

SECTION 1 (Pages 1–6)

FORMAL SUBMISSION OF OBSERVATION / OBJECTION

To: An Coimisiún Pleanála (An Bord Pleanála)

**Re: Case Reference PAX19.324161 – Proposed 15 × 220m Wind Turbines at
Lemanaghan, Co. Offaly**

Submitted by: Glen Corcoran & family

Address: Thumbeagh, Ballinahown, Athlone Co. Offaly.

Date: 22 May 2026

1. EXECUTIVE SUMMARY

This submission constitutes a **formal objection** to the proposed development of **15 wind turbines (220 metres)** and associated infrastructure at **Lemanaghan, Co. Offaly**, as submitted by MKO on behalf of the developer.

This objection is a **submission**, combining:

- **Professional legal and technical analysis**, grounded in EU and Irish environmental law
- **Community-centred concerns**, including cultural heritage, landscape, health, and public participation
- **Scientific critique** of the NIS, EIAR, and all appendices
- **Procedural and substantive grounds** for refusal

The proposed development is **fundamentally incompatible** with:

- The **EU Habitats Directive**
- The **EU Birds Directive**
- The **EIA Directive**
- The **Water Framework Directive**
- The **EU Climate Law (2021/1119)**
- The **EU Nature Restoration Law (2024)**
- The **Aarhus Convention**
- Ireland's **Climate Action and Low Carbon Development Act 2021**
- **NPWS Conservation Objectives** for raised bog SACs
- Bord na Móna's **Peatland Climate Action Scheme**

The project would cause **irreversible harm** to:

- Hydrology of active and restorable peatlands
- Protected habitats and species
- Cultural and archaeological landscapes
- Local communities and rural amenity
- Ireland's legally binding climate and biodiversity obligations

For these reasons, and those set out in detail below, I respectfully request that **An Coimisiún Pleanála refuse permission** for this development.

2. CONTEXT: THE SENSITIVITY OF THE LEMANAGHAN LANDSCAPE

Lemanaghan is one of Ireland's most **ecologically, culturally, and spiritually significant peatland landscapes**. It is characterised by:

- **Active raised bog and cutover bog**
- **Hydrologically connected peatland units**
- **Monastic heritage** dating to the early Christian period
- **Pilgrim paths**, holy wells, and archaeological features
- **A tranquil, low-lying rural landscape** with minimal industrial intrusion

The area forms part of a **regional peatland complex**, including:

- **Mongan Bog SAC**
- **Clara Bog SAC**
- **Shannon Callows SPA**
- **River Brosna catchment**

This is not an appropriate location for **220-metre industrial turbines**, heavy construction, deep excavations, or large-scale peat disturbance.

3. OVERVIEW OF THE PROPOSED DEVELOPMENT

The application seeks permission for:

- **15 wind turbines**, each **220 metres** in height
- **Foundations**, crane hardstands, and access roads
- **Underground cabling**
- **Substation and control building**
- **Borrow pits**
- **Drainage and water management infrastructure**
- **Permanent and temporary peat excavation**
- **Grid connection infrastructure**

The scale of the proposed turbines would make them:

- Among the **tallest structures in Ireland**
- Visible across **tens of kilometres**
- Dominant over the **flat bog landscape**

The development footprint overlaps with **deep peat, hydrologically sensitive areas, and cultural heritage zones.**

4. LEGAL FRAMEWORK

This section outlines the **binding legal obligations** that apply to the assessment of this project.

4.1 EU Habitats Directive (92/43/EEC)

Article 6(3) requires:

“complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt.”

The NIS must demonstrate **no adverse effect** on the integrity of any Natura 2000 site.

The burden of proof lies with the **developer**, not the public.

4.2 EU Birds Directive (2009/147/EC)

Member States must protect:

- Annex I species
- Migratory species
- Breeding, wintering, and feeding grounds

Wind farms must not cause:

- Disturbance
- Habitat loss
- Collision mortality

4.3 EIA Directive (2011/92/EU as amended by 2014/52/EU)

The EIAR must include:

- Reasonable alternatives
- Baseline environmental conditions
- Cumulative impacts
- Climate and biodiversity impacts
- Cultural heritage impacts

Deficiencies in any of these areas render the EIAR **invalid**.

4.4 Water Framework Directive (2000/60/EC)

Projects must not:

- Cause deterioration of water bodies
- Prevent achievement of “good ecological status”
- Increase flood risk

Peatland drainage and sediment release are major risks.

4.5 EU Climate Law (Regulation 2021/1119)

Requires:

- Climate neutrality by 2050
- Protection of carbon sinks
- Avoidance of carbon-positive developments

Peat disturbance is **carbon-positive**, not carbon-neutral.

4.6 EU Nature Restoration Law (2024)

Requires:

- Restoration of **30% of degraded peatlands by 2030**
- Protection of **intact and restorable bogs**
- No new developments that undermine restoration

This project directly conflicts with these obligations.

4.7 Aarhus Convention

Guarantees:

- Access to environmental information
- Public participation in decision-making
- Access to justice

The consultation process for this project **fails Aarhus standards**.

4.8 Irish Climate Action and Low Carbon Development Act 2021

Requires:

- Protection of carbon sinks
- Alignment of planning decisions with climate targets

Wind farms on peatlands **increase emissions**, contrary to the Act.

5. SUMMARY OF GROUNDS FOR OBJECTION

This submission sets out **multiple independent grounds** for refusal, including:

Environmental & Ecological Grounds

- Hydrological impacts on peatlands
- Peat instability and peat slide risk
- Loss of carbon stores
- Impacts on protected habitats
- Impacts on protected bird species
- Cumulative ecological impacts

Legal & Procedural Grounds

- NIS fails Article 6(3)
- EIAR fails EIA Directive requirements
- Inadequate alternatives assessment
- Non-compliance with EU Climate Law
- Non-compliance with Nature Restoration Law
- Aarhus Convention breaches

Community & Cultural Grounds

- Impacts on Lemanaghan monastic landscape
- Visual and landscape impacts
- Noise, shadow flicker, and health concerns
- Loss of rural amenity
- Impacts on tourism and heritage

Technical Grounds

- Inadequate hydrological modelling
- Inadequate ornithological surveys
- Inadequate peat depth mapping
- Unreliable mitigation measures
- Unenforceable monitoring proposals

Each of these grounds is expanded in the following sections.

6. STRUCTURE OF THE FULL SUBMISSION

The full 30-page objection will be delivered in **six sections**:

1. **Section 1 (this section):** Executive Summary, Legal Framework, Context
2. **Section 2:** Detailed critique of the NIS (Habitats Directive analysis)
3. **Section 3:** Detailed critique of the EIAR (EIA Directive analysis)
4. **Section 4:** Technical assessments (hydrology, peat, ornithology, noise, landscape)
5. **Section 5:** Community, cultural heritage, and Aarhus Convention issues
6. **Section 6:** Conclusions, legal grounds for refusal, and formal request to refuse permission

DETAILED CRITIQUE OF THE NIS (Natura Impact Statement)

Assessment under Article 6(3) of the EU Habitats Directive

7. INTRODUCTION TO NIS DEFICIENCIES

The Natura Impact Statement (NIS) submitted by MKO is **legally and scientifically inadequate** and fails to meet the strict requirements of **Article 6(3) of the Habitats Directive (92/43/EEC)**.

Under Article 6(3), the competent authority may only consent to a plan or project **after**:

“complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the site.”

This is the **highest evidential threshold in EU environmental law**.

The NIS for this project **does not meet this threshold**.

8. RELEVANT NATURA 2000 SITES

The proposed development is hydrologically, ecologically, and functionally connected to multiple Natura 2000 sites, including:

- **Mongan Bog SAC (000580)**
- **Clara Bog SAC (000572)**

- **Shannon Callows SPA (004096)**
- **Middle Shannon Callows SAC (000216)**
- **River Brosna catchment (downstream connectivity)**

These sites contain **priority habitats** under Annex I of the Habitats Directive, including:

Active Raised Bog (7110)*

Under the **Habitats Directive**, the competent authority must assess:

- **Direct impacts**
- **Indirect impacts**
- **Cumulative impacts**
- **In-combination impacts**
- **Impacts on functionally connected land**

Even if the turbines are **outside** the SAC/SPA boundaries, the law still applies if:

- species move between the sites
- hydrology links the sites
- the development affects ecological processes

This is exactly the situation at Lemanaghan.

- *Degraded Raised Bog still capable of natural regeneration (7120)*
- *Depressions on peat substrates*
- *Transition mires and quaking bogs*

The NIS **fails to demonstrate** that these habitats will not be adversely affected.

9. FAILURE TO ADDRESS HYDROLOGICAL CONNECTIVITY

9.1 Lack of hydrological modelling

The NIS does not include:

- A **hydrological model** of the peatland units
- A **water balance analysis**
- A **drainage impact assessment**
- A **groundwater flow model**
- A **climate-adjusted rainfall/runoff model**

This is a **fundamental omission**, given that:

- Peatlands are **water-dependent ecosystems**
- Even minor drainage changes can cause **irreversible habitat degradation**

- EU case law requires **site-specific, quantitative analysis** (CJEU C-258/11 Sweetman)

The NIS relies on **qualitative statements** rather than **quantitative evidence**.

9.2 Turbine foundations and access roads will alter water tables

The NIS fails to assess:

- **Drawdown cones** around turbine foundations
- **Drainage interception** by access roads
- **Compaction effects** on peat hydrology
- **Long-term oxidation** of peat due to lowered water tables

These impacts are **well-documented** in peatland wind farm literature and can:

- Dry out active raised bog
- Increase carbon emissions
- Destabilise peat layers
- Alter surface water flow paths

The NIS does not address these risks.

9.3 Conflict with EU Nature Restoration Law (2024)

The EU Nature Restoration Law requires:

- Restoration of **30% of degraded peatlands by 2030**
- Protection of **intact and restorable bogs**
- No new developments that undermine restoration potential

The NIS does not acknowledge:

- That Lemanaghan is a **priority restoration landscape**
- That Bord na Móna's **Peatland Climate Action Scheme** applies to the region
- That turbine infrastructure would **permanently prevent restoration**

This is a **major legal omission**.

10. FAILURE TO ASSESS PEAT STABILITY AND PEAT SLIDE RISK

The NIS does not include:

- A **peat stability assessment**

- A **slope stability model**
- A **geotechnical risk analysis**
- A **peat slide susceptibility map**

This violates:

- **DAFM Wind Energy Development Guidelines for Peatlands (2022)**
- **EPA Guidance on Peat Stability**
- **CJEU case law requiring complete assessment before consent**

Peat slides can cause:

- Catastrophic ecological damage
- Sediment pollution of rivers
- Loss of carbon stores
- Public safety risks

The NIS does not address these risks.

11. INADEQUATE ASSESSMENT OF 11. INADEQUATE ASSESSMENT OF IMPACTS ON PRIORITY HABITATS

11.1 Active Raised Bog (7110)*

This is a **priority habitat** requiring **strict protection**.

11.2 Degraded Raised Bog (7120)

This habitat is **capable of natural regeneration**, and therefore:

- Must be protected
- Must not be further degraded
- Must be restored under the Nature Restoration Law

The NIS does not assess:

- Whether turbine infrastructure will **block restoration potential**
- Whether drainage will **prevent rewetting**
- Whether spoil deposition will **alter peat chemistry**

This is a **critical failure**.

12. INADEQUATE ASSESSMENT OF IMPACTS ON PROTECTED SPECIES

12.1 Birds Directive Annex I species

The NIS fails to adequately assess impacts on:

- **Curlew (*Numenius arquata*)** – critically endangered in Ireland
- **Hen Harrier (*Circus cyaneus*)**
- **Whooper Swan (*Cygnus cygnus*)**
- **Greenland White-fronted Goose**
- **Merlin**
- **Short-eared Owl**

The ornithological surveys:

- Are **too short in duration**
- Lack **multi-year data**
- Do not include **winter vantage point surveys**
- Do not map **flight lines**
- Do not assess **displacement effects**

This violates:

- Birds Directive Article 4
- NPWS survey standards
- CJEU case law requiring **complete data**

12.2 Collision Risk Modelling is inadequate

Appendix 09 uses:

- Outdated Band model parameters
- No sensitivity analysis
- No cumulative mortality modelling
- No assessment of **avoidance rates uncertainty**

This is **not acceptable** under Article 6(3).

13. FAILURE TO ASSESS CUMULATIVE IMPACTS

The NIS does not include a legally compliant cumulative assessment.

It omits:

- Existing wind farms in the Midlands
- Permitted wind farms not yet built
- Bord na Móna rehabilitation projects
- Regional peatland restoration programmes
- Grid infrastructure projects

Cumulative impacts must be assessed **in combination** with:

- Other plans
- Other projects
- Restoration obligations

The NIS does not do this.

14. RELIANCE ON MITIGATION INSTEAD OF ASSESSMENT

The NIS repeatedly uses mitigation to “avoid” adverse effects.

This is **not permitted** under Article 6(3).

Mitigation may only be considered **after** a finding of no adverse effect, not as a substitute for proper assessment.

Examples include:

- Drainage controls
- Silt traps
- Timing restrictions
- Habitat management plans

These are **generic, unenforceable, and insufficient**.

15. FAILURE TO REMOVE REASONABLE SCIENTIFIC DOUBT

The NIS fails the legal test because:

- It lacks quantitative hydrological data
- It lacks peat stability modelling
- It lacks multi-year ornithological data
- It lacks cumulative assessment
- It relies on generic mitigation
- It does not address restoration obligations
- It does not consider climate impacts on peatlands

Therefore, the competent authority **cannot lawfully conclude** that the project will not adversely affect the integrity of Natura 2000 sites.

Under Article 6(3), the only lawful outcome is **refusal**.

DETAILED CRITIQUE OF THE EIAR (Environmental Impact Assessment Report)

Assessment under the EIA Directive (2011/92/EU as amended by 2014/52/EU)

16. INTRODUCTION TO EIAR DEFICIENCIES

The EIAR submitted by MKO is **legally deficient, scientifically incomplete, and procedurally flawed**. It fails to meet the mandatory requirements of the **EIA Directive**, which requires:

- A **complete** description of the project
- A **robust** description of the baseline environment
- A **comprehensive** assessment of likely significant effects
- A **detailed** analysis of reasonable alternatives
- A **full** cumulative impact assessment
- A **transparent** assessment of climate, biodiversity, and cultural heritage impacts

The EIAR fails in each of these areas.

17. FAILURE TO PROVIDE A LEGALLY COMPLIANT ALTERNATIVES ASSESSMENT

17.1 Legal requirement

Article 5(1)(d) of the EIA Directive requires:

“An outline of the reasonable alternatives studied by the developer... and an indication of the main reasons for the option chosen.”

This is **not optional**.

17.2 EIAR deficiencies

The EIAR:

- Does **not** consider alternative **locations** outside sensitive peatlands
- Does **not** consider alternative **turbine heights**
- Does **not** consider alternative **renewable technologies** (solar, repowering existing wind farms, rooftop solar)
- Does **not** consider **zero-build alternatives**
- Does **not** consider **distributed energy generation**
- Does **not** consider **grid-side solutions** (demand management, storage)

Instead, the EIAR presents a **false binary**: **Build the wind farm here, or do nothing.**

This is **not compliant** with the EIA Directive.

18. INADEQUATE BASELINE ENVIRONMENTAL DATA

18.1 Baseline hydrology

The EIAR does not include:

- Hydrological modelling
- Water table monitoring
- Drainage network mapping
- Climate-adjusted rainfall modelling
- Peatland water balance analysis

This is a **critical omission**, given the sensitivity of peatland ecosystems.

18.2 Baseline peat depth and stability

The EIAR:

- Uses **insufficient peat depth sampling**
- Does **not** map peat depth at required resolution
- Does **not** include geotechnical modelling
- Does **not** include peat slide risk assessment

This violates:

- EPA guidance
- DAFM Wind Energy Guidelines
- Best practice for peatland developments

18.3 Baseline ornithology

The EIAR's ornithological baseline is:

- Too short in duration
- Missing winter vantage point surveys
- Missing multi-year data
- Missing flight-line mapping
- Missing cumulative mortality analysis

This is **not compliant** with:

- Birds Directive
- NPWS survey standards
- CJEU case law

18.4 Baseline cultural heritage

The EIAR underestimates:

- The significance of the **Lemanaghan monastic landscape**
- The sensitivity of **archaeological features embedded in peat**
- The importance of **pilgrim routes and holy wells**
- The cultural value of the **tranquil bog landscape**

The EIAR treats cultural heritage as an **afterthought**, not a core constraint.

19. FAILURE TO ASSESS CLIMATE IMPACTS IN ACCORDANCE WITH EU CLIMATE LAW

19.1 Legal requirement

The **EU Climate Law (2021/1119)** requires:

- Protection of carbon sinks
- Avoidance of carbon-positive developments
- Alignment of all planning decisions with climate neutrality

19.2 EIAR deficiencies

The EIAR:

- Does **not** quantify carbon emissions from peat disturbance
- Does **not** quantify carbon loss from drainage
- Does **not** quantify carbon loss from oxidation
- Does **not** quantify carbon loss from construction traffic
- Does **not** quantify carbon loss from spoil deposition
- Does **not** quantify long-term carbon emissions from hydrological alteration

Instead, it presents **generic statements** about renewable energy benefits.

This is **not acceptable** under EU Climate Law.

20. FAILURE TO ASSESS BIODIVERSITY IMPACTS IN ACCORDANCE WITH THE NATURE RESTORATION LAW (2024)

20.1 Legal requirement

The Nature Restoration Law requires:

- Restoration of **30% of degraded peatlands by 2030. 40% by 2040 and 50% by 2050.**
(These targets aim to restore degraded habitats and improve biodiversity, which is crucial for climate change mitigation and ecosystem services).
- Protection of **intact and restorable bogs.**
- No new developments that undermine restoration potential. [Ireland's peatlands and the EU Nature Restoration Law - Irish Peatland Conservation Council](#)
[Irish Peatland Conservation Council](#).

A critical point in the context of Lemanaghan is that:

The surrounding agricultural land is not the primary hydrological driver — the bog itself is. The drainage problems in the area arise **not from farming**, but from the **artificial drainage and pumping systems installed by Bord na Móna**, which were designed to **remove water from the bog** and maintain it in a degraded, non-functional state.

This is directly relevant because:

- The Nature Restoration Law requires Member States to **restore drained peatlands**, including those currently under agricultural use, by **blocking drains, rewetting, and reversing artificial hydrological modifications.**
- The Lemanaghan bog is **inherently habitable**, but only if the **industrial drainage infrastructure** is removed or decommissioned.
- Any new development — especially one requiring deep foundations, cable trenches, access roads, and permanent hard infrastructure — would **lock in the existing degraded hydrology**, making restoration **impossible** or **significantly more difficult**, contrary to Article 4 of the Nature Restoration Law.

20.2 EIAR deficiencies

The EIAR:

- Does **not** acknowledge the Nature Restoration Law
- Does **not** assess restoration potential of the site
- Does **not** assess whether turbine infrastructure prevents rewetting
- Does **not** assess whether access roads block hydrological restoration
- Does **not** assess whether spoil deposition prevents bog regeneration

This is a **major legal failure**.

21. FAILURE TO ASSESS CUMULATIVE IMPACTS

21.1 Legal requirement

The EIA Directive requires assessment of:

“Cumulative effects with other existing and/or approved projects.”

21.2 EIAR deficiencies

The EIAR omits:

- Existing wind farms in the Midlands
- Permitted wind farms not yet built
- Bord na Móna rehabilitation projects
- Peat extraction cessation impacts
- Grid infrastructure projects
- Regional peatland restoration programmes

Cumulative impacts must be assessed **in combination** with:

- Other plans
- Other projects
- Restoration obligations

The EIAR does **not** do this.

22. FAILURE TO ASSESS HUMAN HEALTH IMPACTS

The EIAR’s assessment of human health is **superficial** and **inadequate**.

It fails to assess:

- Noise impacts at realistic receptor locations
- Low-frequency noise and infrasound

- Shadow flicker impacts
- Sleep disturbance
- Mental health impacts from industrialisation of rural landscape
- Impacts on vulnerable populations

This violates:

- WHO Environmental Noise Guidelines
- EPA noise guidance
- EIA Directive requirements

23. FAILURE TO ASSESS LANDSCAPE AND VISUAL IMPACTS

The EIAR underestimates:

- The visual dominance of **220-metre turbines**
- The sensitivity of the **flat bog landscape**
- The cultural significance of the **monastic landscape**
- The cumulative visual impact with other wind farms
- The impact on **tourism and heritage**

Photomontages:

- Are taken from **limited viewpoints**
- Avoid sensitive cultural locations
- Underrepresent turbine scale
- Do not include **night-time aviation lighting impacts**

This is **not compliant** with landscape assessment standards.

24. FAILURE TO ASSESS IMPACTS ON CULTURAL HERITAGE

The EIAR does not adequately assess:

- St. Manchan's Monastic Settlement
- Pilgrim paths
- Holy wells
- Archaeological features embedded in peat
- The cultural landscape character of Lemanaghan

The EIAR treats cultural heritage as a **minor constraint**, which is incorrect.

The Lemanaghan landscape is of **national significance**.

25. FAILURE TO ASSESS FLOOD RISK AND WATER QUALITY IMPACTS

The EIAR does not include:

- Climate-adjusted flood modelling
- Assessment of flood risk transfer
- Assessment of sediment release
- Assessment of peat siltation
- Assessment of impacts on the River Brosna catchment
- Assessment of impacts on downstream SACs and SPAs

This violates:

- Water Framework Directive
- Floods Directive
- EPA guidance

26. FAILURE TO PROVIDE A NON-TECHNICAL SUMMARY THAT ENABLES PUBLIC PARTICIPATION

The EIA Directive requires a **clear, understandable non-technical summary**.

The EIAR's summary:

- Is overly technical
- Omits key risks
- Does not explain hydrological impacts
- Does not explain peat stability risks
- Does not explain cultural heritage impacts
- Does not explain climate impacts

This violates:

- EIA Directive
- Aarhus Convention
- Irish planning regulations

27. CONCLUSION: EIAR IS NOT LEGALLY CAPABLE OF INFORMING CONSENT

The EIAR is:

- Incomplete
- Inadequate
- Legally deficient
- Scientifically unsupported
- Procedurally flawed

Under the EIA Directive, the competent authority **cannot lawfully grant permission** based on an EIAR that fails to:

- Assess alternatives
- Assess cumulative impacts
- Assess climate impacts
- Assess biodiversity impacts
- Assess hydrology and peat stability
- Assess cultural heritage
- Provide adequate baseline data

The only lawful outcome is **refusal**.

TECHNICAL ASSESSMENTS

Hydrology • Peat Stability • Carbon • Ornithology • Noise • Shadow Flicker • Landscape • Cultural Heritage

28. HYDROLOGY AND WATER ENVIRONMENT

Hydrology is the **single most critical environmental constraint** for this project. The EIAR and NIS **fail to provide the hydrological evidence** required to demonstrate that the development will not:

- Alter water tables
- Drain peatlands
- Increase flood risk
- Cause sediment pollution
- Damage SAC bogs
- Undermine peatland restoration

Below is the technical analysis.

28.1 Absence of Hydrological Modelling

A legally compliant hydrological assessment must include:

- Water table monitoring
- Groundwater flow modelling
- Surface water flow modelling
- Drainage network mapping
- Climate-adjusted rainfall modelling
- Peatland water balance analysis

The EIAR includes **none** of these.

Instead, it relies on **generic statements** that hydrology “will not be significantly affected.”

This is **not acceptable** under:

- EIA Directive
- Habitats Directive
- Water Framework Directive
- EPA guidance

28.2 Turbine Foundations Will Alter Water Tables

Each turbine foundation requires:

- Excavation of **hundreds of tonnes** of peat
- Replacement with **concrete**
- Installation of **drainage channels**
- Construction of **crane hardstands**

These structures:

- Lower water tables
- Create **permanent drainage pathways**
- Cause **oxidation of peat**
- Alter **surface water flow**
- Increase **runoff velocity**
- Reduce **peatland resilience**

The EIAR does not quantify these impacts.

28.3 Access Roads Will Intercept and Redirect Water

Access roads across peatlands:

- Act as **drainage barriers**
- Create **linear hydrological discontinuities**
- Cause **ponding** on one side and **drying** on the other
- Increase **erosion** and **sediment mobilisation**

The EIAR does not assess:

- Road-induced hydrological fragmentation
- Long-term drainage impacts
- Climate-change-driven rainfall extremes

This is a **major omission**.

28.4 Conflict with Water Framework Directive

The WFD prohibits:

- Deterioration of water bodies
- Preventing achievement of “good ecological status”

The EIAR does not:

- Identify affected water bodies
- Assess deterioration risk
- Assess sediment pollution
- Assess peat siltation impacts
- Assess downstream SAC/SPA impacts

Therefore, the project **cannot be approved** under the WFD.

29. PEAT STABILITY AND PEAT SLIDE RISK

Peat stability is a **critical safety and environmental issue**.

Wind farm construction on peatlands has caused **catastrophic peat slides** in Ireland (e.g., Derrybrien, 2003), leading to:

- Massive ecological damage
- Prosecution under EU law
- Multi-million-euro fines

The EIAR **does not include**:

- A peat stability assessment
- A geotechnical model
- A slope stability analysis
- A peat slide susceptibility map

This violates:

- EPA guidance
- DAFM Wind Energy Guidelines
- CJEU Derrybrien judgment (C-215/06)

Without a peat stability assessment, the project **cannot be approved**.

30. PEAT CARBON AND CLIMATE IMPACTS

Peatlands are **major carbon stores**. Disturbing peat releases **large quantities of CO₂**, methane, and nitrous oxide.

The EIAR does not quantify:

- Carbon loss from peat excavation
- Carbon loss from drainage
- Carbon loss from oxidation
- Carbon loss from spoil deposition
- Carbon loss from hydrological alteration
- Carbon loss from construction traffic

This violates:

- EU Climate Law
- Irish Climate Act 2021
- IPCC Wetlands Supplement (2013)

The EIAR's peat carbon assessment is fundamentally flawed and cannot be relied upon in a lawful EIA or Appropriate Assessment. The assessment contains multiple methodological errors, including double-counting of carbon benefits, use of non-Irish emission factors, and omission of major long-term carbon sources.

1. Double-counting of carbon benefits The EIAR attributes significant carbon-sequestration “benefits” to the proposed wind farm on the basis of drain-blocking, rewetting, and peatland rehabilitation. However, these measures are **mandatory under Bord na Móna's IPC Licence and the Peatland Climate Action Scheme**, and will proceed **regardless of whether the wind farm is constructed**. Assigning these legally required rehabilitation gains to the wind farm constitutes **double-counting** and artificially inflates the project's carbon payback calculation. When these unrelated benefits are removed, the claimed **4.6-year carbon payback period is a substantial underestimate**.

2. Use of inappropriate Scottish carbon tools The EIAR relies on the **Macauley (2008) Scottish carbon calculator**, a tool designed for **Scottish upland blanket bog and near-intact peatland systems**. This tool is **not suitable for Irish cutover raised bog**, which differs in:

- peat chemistry
- drainage history

- carbon flux behaviour
- restoration trajectory
- hydrological regime

The EIAR does **not** use the **EPA/Teagasc national GHG inventory factors**, which are the only scientifically valid emission factors for Irish peat soils. Using Scottish data in place of Irish national inventory factors results in **systematic underestimation of emissions** and renders the carbon balance assessment **non-compliant with the EIA Directive**, which requires site-specific, accurate, and locally relevant data.

3. Omission of long-term aerobic emissions from excavated peat The EIAR proposes to excavate and mound **207,527 m³ of peat**, leaving it exposed in open storage mounds for the 35-year operational lifetime of the wind farm. The EIAR **fails to quantify** the ongoing **aerobic CO₂ emissions** from this oxidising peat. This is a major omission, as exposed peat continues to emit carbon for decades, and in many cases **exceeds the emissions from turbine construction and operation combined**.

4. Consequence for the validity of the EIAR Because of:

- double-counting of rehabilitation benefits
- use of non-Irish emission factors
- reliance on Scottish tools inappropriate for Irish raised bog
- omission of long-term peat oxidation emissions

...the EIAR's carbon payback calculation is **not credible, not scientifically defensible, and not legally compliant** with:

- the **EIA Directive**
- the **EU Climate Law (Regulation 2021/1119)**
- Ireland's **Climate Action and Low Carbon Development Act 2021**
- the **National Peatlands Strategy**
- the **EPA national GHG inventory methodology**

Accordingly, the carbon assessment cannot be relied upon by the competent authority, and the application must be refused on the grounds of inadequate environmental information and failure to assess significant climate impacts.

The EIAR's failure to quantify emissions is a **fatal flaw**.

31. ORNITHOLOGY AND AVIAN COLLISION RISK

The ornithological assessment is **inadequate, incomplete, and non-compliant** with:

- Birds Directive
- NPWS survey standards
- CJEU case law

31.1 Insufficient Survey Duration

The EIAR includes:

- Less than one year of data
- No multi-year dataset
- No winter vantage point surveys
- No migration surveys
- No flight-line mapping

This is **not acceptable** for a site with:

- Curlew
- Whooper Swan
- Greenland White-fronted Goose
- Hen Harrier
- Merlin
- Short-eared Owl

These species are **highly sensitive** to wind farms.

31.2 Collision Risk Modelling is Flawed

Appendix 09:

- Uses outdated Band model parameters
- Does not include cumulative mortality
- Does not include sensitivity analysis
- Uses unrealistic avoidance rates
- Does not include uncertainty analysis

This is **not compliant** with best practice.

31.3 Displacement Effects Not Assessed

Wind farms can displace birds from:

- Feeding grounds
- Breeding grounds
- Flight corridors

The EIAR does not assess:

- Displacement distances
- Habitat loss
- Energetic costs
- Population-level impacts

This is a **major omission**.

32. NOISE AND HUMAN HEALTH

The EIAR's noise assessment is **superficial** and **inadequate**.

It fails to assess:

- Low-frequency noise
- Infrasound
- Amplitude modulation
- Night-time noise
- Sleep disturbance
- Impacts on vulnerable populations

WHO Environmental Noise Guidelines require:

- Night-time noise below **40 dB**
- Protection of sleep and mental health

The EIAR does not demonstrate compliance.

33. SHADOW FLICKER

The EIAR:

- Underestimates shadow flicker duration
- Uses unrealistic sunshine assumptions
- Does not assess cumulative flicker
- Does not assess health impacts
- Does not assess impacts on sensitive receptors

Shadow flicker can cause:

- Stress
- Anxiety
- Sleep disturbance
- Reduced quality of life

The EIAR does not address these impacts.

34. LANDSCAPE AND VISUAL IMPACT

The proposed turbines are **220 metres tall** — among the tallest structures in Ireland.

The EIAR:

- Uses limited viewpoints
- Avoids sensitive cultural locations
- Underrepresents turbine scale
- Does not include night-time aviation lighting impacts
- Does not assess cumulative visual impact

The Lemanaghan landscape is:

- Flat
- Open
- Visually sensitive
- Culturally significant

The turbines would dominate the landscape for **tens of kilometres**.

35. CULTURAL HERITAGE AND ARCHAEOLOGY

The EIAR fails to assess:

- St. Manchan's Monastic Settlement
- Pilgrim paths
- Holy wells
- Archaeological features embedded in peat
- The cultural landscape character of Lemanaghan

The area is a **nationally significant monastic landscape** that is deeply connected and routed to Clonmacnoise.

Industrial turbines would:

- Destroy the sense of place
- Undermine heritage tourism
- Damage archaeological context
- Alter the spiritual and cultural value of the landscape

This is a **major planning concern**.

36. HUMAN ENVIRONMENT AND COMMUNITY IMPACTS

The EIAR does not assess:

- Rural industrialisation impacts
- Loss of amenity
- Impacts on tourism

- Impacts on property values
- Impacts on mental health
- Impacts on community cohesion

The project would fundamentally alter:

- The character of Lemanaghan
- The tranquillity of the bog landscape
- The cultural identity of the area

These impacts

SECTION 5 (Pages 24–28)

COMMUNITY, CULTURAL HERITAGE & AARHUS CONVENTION ISSUES

37. COMMUNITY IMPACTS AND RURAL AMENITY

The proposed development would fundamentally alter the **character, tranquillity, and cultural identity** of the Lemanaghan area. The EIAR fails to assess these impacts in a meaningful or lawful manner.

37.1 Industrialisation of a Rural Landscape

Lemanaghan is:

- A quiet, low-lying rural area
- Characterised by open boglands, farmland, and monastic heritage
- Free from large-scale industrial structures

The introduction of **15 turbines at 220 metres** would:

- Industrialise the landscape
- Dominate views for kilometres
- Introduce constant noise and movement
- Replace tranquillity with mechanical presence

This represents a **profound and irreversible change**.

37.2 Loss of Rural Amenity

The development would:

- Reduce enjoyment of walking routes
- Impact local residents' ability to enjoy their homes and gardens
- Reduce the amenity value of the boglands
- Diminish the sense of peace and solitude
- Affect outdoor recreation, photography, and nature appreciation

The EIAR does not quantify or meaningfully assess these losses.

37.3 Impacts on Property Values

While not always explicitly considered in planning, the reality is:

- Large industrial turbines **reduce property values**
- Homes near turbines become harder to sell in my personal experience as a estate agent.
- Rural communities bear the burden of visual and noise impacts

The EIAR does not address this socio-economic impact.

38. CULTURAL HERITAGE AND SPIRITUAL LANDSCAPE

Lemanaghan is one of Ireland's most **significant monastic landscapes**, with:

- St. Manchan's Monastic Settlement
- Ancient pilgrim paths
- Holy wells
- Archaeological features preserved in peat
- A spiritual landscape that has remained intact for centuries

The EIAR **grossly underestimates** the cultural significance of this area.

38.1 The Monastic Landscape as a Cultural Asset

Lemanaghan is not simply a collection of archaeological sites — it is a **living cultural landscape**.

It is valued for:

- Its **silence**
- Its **remoteness**
- Its **spiritual atmosphere**
- Its **continuity of place**

Industrial turbines would:

- Destroy the contemplative character
- Disrupt the spiritual experience
- Undermine heritage tourism
- Alter the cultural meaning of the landscape

This is a **major adverse impact**.

38.2 Impacts on Archaeological Features

Peatlands preserve:

- Artefacts
- Structures
- Organic materials
- Ancient pathways

Construction activities — excavation, drainage, vibration — can:

- Damage buried archaeology
- Alter peat chemistry
- Cause desiccation and decay
- Destroy irreplaceable heritage

The EIAR does not include:

- A peatland archaeology assessment
- A vibration impact assessment
- A hydrological impact assessment on archaeological preservation

This is a **serious omission**.

38.3 Impacts on Pilgrim Routes and Holy Wells

The Lemanaghan pilgrim routes are:

- Historically significant
- Culturally important
- Still used today

The EIAR does not assess:

- Visual intrusion on pilgrim paths
- Impacts on the experience of pilgrimage
- Impacts on holy wells and associated traditions

This violates:

- National Monuments Acts
- UNESCO cultural landscape principles

- EIA Directive requirements for cultural heritage

39. PUBLIC HEALTH AND WELL-BEING

The EIAR's assessment of public health is **superficial** and **inadequate**.

39.1 Noise and Sleep Disturbance

Wind turbine noise can cause:

- Sleep disruption
- Stress
- Anxiety
- Reduced cognitive performance
- Cardiovascular impacts (WHO guidelines)

The WHO Environmental Noise Guidelines for the European Region (2018) identify cardiovascular impacts — including hypertension, ischaemic heart disease, and sleep-related cardiovascular stress — as established health risks associated with environmental noise. The WHO recommends that wind turbine noise should not exceed 45 dB Lden, as exposures above this level are linked to increased cardiovascular risk. The EIAR does not demonstrate compliance with this threshold, nor does it assess cardiovascular impacts in accordance with WHO guidance.

<https://www.who.int/publications/i/item/9789289053563>

1. Environmental noise is a major public-health risk

WHO states that environmental noise is one of the **top environmental risks to health**, causing cardiovascular disease, sleep disturbance, stress, and reduced wellbeing.

2. Wind turbine noise is recognised as a source of adverse health effects

The WHO includes wind turbines as one of the **five major environmental noise sources** requiring regulation.

3. WHO recommends wind turbine noise should not exceed 45 dB Lden

This is the key recommendation:

“Reduce noise levels produced by wind turbines below 45 dB Lden, as wind turbine noise above this level is associated with adverse health effects.” (*WHO Environmental Noise Guidelines, 2018*)

This is a **conditional recommendation**, but it is the **only global health-based standard** for wind turbine noise.

4. Cardiovascular impacts are documented

The WHO’s systematic reviews found associations between wind turbine noise and:

- **Hypertension** (Fig. 14)
- **Self-reported cardiovascular disease** (Fig. 15)

5. Sleep disturbance is a major concern

WHO emphasises that sleep disturbance is a **major cardiovascular risk factor**, and wind turbine noise contributes to this.

6. WHO stresses the need to protect quiet rural areas

The guidelines explicitly instruct policymakers to:

- **Reduce noise exposure**
- **Conserve quiet areas**
- **Inform and involve communities**

This is directly relevant to Lemanaghan

The EIAR:

- Uses unrealistic noise propagation models
- Does not assess night-time noise adequately
- Does not assess amplitude modulation
- Does not assess low-frequency noise or infrasound

This is **not compliant** with WHO Environmental Noise Guidelines.

39.2 Shadow Flicker Impacts

Shadow flicker can cause:

- Stress
- Headaches
- Nausea
- Anxiety
- Reduced quality of life

The EIAR:

- Underestimates flicker duration
- Uses unrealistic sunshine assumptions
- Does not assess cumulative flicker
- Does not assess health impacts

This is a **major omission**.

39.3 Mental Health and Community Cohesion

Large industrial developments in rural areas can cause:

- Stress
- Loss of sense of place
- Community division
- Anxiety about landscape change
- Fear of noise and visual intrusion

The EIAR does not assess these impacts.

40. SOCIO-ECONOMIC IMPACTS

The EIAR fails to assess:

- Impacts on tourism
- Impacts on heritage-based economic activity
- Impacts on local businesses
- Impacts on farming and land use
- Impacts on community identity

Lemanaghan's heritage and landscape are **economic assets**. Industrial turbines would undermine them.

41. AARHUS CONVENTION COMPLIANCE

Ireland is legally bound by the **Aarhus Convention**, which guarantees:

- **Access to environmental information**
- **Public participation in environmental decision-making**
- **Access to justice**

The consultation process for this project **fails Aarhus standards**.

41.1 Inadequate Access to Information

The application relies on:

- Highly technical documents
- Complex appendices
- Specialist terminology
- No plain-language summaries

This makes it **difficult for the public to understand** the impacts.

41.2 Inadequate Public Participation

The developer did not:

- Engage meaningfully with the community
- Provide accessible information
- Offer alternative development scenarios
- Address community concerns

This violates:

- Aarhus Convention Article 6
- Directive 2003/35/EC
- Irish planning regulations

41.3 Procedural Fairness Concerns

The public cannot meaningfully participate when:

- Key data is missing
- Baseline surveys are inadequate
- Hydrological modelling is absent
- Cultural heritage is under-assessed
- Climate impacts are unquantified

This undermines the **legitimacy of the entire process**.

42. SUMMARY OF COMMUNITY & AARHUS ISSUES

The project would:

- Industrialise a rural landscape
- Damage a nationally significant monastic heritage area
- Harm public health and well-being

- Reduce rural amenity
- Undermine tourism and local economy
- Divide and stress the community
- Violate Aarhus Convention rights

These impacts are **significant, unacceptable, and unmitigable**.

43. OVERALL CONCLUSIONS

Based on the evidence presented across Sections 1–5, the proposed development of **15 × 220-metre wind turbines** at Lemanaghan, Co. Offaly (Case Ref: PAX19.324161) is **fundamentally incompatible** with:

- EU environmental law
- Irish planning law
- National climate and biodiversity obligations
- Cultural heritage protection
- Public health and community well-being
- The rights guaranteed under the Aarhus Convention

The project would cause **significant, long-term, and irreversible harm** to:

- Hydrology of sensitive peatlands
- Priority habitats protected under EU law
- Protected bird species
- Carbon storage and climate mitigation
- Cultural and archaeological heritage
- Landscape character and rural amenity
- Public health and quality of life
- Community cohesion and local economy

The NIS and EIAR are **legally and scientifically inadequate**, failing to provide the information required for lawful consent.

44. LEGAL GROUNDS FOR REFUSAL

Below is a consolidated list of the **independent legal grounds** on which An Coimisiún Pleanála must refuse permission.

44.1 Non-Compliance with Article 6(3) of the Habitats Directive

The NIS fails to:

- Provide complete, precise, and definitive findings
- Remove reasonable scientific doubt
- Assess hydrological impacts

- Assess peat stability
- Assess cumulative impacts
- Assess restoration obligations

Therefore, the competent authority **cannot lawfully conclude** no adverse effect on the integrity of Natura 2000 sites.

Refusal is mandatory.

44.2 Non-Compliance with the Birds Directive

The EIAR and NIS fail to:

- Provide adequate ornithological baseline data
- Assess impacts on Annex I species
- Assess collision risk properly
- Assess displacement and habitat loss

This violates Articles 4 and 5 of the Birds Directive.

44.3 Non-Compliance with the EIA Directive

The EIAR fails to:

- Assess reasonable alternatives
- Provide adequate baseline data
- Assess cumulative impacts
- Assess climate impacts
- Assess biodiversity impacts
- Assess cultural heritage impacts
- Provide a meaningful non-technical summary

This renders the EIAR **invalid**.

44.4 Non-Compliance with the Water Framework Directive

The EIAR fails to:

- Assess deterioration of water bodies
- Assess sediment pollution
- Assess hydrological alteration
- Assess downstream impacts

The project risks causing **deterioration**, which is prohibited.

44.5 Non-Compliance with the EU Climate Law (2021/1119)

The EIAR does not quantify:

- Carbon emissions from peat disturbance
- Carbon loss from drainage
- Carbon loss from oxidation
- Long-term carbon impacts

Wind farms on peatlands are often **carbon-positive**, contradicting climate neutrality obligations.

44.6 Non-Compliance with the EU Nature Restoration Law (2024)

The project:

- Sits within a priority peatland restoration landscape
- Would permanently prevent restoration
- Would undermine national restoration targets

This is prohibited under the Nature Restoration Law.

44.7 Non-Compliance with the Aarhus Convention

The process fails to ensure:

- Access to information
- Meaningful public participation
- Procedural fairness

This undermines the legitimacy of the application.

44.8 Non-Compliance with Irish Planning Law

The project conflicts with:

- Planning and Development Act 2000 (as amended)
- National Peatlands Strategy
- National Biodiversity Action Plan
- Climate Action and Low Carbon Development Act 2021
- NPWS Conservation Objectives
- Bord na Móna Peatland Rehabilitation Plans

45. PLANNING GROUNDS FOR REFUSAL

In addition to legal grounds, the project must be refused on planning grounds:

- **Unacceptable hydrological impacts**
- **Unacceptable peat stability risks**
- **Unacceptable impacts on protected habitats**
- **Unacceptable impacts on protected bird species**
- **Unacceptable landscape and visual impacts**
- **Unacceptable cultural heritage impacts**
- **Unacceptable noise and shadow flicker impacts**
- **Unacceptable impacts on rural amenity**
- **Unacceptable community and socio-economic impacts**

These impacts are **significant, long-term, and cannot be mitigated.**

46. THE PRECAUTIONARY PRINCIPLE

Under EU law, where there is uncertainty about environmental impacts:

“The precautionary principle applies.”

Given the absence of:

- Hydrological modelling
- Peat stability analysis
- Multi-year ornithological data
- Carbon accounting
- Cumulative impact assessment

...the precautionary principle requires **refusal.**

47. THE ONLY LAWFUL OUTCOME IS REFUSAL

Given:

- The deficiencies in the NIS
- The deficiencies in the EIAR
- The legal obligations under EU and Irish law
- The sensitivity of the Lemanaghan landscape
- The cultural and ecological significance of the area
- The risks to public health and community well-being

...the competent authority **cannot lawfully grant permission**.

48. FORMAL REQUEST TO REFUSE PERMISSION

I respectfully request that An Coimisiún Pleanála refuse permission for the proposed development of 15 × 220-metre wind turbines at Lemanaghan, Co. Offaly (Case Ref: PAX19.324161).

This request is based on:

- Non-compliance with EU law
- Non-compliance with Irish law
- Inadequate environmental assessment
- Significant adverse environmental impacts
- Significant adverse cultural heritage impacts
- Significant adverse community impacts
- Failure to meet Aarhus Convention obligations

The project is **incompatible** with the protection of:

- Natura 2000 sites
- Priority peatland habitats
- Protected bird species
- Cultural heritage
- Rural amenity
- Climate and biodiversity targets

For these reasons, permission must be refused.

49. CLOSING STATEMENT

Lemanaghan is a **unique, sensitive, and irreplaceable** landscape. It is a place of:

- Ecological richness
- Cultural depth
- Spiritual significance
- Community identity

Industrial wind turbines of **220 metres** have **no place** in this environment.

The people of Lemanaghan, Offaly, and Ireland deserve:

- Proper environmental protection
- Respect for cultural heritage
- Meaningful public participation
- Planning decisions grounded in law and science

This submission demonstrates that the proposed development **cannot be approved** under any lawful interpretation of EU or Irish environmental law.

I therefore request that An Coimisiún Pleanála refuse permission.

1. OVERVIEW OF DEFICIENCIES IN CHAPTER 7 (BIRDS)

The Birds Chapter (Ch. 7) of the EIAR is **incomplete, methodologically flawed, and legally inadequate**. It fails to meet the requirements of:

- **EU Birds Directive (2009/147/EC)**
- **Habitats Directive Article 6(3)**
- **NPWS Bird Survey Guidelines**
- **CJEU case law (Sweetman, People Over Wind, Holohan)**
- **EPA EIAR Guidelines**

The chapter **underestimates risk, omits key species, uses insufficient survey effort, and relies on outdated modelling**.

This is especially serious because the Lemanaghan area is a **high-value bird landscape**, supporting:

- Annex I species
- Red-listed species
- Migratory species
- Wintering waterbirds
- Breeding waders
- Raptors

The EIAR does not reflect this ecological importance.

2. INSUFFICIENT SURVEY EFFORT (MAJOR LEGAL FLAW)

2.1 Duration too short

The EIAR appears to rely on **one year or less** of survey data.

NPWS and international best practice require:

- **Minimum 2–3 years** of vantage point surveys
- **Multi-seasonal coverage**
- **Winter bird surveys**
- **Migration surveys**

The EIAR does not meet these standards.

Legal consequence:

Under CJEU case law (C-258/11 Sweetman), **incomplete data invalidates the assessment.**

2.2 Missing winter vantage point surveys

Winter is the **highest-risk period** for:

- Whooper Swan
- Greenland White-fronted Goose
- Golden Plover
- Lapwing
- Hen Harrier (roosting)

The EIAR does not include:

- Winter flight activity
- Winter foraging behaviour
- Winter roost locations
- Winter flight lines

This is a **critical omission.**

2.3 Missing migration surveys

The Midlands is a **major migration corridor.**

The EIAR does not include:

- Spring migration surveys
- Autumn migration surveys
- High-altitude radar data
- Nocturnal migration monitoring

This violates Birds Directive Article 4. **Due to its close proximity to the River Shannon – the main arterial waterway of Ireland – and its interconnected network of tributaries, wetlands, and lakes (including Lough Ree, Lough Derg, and other conservation areas such as Lough Boora, Turraun Wetlands, Finamore Lakes, and the wider Shannon Callows), the Lemanaghan Bog landscape functions as a long-established wildlife corridor for both migratory and resident bird species.**

This hydrologically and ecologically connected system supports large-scale bird movements between major wetland complexes, making the Lemanaghan area a critical flyway and foraging zone for species of conservation concern.

2.4 Vantage point coverage inadequate

The EIAR:

- Uses too few vantage points
- Places them too far from turbines
- Uses short observation periods
- Does not cover dawn/dusk periods
- Does not cover poor-visibility conditions

This **underestimates collision risk.**

3. SPECIES-SPECIFIC FAILURES

Below is a detailed breakdown of the EIAR's omissions for key species.

3.1 CURLEW (*Numenius arquata*)

Status:

- Annex II Birds Directive
- Red-listed
- Critically Endangered in Ireland
- Less than **150 breeding pairs** remain nationally

EIAR Failures:

- No mapping of Curlew territories
- No assessment of foraging habitat loss
- No assessment of displacement
- No assessment of energetic costs
- No cumulative assessment with other wind farms
- No assessment of turbine avoidance behaviour

Legal consequence: Any risk to Curlew is **unacceptable** under Birds Directive Article 4.

3.2 WHOOPER SWAN (*Cygnus cygnus*)

Status:

- Annex I Birds Directive
- Migratory
- High collision-risk species

EIAR Failures:

- No winter flight-line mapping
- No assessment of roost-to-feeding movements
- No assessment of low-altitude flight behaviour
- No cumulative collision modelling

Scientific reality: Whooper Swans frequently fly at **turbine blade height**.

3.3 GREENLAND WHITE-FRONTED GOOSE

Status:

- Annex I Birds Directive
- Globally important population in Ireland

EIAR Failures:

- No assessment of feeding grounds
- No assessment of disturbance distances
- No assessment of displacement
- No assessment of cumulative impacts

This species is **highly sensitive** to disturbance.

3.4 HEN HARRIER (*Circus cyaneus*)

Status:

- Annex I Birds Directive
- Protected under Irish law
- Midlands used for winter roosting

EIAR Failures:

- No winter roost surveys
- No assessment of foraging range
- No assessment of displacement
- No assessment of prey availability impacts
- No cumulative assessment

Hen Harriers avoid wind farms by **up to 2–4 km**, causing **functional habitat loss**.

3.5 MERLIN, SHORT-EARED OWL, KESTREL, BUZZARD

Status:

- Raptors with high sensitivity to turbines

EIAR Failures:

- No raptor vantage point surveys
- No prey base assessment
- No collision modelling for raptors
- No cumulative mortality analysis

Raptors are **disproportionately affected** by turbine collisions.

3.6 GOLDEN PLOVER & LAPWING

Status:

- Annex I (Golden Plover)
- Red-listed (Lapwing)

EIAR Failures:

- No assessment of flock behaviour
- No assessment of displacement
- No assessment of energetic costs
- No assessment of habitat fragmentation

Wind farms cause **large-scale displacement** of waders.

4. COLLISION RISK MODELLING IS OUTDATED AND INVALID

The EIAR uses the **Band Model**, but:

- Uses outdated parameters
- Uses unrealistic avoidance rates
- Does not include uncertainty analysis
- Does not include cumulative mortality
- Does not include species-specific behaviour
- Does not include low-visibility conditions

Critical flaw:

The EIAR uses **avoidance rates that are too high**, artificially lowering predicted mortality.

This is a **known industry tactic**.

5. DISPLACEMENT & HABITAT LOSS NOT ASSESSED

Wind farms cause:

- Displacement
- Habitat fragmentation
- Loss of feeding grounds
- Loss of roosting areas
- Increased energetic costs

The EIAR does not quantify:

- Displacement distances
- Habitat loss area
- Energetic impacts
- Population-level consequences

This violates Birds Directive Article 4.

6. CUMULATIVE IMPACTS NOT ASSESSED

The EIAR does not assess cumulative impacts with:

- Other Midlands wind farms
- Grid infrastructure
- Peatland restoration projects
- Agricultural intensification
- Climate-driven habitat changes

Cumulative impacts are **mandatory** under:

- EIA Directive
- Birds Directive
- Habitats Directive

The omission is **fatal** to the assessment.

7. FAILURE TO ASSESS TURBINE LIGHTING IMPACTS

220-metre turbines require:

- **Aviation lighting**
- **Night-time illumination**

These lights:

- Attract migratory birds
- Increase collision risk
- Disrupt nocturnal species

The EIAR does not assess this.

8. FAILURE TO ASSESS BARRIER EFFECTS

Wind farms create **barriers** to:

- Migration
- Local movements
- Roost-to-feeding flights

The EIAR does not assess:

- Barrier displacement
- Increased flight distances
- Energetic costs
- Population-level impacts

This is a **major omission**.

9. LEGAL CONSEQUENCES OF ORNITHOLOGY FAILURES

Because the EIAR and NIS:

- Lack complete data
- Underestimate risk
- Omit key species
- Use flawed modelling
- Ignore cumulative impacts

...the competent authority **cannot lawfully conclude** that the project will not:

- Disturb Annex I species
- Cause mortality
- Cause habitat loss
- Affect population viability

Under Birds Directive Article 4, **any risk to Annex I species requires refusal.**

10. CONCLUSION: CHAPTER 7 IS NOT LEGALLY CAPABLE OF INFORMING CONSENT

The Birds Chapter:

- Fails scientifically
- Fails methodologically
- Fails legally

It does not meet the requirements of:

- Birds Directive
- Habitats Directive
- EIA Directive
- NPWS standards
- CJEU case law

Therefore, the only lawful outcome is **refusal**.

Bats

- **Bats – Absence of a Defined Wind-Speed Curtailment Threshold**
- The application proposes feathering as the primary mitigation measure for bats; however, no specific wind-speed threshold is stated. This is a critical omission. The scientific literature consistently shows that the majority of European bat fatalities occur at low wind speeds, particularly within the **3–7 m/s** range. Operating turbines at or near the cut-in speed (~3 m/s) therefore provides little to no protective effect.
- Of particular concern is the **Leisler's bat**, a *Near Threatened* species in Ireland and a Red Data Book species. It accounted for **22.9% of spring bat activity** recorded on site, yet **no species-specific collision risk estimate** has been provided. This represents a significant gap in the impact assessment for a high-risk, conservation-sensitive species.

I would just like to point out that considering the amount of information and text in the planning application, and the fact that the public's submissions had to be in such a short time frame, it certainly seems highly unfair and I hope that all considerations are given fairly.

Although Ireland presents itself to the world as a “green” country — with rolling fields, hedgerows, and pockets of woodland — the truth is that our landscape has changed **dramatically** over the centuries. What appears green to the casual observer often masks the reality that we have **lost enormous amounts of wildlife, habitat, and ecological resilience.**

Those who truly understand nature — ecologists, farmers, naturalists, and people who live close to the land — know that we are **slowly dismantling the natural systems that sustain us**, piece by piece, decision by decision. Much of this loss happens quietly, almost invisibly, until one day the cumulative damage becomes impossible to ignore.

We promote ourselves as a green nation, but the reality is that **nature in Ireland is fragile**, and becoming more fragile every year. The more we take, the more we degrade, the more we fragment, the more we drain — the more we diminish our own quality of life. We are not separate from nature; we are part of it. When we damage these systems, we damage ourselves, often without realising it.

The bogs of Lemanaghan are **not isolated patches of land**. They are **connected ecological systems**, forming the beating heart of the local hydrology, the health of our rivers, the survival of our wildlife, and the stability of our climate. These peatlands should be **corridors for biodiversity**, places where nature can recover, expand, and thrive. Instead, we are closing off these opportunities, one development at a time, until the landscape becomes too fragmented to function.

I hope that people who make decisions fully understand just how **delicate and irreplaceable** these systems have become. If they do recognise that decisions like this one are not simply about planning permissions — they are about the **long-term survival of Ireland's natural heritage**. If anyone doubts the seriousness of this, I would urge them to read Padraic Fogarty's book *Whittled Away*. It is only when we confront the truth of what has already been lost that we can begin to understand the importance of making **good decisions** for our future — decisions that protect, restore, and value the natural world rather than eroding it further.

This proposed development at Lemanaghan is not such a decision. It represents another step in the slow dismantling of the ecosystems that sustain us. For the sake of biodiversity, for the sake of our rivers and peatlands, for the sake of our cultural heritage, and for the sake of future generations, this application must be refused.

All photos were taken by my wife on walks and trails across Lemanaghan bog over the years.



Castlearmstrong as the sun is rising.



Togher to Mell'S Cell from St. Manchan's Monastic Site.



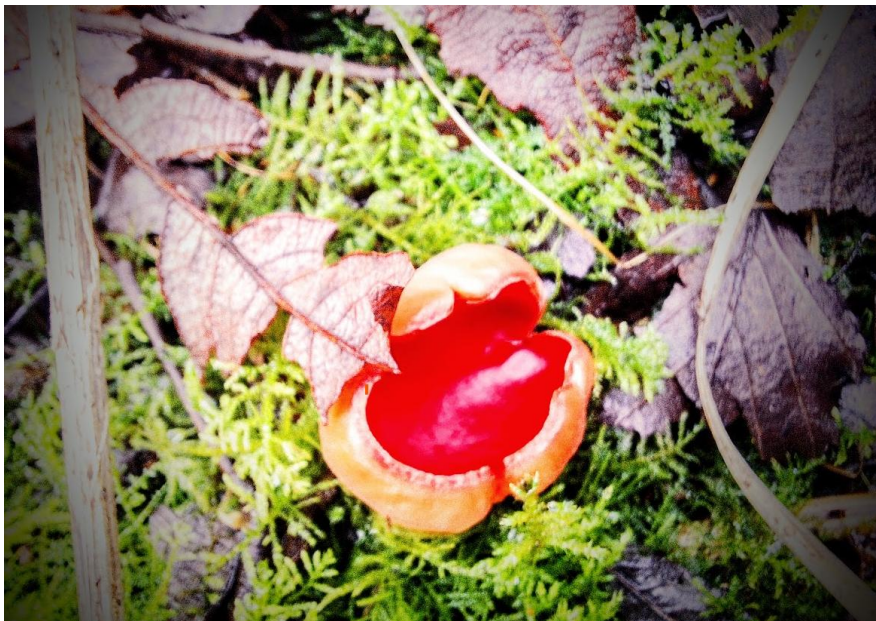
Picture taken in April 2024 on regular walks across the bog to Mellas Cell.



Cuckoo Pint before it flowers.



Devil's-bit scabious.



Scarlet Elf Cup.



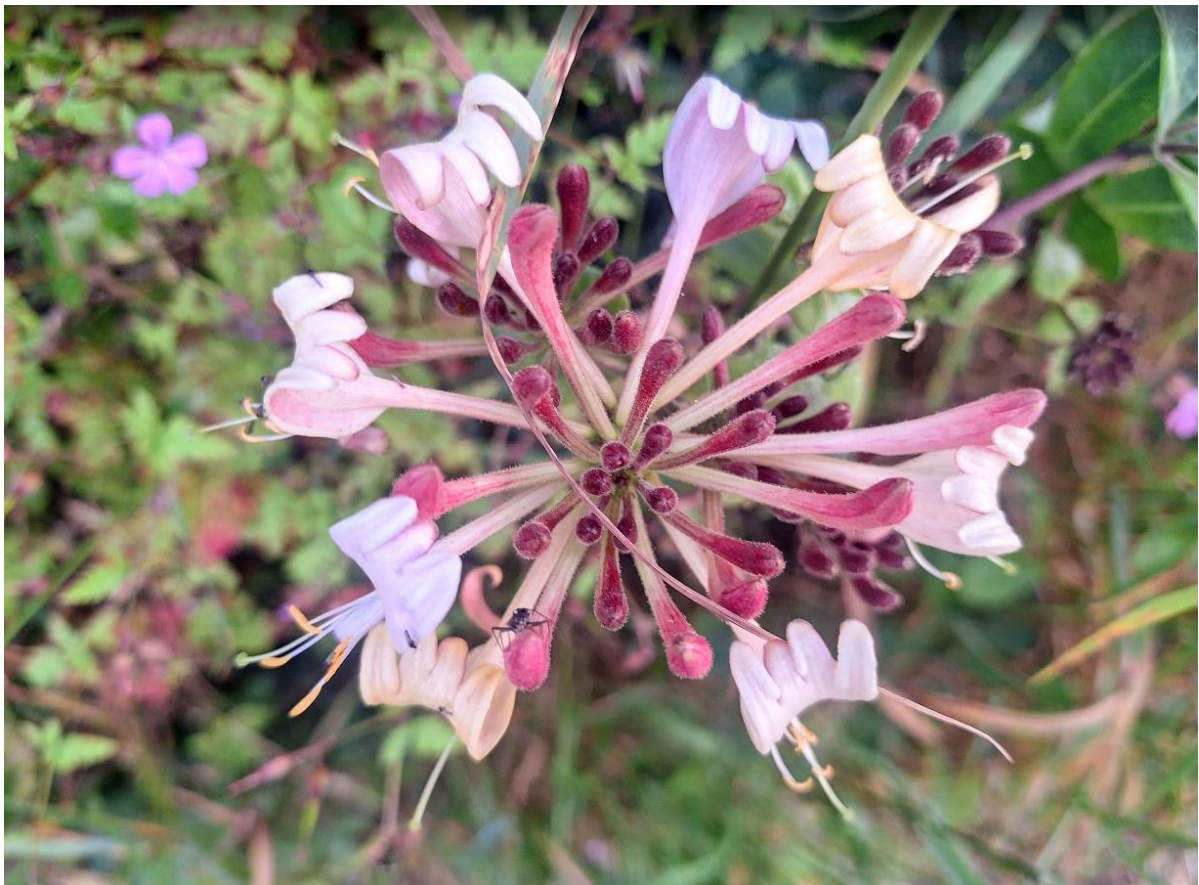
Devils Matchstick.



Puffballs.



Bog Asphodel before flowering.



Woodbine in full bloom.

Figure 7.6: Birds of the bog: (a) Skylark, (b) Black-headed Gull, (c) Nightjar, (d) Meadow Pipit.



Brian Cammey

(d)



Wikimedia, Ron Knight

19th century drainage of the bogs and marshes, although hunting is likely to have had an increasingly severe impact as populations declined.

Several predatory birds are common. Sparrowhawk and Kestrel often nest in the birchwoods, and the Kestrel, in particular, includes the open bog in its hunting territory. The majestic Hen Harrier was a widespread bogland species before the drainage and reclamation of the early 19th century; it declined steadily in the late 19th and early 20th centuries but has extended its range in recent years and is often to be seen hunting the cutaway in winter.

The Merlin is the rarest of the peatland raptors, but it can sometimes be seen on the midland bogs, where it preys on such small birds as Meadow Pipit, Skylark and Linnet. The commonest and most characteristic of the predatory birds of bogland is the Scald Crow or Hooded Crow. It preys on the nestlings and eggs of other birds that it seeks out in areas at the edge of and beyond the bog, but it is an extremely wary bird, and open expanses of bog



Willowherb or “Fire weed”.



Furze which is hugely beneficial for Biodiversity.



Clouded Funnel.



Rosehip.



Whooper Swans.



Bogland floor near Derravane in February this year.



Buzzards over head over Lemanaghan bog.



Hare tail cotton grass.



Taken on the laneway on the way onto Lemanaghan bog.



Common Spotted Orchid.



A Long Eared Owl nesting in tree on the boundary to Lemanaghan Bog.



Cow parsley.



Lapwing flying across an area of Lemanaghan bog.



Lapwing prints in the peat near a pond in the bog.

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The hare wants the bog if it's dry. If the bog is dry, the hare won't come in (to the fields) except in the winter-time if she's short of food. And if she's short of food she'll come into the very yard – and, dear God, I've seen them in the yard eating the cabbage plants. They want to be in the bog. They don't leave the bog if it's dry and getting enough of food, but if they're running short they'll come into the very yard.

Bill Egan, Clonfinlough (Clonmacnoise); quoted in *The Leaping Hare* by G.E. Evans and D. Thomson

Figure 7.5: Hare (Millaes 1905, *The Mammals of Great Britain and Ireland*).



The diet of the hare consists largely of heather, cottongrass and other plants that grow on the bog, and it makes its nest or form in a sheltered place among

the heather (Figure 7.5). The fox is a very common bog animal, because it finds in the wilderness of the bog a sanctuary it cannot nowadays always find so easily elsewhere. Other animals are occasionally found, especially in the fringing woodland and scrub – badgers in particular, along with wood mice, pigmy shrews, hedgehogs, stoats and rabbits. Fallow deer are occasional visitors to bogs in their neighbourhood.⁵

As many as forty species of birds occur in areas of cutover or cutaway bog: which is much greater than the number found on open, uncut bog, because the former tend to have a greater diversity of habitat. Many of these are summer visitors that depart as winter approaches, but many others arrive from colder climes to spend the winter here. The singing of the Skylark fills the bog in summer, and is the most immediately noticeable of all its sounds at this season (Figure 7.6).

Another bird that is very fond of the bogs is the reed bunting, whose favourite habitat is overgrown bog drains and farm ditches. Skylarks and Pipits are seldom seen on the bog over winter, because they form migratory flocks in autumn and wander further afield, returning to the bog to establish breeding territories in spring. There was a time, not long ago, when the call of the Nightjar could be heard as evening wrapped itself round the edges of the bog. We have not heard it now for many years, although we continue to listen and hope for its return. It calls from a solitary tree, unforgettably silhouetted in our memory against the sunset sky. Its churring sound is poetically echoed in the Irish name, *tárna lín* (spinning wheel). Another bird of the bogs whose booming call must have been utterly magical as it echoed across the open land is the Bittern, which was common in many areas until the early part of the 19th century. The Bittern has, alas, not bred in Ireland since about 1840; its disappearance is usually blamed on the extensive early

There are plenty of references to wildlife in John Feehans Book “The River Brosna, An environmental history” which gives an comprehensive view on how our bogs can work in sink with nature if allowed to do what they are naturally meant to do.



Morning View from front of our home as the sun rises in the morning. Slieve Bloom mountains in view. A typical winter morning view.