	2-8°	Lower gravity risk but same EIA failures
Geotechnical Model	None/qualitative	2-D infinite-slope only	Same deficiency
Peat Management Plan	Deferred to construction	Deferred to post-consent (Appendix 4-2)	Same fatal flaw
Slope Stability Testing	No site-specific modelling	No 3-D or coupled analysis	Same inadequacy
Monitoring	Visual inspection only	Visual inspection only	Same failure
Hydrology Connection	River to Lough Cutra SAC	River Clare to Lough Corrib SAC	Same risk pathway
Result	450,000 m ³ slide, €5M fine	Pending approval	Predictable disaster

The structure and methodology of the Cooloo Wind Farm EIAR closely mirror those of the Derrybrien Wind Farm... Both projects involve extensive peat and hydrologically sensitive terrain, yet both EIARs rely on qualitative judgement, limited field data, and mitigation deferred to post-consent stages... Granting permission on such an incomplete evidential base would breach the EIA Directive and expose the State to renewed enforcement.

Derrybrien: No site-specific slope-stability modelling

Cooloo (Appendix 8-1 Review): Only 2 boreholes for 9 turbines and 9.3 km of access roads, there is Insufficient sampling density for a project of this scale, Ground investigations are clustered around turbine locations, leaving roads, trenches, and peripheral slopes under-sampled.

This demonstrates Non-compliance with EPA EIAR Guidelines 2022

Derrybrien: Relied on qualitative judgment

Cooloo Uses 2-D “infinite-slope” model only, no 3-D modelling, no finite-element analysis, no coupled hydro-geotechnical modelling, assumes uniform 5 kPa shear strength without laboratory testing, Peat may exhibit residual strengths as low as 2 kPa but lower-bound not tested

This demonstrates non-compliance with EPA EIAR Guidelines 2022 (current scientific methods). The PSRA’s 2-D screening approach is a preliminary tool only and cannot quantify failure risk in complex peat-till terrain. Consent based on a 2-D FoS is scientifically unsound.

Deferred Peat Management Plan

Derrybrien: No peat management plan pre-construction; spoil mounds placed on saturated slopes triggered mass movement.

Cooloo

Identifies “Safety Buffer Zones” and “Peat Stockpile Restriction Areas” but defers exact locations and capacities to post-consent design, the estimated peat excavation: 39,530 m³ is a massive volume of peat and no quantified stability or carbon-loss assessment is provided. Derrybrien proved the danger of approving without a fixed plan. Cooloo appears to repeat this legal flaw.

Absence of Instrumented Monitoring

Derrybrien used visual monitoring only which failed to prevent disaster

Cooloo (Appendix 8-1 Review): Proposes “visual inspection” only, there is no proposed use of binding instrumentation (piezometers, inclinometers, settlement plates) or pre-defined alarm criteria.

This is non-compliant with EPA Research Report 494 (instrumented monitoring mandatory) Reliance on visual monitoring fails to provide early-warning capability. Instrumented monitoring and trigger-level protocols are mandatory to prevent catastrophic failure.

Derrybrien: There was no transient rainfall modelling, slide occurred during storm

Cooloo (Appendix 8-1 Review): No extreme-rainfall modelling is undertaken,

drainage ditches and construction surcharge effects are not simulated, and we cannot predict response to storm conditions, which we are having more of and with greater intensity, Storm Eowyn, January 24th, 2025. Without such modelling, the EIAR cannot exclude a repeat of the Derrybrien-type failure under storm conditions.

The European Court of Justice in Case C-215/06 held that, an EIA must be completed before consent is granted, deferral of critical investigations to post-consent is unlawful, qualitative risk assessment without quantitative verification is inadequate and visual monitoring without instrumentation is insufficient

Cooloo Wind Farm repeats every condemned practice.

This development would: 1. Breach the EIA Directive (2014/52/EU as amended) 2. Violate S.I. 296/2018 (Irish EIA Regulations) 3. Expose Ireland to renewed EU infringement proceedings 4. Create foreseeable risk of environmental disaster 5. Repeat the exact methodological failures condemned by the ECJ

The Board cannot reasonably approve a development that replicates practices already found unlawful by the highest court in Europe.

3. Unacceptable Impacts on Protected Bird Species

Hen Harrier (*Circus cyaneus*) - Annex I Species

The EIAR confirms the presence of **Hen Harrier**, a species listed on **Annex I of the EU Birds Directive** and protected under Irish law (Wildlife Act 1976 as amended).

Chapter 7 (Birds) confirms “Hen Harrier roost surveys were undertaken within the Proposed Wind Farm site and to a 2km radius”, Hen Harrier observations were recorded during surveys, The species was observed within and near the site.

Hen Harrier is highly vulnerable to wind farm developments due to collision risk with turbine blades (185m tip height), habitat loss and displacement from construction, disturbance during breeding and roosting (sensitive species), barrier effect disrupting foraging and movement patterns.

An Bord Pleanála REFUSED planning permission for a wind farm in County Clare (2024) specifically due to “potential adverse effects on the hen harrier.”

The Board found that the development, combined with existing wind farms, would result in **“unacceptable cumulative impacts on the hen harrier population”**,

The site was identified as having **“significant ornithological value”** and the impacts on Hen Harrier could not be adequately mitigated. The Cooloo development poses identical risk, same species (Hen Harrier), similar peatland/bog habitat, comparable turbine scale (180-185m), cumulative impact context (other wind farms in region) and Inadequate assessment of cumulative effects.

Golden Plover (*Pluvialis apricaria*) - Annex I Species

The EIAR confirms **Golden Plover** presence, another **Annex I** species under the Birds Directive. The applicant prepared a specific “Bird Mitigation Plan regarding golden plover” (referenced in Ch. 7) The existence of this mitigation plan demonstrates the significant risk this development poses to the species.

Golden Plover uses peatland habitats for feeding and roosting. The Slieveacurry Wind Farm (County Clare, 2024) was refused by An Bord Pleanála due to **impacts on Golden Plover (among other species)**. The Board determined the development would cause unacceptable harm to this Annex I species.

Reasons cited were Habitat loss: Excavation of 39,530 m³ of peat destroys foraging habitat, Displacement: Turbines displace birds from suitable habitat, Collision mortality: Flight paths intersect turbine swept areas, Cumulative effects: Combined with other developments in region

Cloghercor Wind Farm Precedent (Donegal, 2024)

An Bord Pleanála **refused** the **Cloghercor Wind Farm in County Donegal (2024)** due to impacts on the Golden **Eagle** and cumulative effects on Annex I bird species. Reasons cited were, unacceptable impacts on protected bird species, cumulative effects with other wind farms, inadequate assessment of species impacts. ABP is currently refusing wind farms based on bird impacts, particularly where cumulative effects are inadequately assessed.

Additional Protected Species

The EIAR confirms presence of additional protected and declining bird species:

Curlew (*Numenius arquata*): Red-listed (breeding and wintering) - highest conservation priority, **critically endangered** with only 100-105 breeding pairs remaining nationally, confirmed present in site area during surveys (non-breeding observations) Uses peatland habitats for breeding and foraging elsewhere in Ireland, with such a critically low population, ANY habitat loss or disturbance zone is significant.

Lapwing (*Vanellus vanellus*): Red-listed (highest conservation priority), **Declining population** nationally, Breeding bird requiring open wetland/peatland habitat, Vulnerable to construction disturbance and habitat loss

Snipe (*Gallinago gallinago*): Breeding bird of **conservation interest**, Associated with wet peatland and bog habitats, Sensitive to drainage and habitat alteration

All these species are vulnerable to habitat loss from 39,530 m³ peat excavation, drainage impacts altering bog hydrology, displacement from construction activity and turbine operation, collision mortality during flight and cumulative impacts from multiple regional pressures.

Legal Obligations Under Birds Directive

Article 4 of the EU Birds Directive requires Member States to: Take special conservation measures for Annex I species, classify Special Protection Areas for protection, avoid deterioration of habitats and significant disturbance

The development fails to adequately protect: the Hen Harrier (Annex I), Golden Plover (Annex I), Curlew, Lapwing, Snipe (species of conservation concern) This is a breach of the EU Birds Directive (2009/147/EC), S.I. 477/2011 (European Communities (Birds and Natural Habitats) Regulations) and the Wildlife Act 1976 (as amended).

Inadequate Cumulative Impact Assessment

The EIAR provides inadequate assessment of cumulative impacts with existing wind farms in the region, other proposed developments, peat extraction activities, forestry operations and agricultural intensification. The cumulative impact on Hen Harrier, Golden Plover, and

other protected species is poorly addressed, despite this being a key reason for recent ABP refusals.

Gougane Barra Precedent: Visual Impact (Cork, 2024)

An Bord Pleanála refused the Gougane Barra Wind Farm (County Cork, 2024) citing “significant harm to the area’s visual appeal. “The Board found that the visual impact of **178.5-meter turbines** was unacceptable, development would industrialize scenic landscape and cause harm to visual amenity and landscape character. Cooloo turbines: **180 meters** (taller than Gougane Barra) and are situated in a rural Galway landscape where similar visual impacts are expected.

The Cooloo Wind Farm presents comparable or greater environmental risks when compared to Clogher Donegal, Slieveacurry, Co. Clare and Gougan Barra Cork and should be refused on consistent grounds.

Grid Connection Legal Deficiency. Legal Precedent: O’Grianna v. An Bord Pleanála

The EIAR states that the 110kV grid connection is being assessed separately from the wind farm. However, established case law requires assessment as a single project.

High Court Ruling (O’Grianna): The wind farm and its grid connection constitute a single project, the EIA must assess the entire project including the grid connection, grid connection works requiring EIA cannot be considered exempted development, failure to properly assess the grid connection renders the planning permission invalid.

The applicant’s approach of assessing the grid connection separately is legally deficient and contrary to established Irish case law and EU EIA requirements. The grid connection crosses Lough Corrib SAC for 95 meters, this direct SAC impact must be assessed as part of the wind farm EIA, not separately.

4. Post-Construction Nuisance Risk - High Court Precedent

Recent Irish High Court decisions have established that wind turbines can be shut down post-construction and substantial damages awarded when noise nuisance is established, even when turbines comply with planning conditions and regulatory noise limits. These precedents create material planning considerations that An Bord Pleanála must assess before granting permission.

Gibbett Hill Wind Farm - Complete Shutdown Ordered (2025)

Raymond Byrne & Lorna Moorhead v. ABO Energy Ireland Ltd. Bunclody, County Wexford (June 2025) In the most significant Irish wind farm case to date, the High Court ordered the complete permanent shutdown of 3 out of 6 turbines (50% of the wind farm) at Gibbett Hill Wind Farm and awarded €360,000 in damages to residents Raymond Byrne and Lorna Moorhead.

They lived approximately 1 kilometre from the nearest turbine, turbine noise caused significant stress and anxiety, sleep disturbances and material interference with enjoyment of their property.

The court found actionable nuisance and ordered, complete shutdown, turbines ceased operations July 2025, €360,000 damages awarded (including €60,000 aggravated damages), the operators (ABO Energy Ireland Ltd) faced €2.3 million in legal costs and No appeal was lodged. The operators accepted the shutdown order. Which set a legal precedent that planning permission does NOT immunize wind farm operators from nuisance claims or prevent court-ordered shutdowns.

Notable in this case was the finding that the distance of 1 kilometre was insufficient to prevent noise nuisance. This finding has direct implications for Cooloo Wind Farm, which proposes a minimum setback of only 500 meters, with the first residence 720m from a turbine, below the distance that proved inadequate in Gibbett Hill.

Ballyduff Wind Farm, Kilcomb, near Enniscorthy, County Wexford (March 2024).

The High Court ordered nighttime shutdown of one turbine at Ballyduff Wind Farm and required it to operate at lower power mode during “quiet waking hours.” Two couples experienced sleep disturbances and unreasonable interference with their property enjoyment. The court found that “Wind turbine noise, even if within regulatory limits, can constitute a nuisance.” This demonstrated that compliance with planning conditions is not a defence against nuisance claims, meeting regulatory noise limits is NOT a defence against proven harm, planning permission and regulatory compliance provide no immunity from litigation and courts will impose operational restrictions to protect residents. This case was **referred to the Attorney General** due to its constitutional and public interest implications, indicating the fundamental nature of the legal principles at stake. It was established that “unreasonable interference” with enjoyment of property had occurred a test that focuses on **actual harm suffered**, not mere compliance with technical standards.

Barnafaddock Wind Farm 2019, Ballyduff, County Waterford.

The High Court found that 11 turbines at Barnafaddock Wind Farm were not authorized as built because they were constructed with blade spans exceeding the dimensions specified in planning permission. The approved blade span was 90 meters, but the actual blade span was 103 meters, the excess was 13 meters (14.4% larger than authorized). The court ruled that the turbines constituted an unauthorized development and material deviation from planning permission.

Wind turbine dimensions (blade span, rotor diameter, hub height) must **strictly comply** with approved plans. "Substantial compliance" cannot be claimed for material deviations.

These cases establish the following binding legal principles.

Planning Permission Provides no immunity from claims and An Board Pleanála approval does not prevent these consequences my.

Regulatory Compliance is not a Defence.

Developers can still be found liable for nuisance regardless of compliance with regulations if actual harm to residents is proven.

Courts will Order Operational Shutdowns.

High Court precedent demonstrates willingness to shut down 50% of operational windfarms. Investment in turbines provides no protection from shutdown orders.

A distance of 1 Kilometre was Insufficient:

Gibbett Hill established that 1 kilometre distance between turbines and dwellings was insufficient to prevent noise nuisance. This has direct implications for setback distance assessment in planning applications.

Actual Harm Trumps Technical Compliance

The courts focus on actual harm suffered by residents. Sleep disturbance, stress and anxiety and the effects on material interference with enjoyment of property. Not on whether the developer complied with technical standards.

Strict Compliance is Required

Turbine dimensions must match approved plans exactly (Barnafaddock). Material deviations result in the project being deemed an unauthorized development.

If the Irish High Court found that 1 kilometre was insufficient to prevent noise nuisance leading to shut down and €360,000 damages then Cooloo Wind Farm's proposed 500-meter minimum setback is, half the insufficient distance established by precedent, demonstrably inadequate to protect residents creating a higher risk of post-construction nuisance a foreseeable basis for future litigation and shutdown.

Multiple dwellings exist within 720 meters to 2 kilometres of proposed turbine locations, creating exposure to multiple nuisances claims if Gibbett Hill precedent is applied.

Planning Permission will not Protect the Developer or the Residents

Even if An Bord Pleanála grants permission, this provides no protection, the developer can still be sued for nuisance (Gibbett Hill, Ballyduff precedent) and can face court-ordered shutdowns (50% precedent) and face €360,000+ damages per household affected. Cooloo Windfarm has inadequate setback distances (720m vs. 1km insufficient precedent), foreseeable post-construction nuisance risk with a high probability of shutdown (Gibbett Hill precedent). It is not in public interest to approve development with foreseeable shutdown risk.

Proper Planning and Sustainable Development

Granting permission for a development where the setback distance is less the insufficient Gibbett Hill distance of the High Court precedent demonstrates 50% shutdown risk, a risk of financial exposure of up to €4-7 million and community opposition already exists therefore post-construction litigation is foreseeable. Planning Laws exist to allow for refusal of inappropriate sites rather than approval followed by shutdown. The Gibbett Hill court emphasized; “the necessity of addressing wind turbine noise to ensure the success of renewable energy initiatives”. This statement recognizes that, poor siting undermines public acceptance of wind energy and noise nuisance, damages renewable energy reputation. Appropriate siting is essential, not optional. Refusing this application protects renewable energy reputation by preventing foreseeable shutdown disaster. The Climate Action Plan 2024 and renewable energy policy support wind energy when appropriately sited

5. Incomplete Environmental Impact Assessment

Systematic Deferral of Critical Studies

Throughout the EIAR, critical investigations are deferred to “post-consent” stages,

Fire safety risk assessment (future tense: “will be subject to”), Full hydrological assessment (NIS admission), Detailed peat stability analysis (Appendix 8-1), Karst ground investigation at high-risk locations (Appendix 8-2), Peat stockpile locations and stability (Appendix 4-2), Monitoring instrumentation and trigger levels and Emergency response plans.

ECJ Case C-215/06 (Derrybrien): Ireland fined €5 million for approving development without complete EIA

ECJ Case C-441/17: Assessment must be complete **before** consent, with “complete, precise and definitive findings”

The Cooloo EIAR repeats the exact error condemned by the European Court of Justice.

Missing or Inadequate Technical Studies

Required Study	Cooloo EIAR Status	Deficiency
Quantitative hydrology modelling	Desk study only	No numerical models
Groundwater tracer testing	Not conducted	Cannot prove no pathway to SAC/PWS
3-D peat stability modelling	2-D infinite-slope only	Inadequate for complex terrain
Laboratory peat testing	Not conducted	Shear strength assumed
Karst dye tracing	Not conducted	Pollution pathways unknown
Fire risk assessment	Deferred	Not completed
Climate change assessment	Minimal	No adaptation measures
Carbon release quantification	Not calculated	39,530 m ³ peat impacts unknown

Required Study	Cooloo EIAR Status	Deficiency
Cumulative effects	Qualitative	No quantitative modelling
Instrumented monitoring plan	None	Visual inspection only

Confidential Data and Public Access Limitations

Two critical appendices containing detailed protected species location data have been withheld as confidential. Appendix 6-5: Confidential Biodiversity Data. Chapter 6 relates to Biodiversity assessment however a cover page only is provided (379 bytes) the rest is marked "CONFIDENTIAL and not for public display".

"The Board must satisfy itself that the confidential data in Appendices 6-5 and 7-5 fully supports the applicant's conclusions regarding impacts on EU protected habitats and species, as the public cannot independently verify these critical assessments. Given the presence of Annex I bird species (Hen Harrier, Golden Plover) and EU Annex I habitats (Active Raised Bog, Alkaline Fen), the Board must ensure that the withheld location data does not reveal greater impacts than claimed in the public documents."

Natura Impact Statement Availability Issue

The **172-page Natura Impact Statement (NIS)** is a mandatory document under the EU Habitats Directive for developments that may affect Natura 2000 sites (Special Areas of Conservation or Special Protection Areas).

Procedural Irregularity, the NIS was filed with An Bord Pleanála which is legally compliant, however the NIS was not available on the applicant's public website (www.cooloowfplanning.com) during the consultation period, the public had to access the ABP case file system to review this critical 172-page environmental assessment, this may have limited public access to essential information needed to make informed objections.

Under the **Aarhus Convention** (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, ratified by Ireland), Article 4: Right of access to environmental information, Article 6: Public participation in decisions on specific activities

The NIS contains critical assessments of, Impacts on Lough Corrib SAC [000297], Active Raised Bog (EU Annex I habitat 7110), Alkaline Fen (EU Annex I habitat 7230), Protected aquatic species (Atlantic Salmon, Lamprey, Otter, White-clawed Crayfish) and mitigation measures for peat excavation and Cumulative impacts assessment.

It is noted that the 172-page Natura Impact Statement, a mandatory document under the EU Habitats Directive, was not readily available on the applicant's public website (www.cooloowfplanning.com) during the consultation period, despite being filed with An Bord Pleanála. This may have limited the public's ability to access this critical environmental assessment document and make fully informed objections regarding impacts on EU-protected Natura 2000 sites and Annex I habitats. The public should not be required to navigate An Bord Pleanála's case file system to access mandatory environmental assessment documents during the statutory consultation period.

6. Inadequate Assessment - Reliance on Outdated Methodologies

Systematic Use of Outdated Guidelines and Research

The Environmental Impact Assessment Report (EIAR) and supporting technical reports rely extensively on outdated guidelines, standards, and research, some dating back nearly 30 years. This systematic reliance on obsolete methodologies violates the EIA Directive's requirement for assessment based on "current knowledge" and "best available techniques" and renders the assessment fundamentally inadequate.

Primary Assessment Guideline: Wind Energy Development Guidelines, 2006 (19 YEARS OLD)

The 2006 Guidelines Are Used Throughout

Wind Energy Development Guidelines, 2006 (DoEHLG 2006) are the primary guidelines used for, noise assessment and noise limits, setback distances (500m minimum), visual impact assessment and multiple technical chapters. Which are now 19 years old in November 2025.

The developer admits the 2006 Guidelines are, "Very limited," provide no guidance on where or how to measure background noise and provide no guidance on wind speed correlation. There is also no mention of a cumulative effects assessment.

2006 Wind Turbine Technology has a typical height: 80-100 meters and a typical capacity of 1-2 MW with smaller rotors and different noise profiles.

The 2025 Cooloo Wind Farm Proposal has blade tip heights of 180meters (2-3 times taller) and a turbine capacity of 6MW+ (3-6 times more powerful). Modern rotors have completely different noise characteristics.

In those 19 years there has been extensive operational wind farm noise data (2006-2025) collected. Providing updated understanding of low-frequency noise and infrasound. High Court precedent establishing actual harm: Gibbett Hill (2025), Ballyduff (2024), There are

modern noise assessment methodologies available (IOA GPG 2013, WHO Guidelines 2018). There is 19 years of health research and epidemiological studies providing updated understanding of the cumulative impacts of infrasound. The 2006 Guidelines were not designed for modern 6 MW+, 180meter-tall turbines. The developer proceeds with an application based on guidelines the government has committed to replacing.

Carbon Assessment: IPCC 1996 Guidelines (29 YEARS OLD)

The carbon calculations in Chapter 11 use “Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories” which are 29 yrs old. They were used to assess 39,530 m³ peat excavation carbon release, carbon payback period and climate benefit of the proposed development as well as greenhouse gas emissions.

The following updates have been made to the 1996 IPCC Guidelines, 1996 IPCC Guidelines → 2006 IPCC Guidelines → 2019 IPCC Refinement ← CURRENT STANDARD.

The 2019 IPCC Refinement to the 2006 Guidelines is the current international standard for greenhouse gas inventories. The developer has ignored the 2006 IPCC Guidelines (19 years more recent than 1996) - 2019 IPCC Refinement (current standard, 23 years more recent than 1996). No justification is provided for using 29-year-old methodology when the current standard is publicly available.

Changes over 29 Years

Peatland Carbon Science (1996 vs. 2025) has a vastly improved understanding of peatland carbon stocks and emission factors, updated emission factors for disturbed peatlands provides better measurement methodologies for peat carbon content. Recognition of complexity in peatland carbon dynamics - Ireland-specific peatland research (post-Derrybrien 2003).

Wind Turbine Lifecycle Assessment (1996 vs. 2025). In 1996 Modern wind turbines did not exist so there is no lifecycle data available in 2025. There is now extensive data on manufacturing, transport, installation, operation, decommissioning and carbon costs. Modern turbines use different materials and manufacturing processes.

The Paris Agreement (2015) set out updated climate targets and accounting methods, IPCC Special Reports: 1.5°C warming (2018) as well as updated climate models and Improved understanding of climate tipping points and urgency. Using 29-year-old carbon accounting methods to assess climate benefit is fundamentally inadequate.

Eamon O Reilly of the Irish Association of Engineering 17th of November 2025 on RTE Radio1 stated “renewables can definitely take an awful lot of carbon emissions out of the system, but we always need some source of energy that is going to make sure our electricity sources are adequate, that they are reliable, and that we have security of supply over, let’s say, a 30 day period where there is no wind”. He is discussing his frustration at the state of Irish Energy Policy and states that Ireland's objective of becoming climate neutral by 2050 was “unachievable” and aiming to have 54,000MW of renewable energy

generation here “simply makes no sense”. Article RTE website by Adam McGuire Monday 17th of November 2025.

Landscape Assessment: 2000 Guidelines (25 YEARS OLD)

The Landscape and Visual Impact Assessment (Chapter 13) rely on “DoEHLG 2000 Landscape Guidance” which is 25 years old. The typical turbine height in 2000 was ~50-70 meters and typical blade tip height was ~80-90 meters, Cooloo windfarm blade tip is 180m, the Visual assessment criteria was designed for these smaller structures. Visual impact assessment criteria from 2000 cannot adequately assess structures more than twice the height they were designed for.

Modern International Standard: GLVIA3 (Guidelines for Landscape and Visual Impact Assessment, 3rd Edition), was published by the Landscape Institute of Environmental Management & Assessment (IEMA) in 2013 and is the current industry standard for landscape and visual impact assessment. The developer chose to use 25-year-old guidance (2000) rather than the current industry standard (GLVIA3 2013). No justification is provided for this choice.

Health Assessment: 10-Year-Old Literature Review

Appendix 5-1 Wind Farms & Health Literature Review - Chapman 2015 is used in Chapter 5 (Population & Human Health) which is a 10 year old literature review. This results in 10 years of additional peer-reviewed research (2015-2025) missed, updated studies on low-frequency noise and infrasound not included long-term epidemiological studies (10-year follow-ups) and research on modern large turbines (6+ MW, 180m height).

Pre-Dates High Court Findings of Actual Harm

The Chapman 2015 review pre-dates, Gibbett Hill Wind Farm (2025): - High Court found actual harm and the Ballyduff Wind Farm (2024), High Court found “unreasonable interference” with property enjoyment. These High Court findings establish that wind turbine noise causes actual, measurable harm to human health and well-being. The 2015 health review pre-dates this evidence and cannot account for it.

Additional Outdated References

Biodiversity and Ecology, Toner et al., 2005 (EPA Q-ratings) - 20 years old - Used for aquatic ecology assessment,

O’Grady, 2006 (habitat requirements) - 19 years old - Used for species habitat assessment
2009 (ecological guidelines) - 16 years old

Used for ecological impact assessment (designed for roads, not wind farms), Worrall, 2009 (peat carbon) - 16 years old - Used for peat carbon calculations

Construction Assessment

Nayak et al., 2008 (construction noise) - 17 years old - Used for construction noise predictions

Development Management Guidelines, 2007 - 18 years old - Used in planning assessment

EIA Directive 2014/52/EU requires, “*Best available techniques*”

This is not proper planning, not sustainable development, and not compliance with the EIA Directive. We request refusal of permission on grounds of inadequate assessment using outdated methodologies.

7. Unacceptable Risk to Public Water Supply

Mid-Galway Public Water Supply at Risk

Chapter 9 of the EIAR (Hydrology and Hydrogeology) reveals that the development site overlaps the Source Protection Area (SPA) for the Mid-Galway Public Water Supply (PWS). The Source Protection Area is 49.8 km², the water source, Lecarrow is 3 km downstream of the wind farm, the water type is groundwater which is fed from karst springs, it serves a wide population of thousands of homes and businesses. It is classed as an “extremely sensitive water supply”, this is the EIARs own classification. The water supply intake is located along karst springs on the Lecarrow 30 Stream, directly downstream of the proposed wind farm.

Brierfield Group Water Scheme

“The PD [Proposed Development] is also contained within a Prioritized Area for Action ‘Coolourty Brierfield GWS’ under the 2022-2027 dRBMP [draft River Basin Management Plan], therefore LAWPRO (Local Authority Waters Programme) is focusing on this area to protect water quality.”

Under the EU Water Framework Directive and River Basin Management Plan 2022-2027, this area has been officially designated as requiring priority attention for water quality protection. LAWPRO (Local Authority Waters Programme) is actively working in this area to IMPROVE water quality. This designation means the area already has water quality challenges or risks. Proceeding with this development would introduce new pollution risks to an area specifically targeted for water quality improvement.: Approving this development directly contradicts the objectives of the legally binding River Basin Management Plan. While LAWPRO works to improve water quality, the wind farm would create new contamination risks. The WFD requires Member States to prevent deterioration of water status which is particularly critical in Prioritised Areas. The State cannot simultaneously, designate an area for priority water quality protection and approve a major industrial development that creates contamination risks to that same water supply.

Feigh East and West Group Water Scheme

While the EIAR identifies this scheme as lower risk it acknowledges that it is still relevant because although the grid connection does not pass through this SPA and is upgradient, it demonstrates the density of community water schemes in the area dependent on groundwater.

The combined population served by these interconnected community water schemes represents a significant portion of east Galway. Contamination of the shared karst aquifer system would be catastrophic for multiple communities simultaneously.

Hydrological Connectivity

The EIAR confirms direct hydrological connectivity, the Wind farm site drains via Grange River and Abbert River, both rivers flow to River Clare, the River Clare flows to Lough Corrib SAC [000297], and Lecarrow 30 Stream is a tributary receiving groundwater discharge from the karst aquifer beneath the wind farm site. This creates a pollutant pathway: Site → Groundwater → Karst conduits → Springs → Lecarrow 30 Stream → Mid-Galway PWS intake.

Extreme Vulnerability of Karst Aquifer

This area is a Regionally Important Karstified Conduit Aquifer (Rk), bedrock (karstified limestone) is within 5 meters of ground surface across much of the site, GSI groundwater vulnerability mapping highlighted "Extreme" vulnerability ratings for portions of the site, there was 41 karst features within 500m identified, with 13 features on site (Appendix 8-2) Karst conduits provide rapid, direct pathways for contaminants to reach groundwater. There is minimal soil/rock filtration, contaminants can travel kilometres in hours through conduit systems, once contaminated, karst aquifers are extremely difficult to remediate. The development poses multiple contamination pathways through Peat Excavation (39,530 m³), concrete pouring, hydrocarbon spills and site drainage from the construction of access roads. Extreme rainfall events could overwhelm the drainage systems and directly discharge water into the public supply resulting in pollution.

If the Mid-Galway Public Water Supply is contaminated, thousands of homes and businesses will lose drinking water, alternative water supply (tankers, bottled water) will cost millions, long-term aquifer contamination may be irreversible, and no financial security or contingency plan is in place.

The health implications from contaminated water sources are difficult to quantify but include acute infectious gastroenteritis caused by microbes like *Cryptosporidium*. Symptoms typically include stomach cramps, diarrhoea, nausea, and vomiting, and while most healthy individuals recover, the illness can be severe for vulnerable groups like young children, the elderly, and those with weakened immune systems. Contaminants from construction work can leak into the water supply, which is particularly dangerous for young children, pregnant women, and babies.

The Board cannot reasonably approve a development that places the drinking water supply for thousands of people at unacceptable risk, particularly where the applicant has failed to complete basic hydrological assessment of pollutant pathways.

8. Inadequate Infrasound and Low Frequency Noise Assessment

The EIAR relies on Outdated Studies for Obsolete Turbines

The Noise Report dismisses infrasound concerns by citing studies from **2004-2018**, including, 2004 DTI Study/2006 Hayes McKenzie Report is based on turbines operating 19-21 years ago, 2005/2009 Dr Leventhall articles, are based on turbines up to 20 years old, 2009 IOA Bulletin is now 16 years old, 2018 Planning Appeal is 7 years old, pre-dating modern large turbines. These studies assessed turbines that were significantly smaller than the proposed Cooloo turbines. Larger turbines with longer blades rotating at greater tip speeds generate significantly more infrasound and low frequency noise than the smaller turbines assessed in the cited studies. Applying 2004-2009 conclusions about 1-3 MW turbines to modern 6.6 MW turbines is scientifically invalid.

The EIAR's own sources contradict its own conclusion.

The EIAR states Evidence on health effects from wind turbine noise is either absent or rated low/very low quality. Then in chapter 5, p 5-2 NHMRC 2014 was cited "There is consistent evidence that noise from Wind Turbines is associated with annoyance, sleep disturbance, poorer sleep quality and quality of life". It also cites that wind turbine noise above 45dB Lden is associated with adverse health effects, "WHO guidelines (cited EIAR Ch 5, p5-7) Yet they conclude that the Project will not result in any significant effects on human beings EAIR Ch 5, p5-90.

In the case of Byrne and Moore V ABO Energy 2025 EHC 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.

This resulted in the permanent shutdown of three turbines in county Wexford.

Professor Ken Mattsson from Uppsala University 18/07/2025 Produced new research that suggests that modern Wind Turbines may generate significantly higher levels of Infrasound that travels farther than previously thought.

<https://ieeexplore.ieee.org/document/11079109>. His study indicates that Infrasound levels from modern wind turbines are considerably higher and travel much farther than was previously assumed. These challenges outdated measurement techniques and models used in the environmental impact assessments.

The HSE position paper on wind turbines referred to in this chapter, was published in February 2017 to address the rise in wind farm developments. A project of this size requires more up to date Public Health Guidelines than that.

International set back comparisons Cooloo Windfarm 720m minimum distance vs Bavaria Germany 1800m (10x tip height). Ireland's 720m setback is among the least protective internationally for 180m turbines.

Brown County, Wisconsin 2014 Board of Health Declaration - the board voted unanimously to declare Shirley Wind farm a "human health hazard" based on sleep disturbance, headaches, dizziness, stress.

This following statement is taken from a report by a Fellow of The American Academy of paediatrics.

"I am a physician and scientist; my expertise lies in clinical and environmental matters. Whether or not wind proves to be a viable source of power, it is essential that windmills are not sited any closer than 1.25 miles (2 km) from people's homes or anywhere else people regularly congregate. (Highways are also a problem for motorists with seizure and migraine disorders and motion sensitivity, from the huge spinning blades and landscape-sweeping shadow flicker.) I consider a 1.25(2km) mile set-back a minimum figure. In hilly or mountainous topographies, where valleys act as natural channels for noise, this 1.25mile (2km) set-back should be extended anywhere from 2-3 miles from homes. Let me be clear. There is nothing, absolutely nothing, in the wind energy proposition that says windmills must be sited next door to people's homes. Siting, after all, is the crux of the issue. Irresponsible siting is what most of the uproar is about. Corporate economics favours building wind turbines in people's backyards; sound clinical medicine, however, does not. Nina Pierpont, MD, PhD Fellow of the American Academy of Paediatrics". Wind Turbine Syndrome mechanisms - (2021)

Infrasound and those with Autism and Neuro-Divergergent individuals

The World health Organisation (WHO) defines health as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

This planning application fails to address key health concerns of residents living in this proposed wind farm development. While much consideration is given to noise and shadow flicker from wind turbines, the guidelines used are often outdated. There is little or no consideration given to people with disabilities or the more vulnerable populations such as the elderly and those with chronic disease. The National School in Brierfield provides a service for Autistic Spectrum Disorder therefore many families move to this area to avail of this service for their children who have special educational needs. The school is 1.3km from the nearest turbine.

"To an autistic child sound can be either an overwhelming sensory input that causes distress or a source of comfort, their experience can vary widely. Many autistic children have heightened sensitivity or hypersensitivity while others may have low sensitivity or sensitivity to only certain types of sounds:" – "What is sound therapy for Autism Spectrum Disorder", Donnesa McPherson, AAS, Autism Parenting Magazine, June 28,

2025. This again creates concern regarding the number of children with Autistic Spectrum disorder living in the area and attending the school in Brierfield which as previously stated is within 1.3km of the nearest turbine.

Summary on Infrasound

EPA EIAR Guidelines 2022 (Section 7.5.1) require the EIAR to identify, describe and assess in an appropriate manner, the direct and indirect significant effects of a project on population and human health. The Cooloo EIAR fails to assess infrasound impacts on, Human health (relying on outdated dismissive studies) or Wildlife populations where there is no assessment whatsoever.

I think it's fair in summary to suggest that the health impacts for residents have not been considered in any great depth in this EIAR or its effects on Population and Human Health. Considerably more detail will be required before considering proceeding with this development. The Health Service Executive should be consulted to analyse in full the total Public Health measures required to protect the residents in this area. Retrospective Public Health measures represent poor service planning. It's also fair to suggest that the Department of Education should be consulted regarding this project and the potential disruption to the children attending the schools. It is our position as a community that it's totally unacceptable to provide a service for autistic and neuro-diverse children and then construct wind turbines 1.3km from that service that could cause considerable distress to those children.

9. Flicker and Disruption to Everyday Enjoyment of Property

There are 43 homes within 1 km of a planned turbine in the Cooloo Barnaderg area. One home is 720m from a turbine. There is also the school with an ASD room within the allowed 1.6km limit, Brierfield NS which is 1.3km from the nearest Turbine.

We know of at least three children who live within a 1km radius of turbines who have autism and we are confident there are more families who moved into the area to attend Brierfield NS because of its ASD room. There are 6 children in the Autistic Spectrum classroom and several other children with neuro-diverse needs in the mainstream classrooms. There is a failure to acknowledge the already difficult battle a lot of these people face when dealing with disability and illness and sourcing of government support. So, it is a long reach to simply ask them to trust the developer.

This is the situation of one resident in his own words, "The project includes nine turbines, seven of which are located less than 2km from my house, with the nearest just 920 meters away. All nine proposed turbines lie within a 3km radius." he goes on to describe concerns about "cumulative exposure from multiple turbines" and rightly highlights the absence of "scientific basis for the 30-hour limit, and no differentiation made between single-turbine exposure and multi-directional flicker from clustered arrays".

Mitigating Measures weighted in the developers favour.

While mitigating measures have been well described and it is acknowledged that the technology allows for many mitigating measures, its concerning to local people the description of how mitigating measures are approached. The mitigation plan (EIAR Ch 5, pp 5-80 to 5-82) 1. Build Turbines 2. Wait to see what residents experience. 3. Residents must log 5+ shadow flicker events. 4 Developer investigates (conflict of interest). 5. Negotiate mitigation with homeowner 6. If no agreement, use turbine control software. Up to 12 months before the full mitigation procedure is complete.

This arrangement again is weighted in favour of the developer and fails to acknowledge the very real circumstances children with special needs might be experiencing or elderly, or adults with disabilities. A year for a resolution is an unacceptable offering to these residents.

The principle of "Nothing About Us, Without Us" is not applied here, meaning disabled people and their representative organisations must be fully involved in shaping the policies and decisions that affect their lives. **Article 19 of the UN Convention on the Rights of Persons with Disabilities (UNCPRD) which Ireland ratified in 2018.**

There was a failure to consult with the parents and teachers of these children with ASD and there was very poor communication regarding this proposed project on the developer's side.

International set back comparisons Cooloo Windfarm 720m vs Bavaria Germany 1800m (10x tip height).

There are no Mandated Mitigation Strategies such as, Automated curtailment that shut down turbines during predicted flicker, 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.

This is an unacceptable mitigation procedure for the residents and leaves already vulnerable people in an even more vulnerable situation with potential impacts that could be personally devastating for some families. Families who have children with Autism or Neuro-diverse needs are already fighting for every government service their child is entitled to get and do not have time to read a 5000 page plus document on a Wind farm development that could potentially ruin their child's enjoyment of their home permanently. It brings into question the integrity of this proposed project and I strongly suggest that An Board Pleanála consider these children and their families in their decision regarding this application.

10. Inadequate Fire Safety Assessment

There is no mention of BESS and there is no fire risk assessment regarding battery storage.

Section 4.1 Chapter 4 outlines that BESS does not yet form part of the planning application at this stage and will be part of a later application. It is anticipated that a revised NIA will be required., therefore the purpose of this NIA is to provide the initial assessment”.

BESS cannot currently meet fire safety standards because

1. No fire safety protocols exist in Ireland for BESS
2. No environmental licensing framework exists
3. No insurance verification system
4. Decommissioning bond is not stated
5. This does not meet international standards

The developer’s solution is to Approve the windfarm. Later Submit BESS application separately which would benefit the wind farm approval as it won't be delayed by BESS requirements Once the wind farm is approved it would be difficult to refuse the BESS.

Therefore, there are no fire suppression system details. No thermal runaway risk assessment. No emergency response procedures for lithium battery fires, No Fire Service consultation evidence. No BESS capacity specified. Chapter 16 Major Accidents contains Zero assessment of BESS fire risk.

Recent BESS fire accidents globally California 2022, South Korea 2021, Arizona 2019 have heightened regulatory scrutiny. Irish Fire Services now routinely request comprehensive fire safety assessments for BESS facilities > 1MW.

Recent Battery Fire Claregalway

On 29–30 January 2025, a major fire occurred at the Xerotech lithium-ion battery facility in Claregalway Corporate Park, Co. Galway (approximately 26 km from the proposed Cooloo site), which resulted in the evacuation of the business park, nearby schools, and several homes and required a multi-agency emergency response. This incident followed a previous significant fire at the same facility in September 2022, and the company subsequently entered liquidation in February 2025.

The Claregalway facility was in an industrial park with paved roads, mains water supply and closer emergency services, yet the incident resulted in serious consequences including large-scale evacuations and prolonged emergency operations. How can similar battery storage technology be considered at a remote bogland site with floating road access, limited mains water supply for firefighting, and flammable peat surrounds?

BESS Fire Characteristics are thermal runaway, toxic gas release and water is ineffective and therefore a specialized response is required: Requires foam, inert gas, or controlled burning and there is a risk of re-igniting days after extinguishing.

This fire safety risk assessment has NOT been completed. The Board is being asked to consider a wind farm development that will require 15 lithium-ion battery containers without a completed fire risk assessment, weeks after a local lithium battery fire caused evacuations.

Excavation of 39,530 m³ of peat will create large volumes of dried, stockpiled peat which is (highly flammable), can burn underground for weeks or months and extremely difficult to extinguish. A fire releases massive quantities of CO₂ and toxic smoke and can spread through subsurface peat layers undetected. There are numerous examples of bog fires in Ireland requiring multi-agency response. A BESS fire could ignite surrounding peatland, creating an uncontrollable underground peat fire in EU protected Active Raised Bog habitat.

Wind turbines themselves present fire risks

Nacelle fires Transformer fires Lightning strikes Fires in nacelles (180m height) cannot be fought so turbines burn and collapse. Flaming debris can ignite surrounding peat. Typical fire engine weight is 16-18 tonnes. Turntable ladder trucks (if needed): 26-32 tonnes. The access will be on a floating road 2.1 km, founded roads 7.2 km crossing deep peat (up to 6.8m). Load-bearing capacity is not demonstrated for emergency vehicles and is questionable during extreme rainfall when the bog is saturated.

An Bord Pleanála cannot reasonably approve:

1. A development that requires Lithium-ion battery storage in County Galway weeks after Xerotech evacuations
2. BESS on remote peatland without completed fire risk assessment
3. Development with no demonstrated emergency access or water supply
4. Industrial infrastructure threatening EU Annex I habitat via fire risk.

11. Massive Carbon Release Negating Climate Benefits

Total peat excavation: 39,530 m³, approximately 43,500 tonnes of wet peat.

After drying, 21,700 tonnes of dried peat material, the equivalent to peat from approximately 4 hectares of bog (1 meter depth). Dried peat contains approximately 50-60% carbon by weight, 21,700 tonnes dried peat × 55% carbon = 11,950 tonnes of carbon. When oxidized to CO₂: 11,950 × 3.67 = 43,900 tonnes of CO₂.

The equivalent of the annual emissions from 9,500 cars (4.6 tonnes CO₂ per car per year) or 2,100 homes (21 tonnes CO₂ per home per year). It's the equivalent to flying London to New York 15,000 times.

Ongoing Emissions from Peat Deposition Areas

The excavated peat will be placed in "peat deposition areas" where it will dry out over months/years, oxidize, continuously release stored carbon gradually and continue emitting CO₂ for decades.

Additional emissions from Drainage-induced peat drying across the site, disturbance of active peat-forming processes and altered hydrology preventing peat accumulation.

Carbon Payback Period

Wind farm carbon savings, approximately 2,000-3,000 tonnes CO₂ per year avoided (displacing fossil fuel generation) Carbon payback period 43,900 tonnes ÷ 2,500 tonnes/year = 18 yrs. The wind farm must operate for nearly two decades just to offset the carbon released from peat disturbance, assuming, all excavated peat carbon is released (conservative assumption), no additional drainage-related emissions (underestimate) and turbines operate at full capacity for 18 years which is highly unlikely. Wind turbines usually operate at 25-30% therefore 3 - 4 times 18 yrs results in 54 - 72 yrs which is 2 times the lifetime of the Turbines.

Violation of Climate Commitments

This massive carbon release contradicts the climate Action Plan 2023 - Ireland's commitment to 51% emissions reduction by 2030, the Paris Agreement- limiting global warming to 1.5°C, EU Climate Law (Regulation 2021) - climate neutrality by 2050 National Peatlands Strategy - protecting peatlands as carbon stores. Ireland cannot meet climate targets while approving renewable energy projects that release more carbon than they save.

Missing Carbon Assessment

The EIAR fails to calculate total carbon release of 39,530 m³ of peat excavation, assess carbon payback period, compare project emissions to climate targets and consider alternative sites with less peat disturbance. This is non-compliant with EIA Directive

12. Misleading Representation of Project Duration and Decommissioning

The “Temporary 35-Year Development” Misrepresentation

The application presents this development as a temporary 35-year project with full decommissioning thereafter. However, wind industry practice and economic reality demonstrate that permanent operation through successive repowering cycles is the expected and economically inevitable outcome. The decommissioning plan states, “Decommissioning of the Proposed Wind Farm will be scheduled to take place after the proposed 35-year lifespan.” This presentation is fundamentally misleading when considered against established industry practice.

Industry Practice: Repowering is the Standard Outcome

According to WindEurope (2022) in “Repowered Wind Farms Show Huge Potential of Replacing Old Turbines”, repowering projects demonstrate capacity can more than double and electricity output can triple, fewer than 10% of turbines reaching end-of-life are decommissioned, the industry is actively lobbying governments to streamline repowering permission processes. An example is Windplan Groen (Netherlands) replaced 98 turbines with 90 new ones, increasing capacity from 168 MW to 500 MW

Wind Power Monthly (2023) reports, Danish Energy Agency finds turbines regularly exceed 35-year operational life with decommissioning decisions being systematically postponed. The industry views repowering as the inevitable next phase. The Cost of building from scratch is €100-200million compared with €30-50million to repower.

For already vulnerable species (Curlew, Golden Plover), continuous mortality over 70+ years without recovery periods represents a qualitatively different impact on population viability. Repowering requires heavy crane mobilization, component delivery (abnormal loads), foundation upgrades and reinforcement, temporary construction compounds, worker accommodation and potential hardstand expansion. This constitutes a second major construction phase, entirely unassessed in the current EIAR. The community is being asked to accept a development presented as temporary when permanent industrialization is the industry-standard and economically inevitable outcome. The initial approval effectively locks in permanent industrial use of this raised bog landscape.

The Decommissioning Plan (Appendix 5) contains a description of removal methodology, environmental mitigation measures and waste management principles. But does not include the cost estimate for decommissioning or a financial bond or security requirement or guarantee of funds availability in 35 years. There is no protection against developer insolvency.

13. Systematic Peat Stability Assessment Failures

Peat Stability Risk Assessment

Independent expert technical review identifies

Deficiencies in the Peat Stability Risk Assessment (Appendix 8-1):

“The Chapter 8 investigation relies on only two boreholes for deep subsurface stratigraphy in a 9-turbine site, which is inadequate given the varying peat depths and subsurface complexity. The sampling density is insufficient in key areas.”

“The report fails to assess slope response to rainfall or drainage change, contrary to RR-494’s emphasis on coupled hydro-geotechnical processes. Without such modelling, the EIAR cannot exclude a repeat of the Derrybrien-type failure under storm conditions.”

This constitutes a regulatory Breach of EPA EIAR Guidelines 2022 (hydrology-geotechnics interaction)

“Reliance on visual monitoring fails to provide early-warning capability. RR-494 mandates instrumented monitoring and trigger-level protocols to prevent catastrophic failure.”
Derrybrien Lesson: Visual monitoring failed to prevent 450,000 m³ peat slide. EPA Research Report 494 - instrumented monitoring mandatory

“Deferring GI and stability validation post-consent is contrary to established ABP practice and EU case law (C-215/06). The Board must obtain full GI and quantitative modelling before determination.” ECJ Ruling (C-215/06): EIA must be complete before consent, deferral is unlawful. EIA Directive 2014/52/EU - complete assessment required pre-consent.

“The PSRA lacks quantitative assessment of spoil or temporary storage stability. RR-494 requires defined containment, drainage, and FoS > 1.5 for all stockpiles prior to consent.” Unstable peat stockpiles can trigger slides (as occurred at Derrybrien).

“Given the Derrybrien precedent, an independent geotechnical peer review is mandatory to verify peat stability analysis. Public release of borehole logs and model inputs should be required for transparency and accountability.”

14. Karst Risk Assessment Failures

Deficiencies in the Karst Risk Assessment

Excludes Hydrogeology

“The Karst Risk Assessment omits hydrogeological interactions despite the site overlying a Regionally Important Karstified Conduit Aquifer. Excluding groundwater connectivity and pollutant pathways renders the assessment incomplete under the EIA Directive and EPA EIAR 2022 §3.5.6.”

Insufficient Intrusive Investigation

There are ground investigation limitations. Only 2 boreholes across the entire site, no drilling near T4 despite 11 enclosed depressions identified. “High-risk turbine and road sections (e.g., T4 cluster) lack intrusive verification. This fails EPA §3.4.1 on representative baseline data. The Board cannot rely on unverified desk indicators.”

Qualitative Risk Matrix Only

“Use of a qualitative matrix without quantitative probability or uncertainty analysis is inadequate for consent. The KRA must present likelihood metrics, and uncertainty bounds to meet EPA §2.5/§3.9.” “Low-medium” risk rating based on subjective judgment, not quantitative analysis”. EPA EIAR Guidelines 2022 §2.5 (scientific methods) & §3.9 (uncertainty)

“Extreme” Groundwater Vulnerability Underplayed

“The KRA acknowledges shallow rock and ‘Extreme’ vulnerability but does not adopt conservative design assumptions. This conflicts with GSI vulnerability mapping.” EPA EIAR Guidelines 2022 §3.5.6 (groundwater resource protection)

No Dye Tracing or Connectivity Testing

“Absence of dye tracing and groundwater monitoring fails to prove no pollutant pathway to Lough Corrib SAC. This is contrary to Habitats Directive Art. 6(3) and EPA §3.5.6.”

Dye tracing is routine for major developments over karst aquifers, particularly when European sites or public water supplies are downgradient. Habitats Directive Article 6(3) - must rule out adverse effects with certainty, EPA EIAR Guidelines 2022 §3.5.6.

Construction Phase Impacts Not Modelled

“Lack of coupled construction-phase analysis (dewatering/trenching/vibration) leaves material risk unassessed, contrary to EPA §3.5.6”. Construction activities can open or enlarge karst conduits, creating new pollution pathways. EPA EIAR Guidelines 2022 §3.5.6 & §3.6 (factor interactions).

Linear Infrastructure Under-Assessed

“Linear infrastructure across karst is under-investigated and unmodelled. This contravenes EPA §3.4.1/§3.5.3 requiring asset-specific assessment.” Roads/trenches crossing undetected voids can collapse, creating sinkholes.

Visual Monitoring Only

“Visual inspection is inadequate in karst. The EIAR must commit to instrumented monitoring with trigger thresholds and independent auditing.” Karst processes occur underground; visual inspection cannot detect subsurface void development or groundwater contamination”. EPA Research Report 494 (longevity and monitoring).

Post-Consent Deferral

“Deferral of core investigations and design verification to post-consent repeats the Derrybrien error (ECJ C-215/06). The Board must obtain this information before determination.” EIA must be complete before consent, deferral is unlawful. EIA Directive 2014/52/EU; S.I. 296/2018

No Receptor-Specific Consequence Analysis

Drinking water abstractions not identified as high-consequence receptors. Consequence analysis must treat public water supplies and Natura features as high-consequence receptors with strict pathways control. The omission breaches EPA §3.5.6 and WFD obligations.

Residual Risk Downgraded by Assertion

“Risk ratings are reduced without engineering demonstration. Assertions breach the EIA requirement for ‘complete, precise and definitive’ information (ECJ C-215/06). Independent design verification is required.” Board is asked to accept that mitigation will work based on assertion, not evident

No Independent Peer Review

“Given karst conduit risk to Lough Corrib SAC, independent peer review is warranted to ensure objectivity. ” Major developments over karst require independent specialist review.

15.Road Closures and Traffic Management Failures

Material Contradiction

There are contradictions in the documentation about traffic management. The Traffic Management Plan (Appendix 15-2) Page 5 (Line 198) states: Early in the document there is a statement about “no road closures anticipated” - Later in the document it states the “entire 21 km route requires closure”.

The grid connection route comprises: - 2.3 km of R332 (Regional Road) - 4.2 km of N63 (National Secondary Road)- 3.9 km of R347 (Regional Road) - 12 km of local roads (L6234, L2115, L2127, L2125, L6141) - Total: 21 km of public roads requiring closure.

This contradictory information renders the public consultation process inadequate, as the community cannot make informed submissions based on conflicting information about the fundamental nature and scale of road disruption.

No Assessment of Emergency Services Access - Public Safety Issue

The Traffic Management Plan provides no assessment whatsoever of the impact of road closures on emergency service response times, despite diversions of up to 13.7 km being required during construction.

Medical emergencies where response time is critical include Cardiac arrest because brain damage begins after 4-6 minutes without oxygen. Stroke “Time is brain”, every minute counts for the treatment window. Severe trauma, “Golden hour” for trauma care before major blood loss and shock occurs. Anaphylaxis, rapid intervention required due to airway occlusion. Obstetric emergencies because of maternal or foetal distress.

The HSE National Ambulance Service aims to respond to immediately life-threatening calls (ECHO calls) within **18 minutes 59 seconds in 80% of cases** (urban/rural combined target). Road closures creating 13.7 km detours could push response times beyond acceptable standards in affected areas.

Similarly, delayed fire brigade response increases risk of fire spread to adjacent properties, structural collapse before firefighters arrives and increased property damage or threat to life if occupants are trapped.

A planning condition requiring “road closures to be minimized” or “conducted efficiently” is vague and unenforceable. No objective standard for compliance. No remedy if exceeded.

By contrast, a condition specifying, “Maximum 30-day closure per 3 km section” - “Working hours 7am-7pm Monday-Friday only”. “Roads reopened for weekend access”

Would be specific, measurable, and enforceable.

The absence of this fundamental information renders the traffic impact assessment inadequate under the EIA Directive 2014/52/EU.

The grid connection must be assessed as an integral part of the development, not separately. O’Grianna v. An Bord Pleanála [2014] IEHC 632

The grid connection is responsible for all 21 km of road closures -, all diversion routes up to 13.7 km - 10 months of rolling disruption and emergency service access impacts.

Yet this is assessed in: - Appendix 15-2 (Traffic Management Plan) - buried in appendices. Not prominently featured in main EIAR Chapter 15 (Traffic & Transport) - Not integrated into public consultation materials. Not adequately signposted in Non-Technical Summary.

This separation obscures the true scale of traffic impact and violates the O’Grianna principle that grid connection impacts must be transparently assessed as part of the single integrated project.

If the Board is minded approving this development (which we oppose), the following information must first be provided and conditions imposed:

Required Information (Further Information Request):

1. Maximum Closure Duration Per Section:
 - Specify maximum days each road section will be closed
 - Provide section-by-section phasing schedule
 - Commit to construction working speed
2. Working Hours Specification:
 - Daily hours of closure (e.g., 7am-7pm Monday-Friday)
 - Weekend and Bank Holiday reopening requirements
 - Emergency access provisions
3. Emergency Access:
 - Pilot vehicle system for emergency services during closures
 - Direct communication line with ambulance/fire control
 - Maximum 5-minute delay commitment for emergency vehicles
4. Advanced Notice:
 - Minimum 14 days’ notice to residents before any road closure
 - Weekly updates on construction progress and upcoming closures
 - Dedicated community liaison officer
5. Enforcement:
 - Financial penalties for exceeding maximum closure durations
 - Bond for road reinstatement held until confirmed satisfactory
 - Right of local authority to suspend works for non-compliance

16. Unassessed Grid Constraints and Curtailment Burden

National Curtailment Context

The planning application acknowledges (Chapter 2, Background) a critical issue with Ireland's wind energy system, Grid constraints led to 1,266 GWh (10.1% of the total available wind energy) of wind and energy being curtailed."

What this means, 10.1% of available wind energy was not generated due to grid transmission constraints, 1,266 GWh (1.266 TWh) of potential renewable energy was "curtailed" nationally. Wind farms receive "constraint payments" for electricity they did not generate. These payments are funded by electricity consumers through the PSO levy and electricity bills. Assuming conservative wholesale electricity price of €100/MWh. $1,266 \text{ GWh} \times €100/\text{MWh} = €126.6 \text{ million per year}$. Approximately €63 per household per year (2 million Irish households). This is just for constraint payments. Consumers pay wind farms for electricity that was never produced.

Wind farms are financially incentivized to build in grid-constrained areas because they receive guaranteed payments whether they generate or not. The worse the grid constraints, the more certain their payment stream.

It is highly likely this wind farm will face significant curtailment, potentially exceeding the 10.1% national average. However, the EIAR provides no analysis to inform decision-makers of this risk.

Economic Impact on Consumers Not Assessed

Curtailment creates a direct economic burden on electricity consumers through "constraint payments". The Wind farm is entitled to payment under Power Purchase Agreement (PPA) or Renewable Energy Support Scheme (RESS) for the electricity it could have generated. These "constraint payments" are funded through, Public Service Obligation (PSO) levy on electricity bills, Grid transmission charges and overall electricity pricing.

Economic burden on consumers is a material planning consideration. The proper planning and sustainable development of the area requires assessment of, economic efficiency of the project, cost-benefit analysis including curtailment burden and whether the public interest is served by burdening consumers. The EIAR completely fails to assess this economic impact.

If grid transmission capacity is insufficient now, then, building wind farm now = guaranteed curtailment + consumer burden, building wind farm after grid upgrade = minimal curtailment + no consumer burden. Same climate outcome, vastly different economic efficiency. Failure to assess this alternative violates EIA Directive requirements.

Aarhus Convention (UN/ECE, 1998) requires,

“Each Party shall ensure that... the public concerned is given early and effective opportunities to participate in the environmental decision-making”

Effective participation requires adequate information. The failure to disclose curtailment risk, consumer costs, and alternatives undermines the public’s ability to make informed submissions. This is a procedural defect that renders the public consultation inadequate. This development is premature and should be refused or deferred until grid transmission capacity is upgraded.

17. Final Statement

The proposed Cooloo Wind Farm represents an unacceptable risk to:

- EU Annex I priority protected habitats
- Lough Corrib Special Area of Conservation
- Public drinking water supply serving thousands
- Community safety (fire risk)
- Climate targets (massive carbon release)
- Peatland stability (Derrybrien repetition)

The EIAR is fundamentally inadequate, repeating the same methodological failures that led to Ireland's €5 million ECJ fine after the Derrybrien disaster.

Granting permission would: 1. Breach multiple EU Directives 2. Violate Irish planning and environmental law 3. Expose Ireland to renewed EU infringement action 4. Create foreseeable risk of environmental disaster 5. Destroy irreplaceable EU protected habitats 6. Threaten public water supply 7. Release more carbon than the wind farm saves

The Board cannot reasonably conclude that this development represents proper planning and sustainable development.

For the reasons outlined above, we respectfully request that An Bord Pleanála **REFUSE PLANNING PERMISSION** for this application.

Declaration

We declare that the information contained in this observation is true and accurate to the best of our knowledge and belief.

Yours Sincerely,

Caroline Ward
William Ward

Name: Caroline and William Ward

Date: 20th November 2025

References

Primary EIAR Documents

1. Cooloo Wind Farm Environmental Impact Assessment Report (EIAR), 2025
2. Chapter 8: Land, Soils & Geology
3. Chapter 9: Hydrology and Hydrogeology
4. Natura ImCase C-215/06, Commission v Ireland (Derrybrien Wind Farm), ECJ Judgment 2008
5. Case C-258/11, Sweetman v An Bord Pleanála, ECJ Judgment 2013
6. Case C-441/17, Commission v Poland (Białowieża Forest), ECJ Judgment 2018

ECJ Case Law

8. Case C-215/06, Commission v Ireland (Derrybrien Wind Farm), ECJ Judgment 2008
9. Case C-258/11, Sweetman v An Bord Pleanála, ECJ Judgment 2013
10. Case C-441/17, Commission v Poland (Białowieża Forest), ECJ Judgment 2018

EPA and Regulatory Guidelines

11. EPA (2022), Guidelines on the Information to be Contained in Environmental Impact Assessment Reports
12. EPA (2025), Research Report 494: Peat Hub Ireland - Accountability and Longevity
13. EPA (2003), Advice Notes on Current Practice in the Preparation of Environmental Impact Statements

EU Legislation

14. Directive 2014/52/EU (amending EIA Directive 2011/92/EU)
15. Council Directive 92/43/EEC (Habitats Directive)
16. Directive 2009/147/EC (Birds Directive)
17. Directive 2000/60/EC (Water Framework Directive)
18. Council Directive 98/83/EC (Drinking Water Directive)

Irish Legislation

19. S.I. 296/2018 - European Union (Planning and Development) (EIA) Regulations 2018
20. S.I. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011
21. Planning and Development Act 2000 (as amended)
22. Wildlife Act 1976 (as amended)