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Submitted via the Commission's observation portal

The Secretary,
An Bord Pleanála,
64 Marlborough Street,
Dublin 1.

21 May 2026

Dear Sir/Madam,

Third Party Planning Observation in respect of An Coimisiún Pleanála RED III planning application - Case reference: PAX19.324161 - which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly. (www.lemanaghanwindfarmplanning.ie).

BPS Planning & Development Consultants LTD, a firm of Irish Planning Institute accredited town planning consultants, have been instructed by Lemanaghan Heritage & Conservation Group CLG, C/O Ciara Egan, Thumbeag, Ballinahown, Athlone, Co. Westmeath [hereafter, this report refers to "Client" or "LHCG"] to prepare and to lodge a planning observation on its behalf in respect of An Coimisiún Pleanála [hereafter "ACP"] RED III planning application - Case reference: PAX19.324161 - which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly. (www.lemanaghanwindfarmplanning.ie).

This planning application was submitted to ACP on 27/03/2026. The deadline for submissions is 10 weeks from this date. The final date for submission of observations is 26 May 2026. This observation is lodged on or before this deadline.

LHCG maintains several significant planning concerns/grounds for observation in respect of this planning application. These are set out in turn in the attached Planning Observation Report.

For the purposes of validation of this observation, please note:

(1) The fee payable for a 3rd party observation of 50 euro has been padi via the Commission's Third Party observations web portal; and

(2) A Planning Observation Report is attached setting out our client's 'Grounds for Observation'.

We confirm that we act as agent for LHCG. Please direct any correspondence to this office.

If you require any further details, please contact BPS at the address provided.

With best wishes,

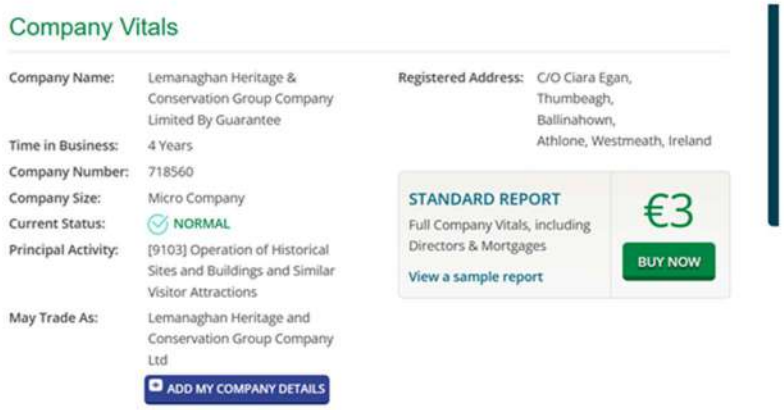
Brendan Buck

Brendan Buck MIPI
Managing Director
BPS Planning & Development Consultants LTD

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Third Party RED III Planning Observation Checklist

1. Name and address of the Observer: **LEMANAGHAN HERITAGE & CONSERVATION GROUP CLG, C/O CIARA EGAN, THUMBEAG, BALLINAHOWN, ATHLONE, CO. WESTMEATH (SEE COMPANY DETAILS BELOW).**



2. If an agent is involved, state the name of the Agent: **BRENDAN BUCK MIPI.**

3. Company address of the Agent: **BPS PLANNING CONSULTANTS LTD., PO BOX 13658, DUBLIN 14, D14NY27.**

4. State the Subject Matter of the Observation: **THIRD PARTY OBSERVATION TO AN COIMISIÚN PLEANÁLA IN RESPECT OF AN COIMISIÚN PLEANÁLA - CASE REFERENCE: PAX19.324161. FOR PROPOSED DEVELOPMENT OF 15 NO. WIND TURBINES, A PERMANENT 220KV ON-SITE SUBSTATION, AND ASSOCIATED INFRASTRUCTURE AT LEMANAGHAN AND SURROUNDING TOWNLANDS, CO. OFFALY. (WWW.LEMANAGHANWINDFARMPLANNING.IE)**

5. Description of the development set out in the statutory notices: **PLANNING APPLICATION COMPRISES: "PROPOSED DEVELOPMENT OF 15 NO. WIND TURBINES, A PERMANENT 220KV ON-SITE SUBSTATION, AND ASSOCIATED INFRASTRUCTURE".**

6. Location of development: **LEMANAGHAN AND SURROUNDING TOWNLANDS, CO. OFFALY. (WWW.LEMANAGHANWINDFARMPLANNING.IE).**

7. Local authority area: **OFFALY COUNTY COUNCIL.**

8. Name of assessing authority: **AN COIMISIÚN PLEANÁLA.**

9. Register reference number: **REG. REF. PAX19.324161.**

10. Attach, in full, the Grounds for Observation and the reasons, considerations and arguments on which they are based. **PLEASE FIND A DETAILED PLANNING OBSERVATION REPORT ATTACHED.**

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11. Enclose/Pay the correct fee for the **Third** Party Observation: **BASED ON THE RENEWABLE ENERGY DIRECTIVE (RED) III INFORMATION GUIDE PUBLISHED IN MARCH 2026, THE FEE FOR MAKING A SUBMISSION OR OBSERVATION ON A RENEWABLE ENERGY DEVELOPMENT APPLICATION IS** €50**.**

12. Ensure that the Observation is received in the **correct manner** and in **time**. **THIS PLANNING APPLICATION WAS LODGED ON 27/03/2026. THE DEADLINE FOR SUBMISSIONS IS 10 WEEKS FROM THIS DATE. THE FINAL DATE FOR SUBMISSION OF OBSERVATIONS IS THE 26/5/2026. THIS OBSERVATION IS LODGED ON OR BEFORE THIS DEADLINE.**

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Planning Observation Report

Third Party Planning Observation Report in respect of An Coimisiún Pleanála RED III planning application - Case reference: PAX19.324161 - which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly. (www.lemanaghanwindfarmplanning.ie).

This Planning Objection Report has been produced by BPS Planning & Development Consultants Ltd. for and on behalf of Lemanaghan Heritage & Conservation Group CLG, C/O Ciara Egan, Thumbeag, Ballinahown, Athlone, Co. Westmeath.

Document Control Sheet

Project	Third Party Planning Observation Report in respect of An Coimisiún Pleanála RED III planning application - Case reference: PAX19.324161
Project No.	2026 – 307.
Document title	Third Party Planning Observation Report.

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Table of contents	2
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Date: 21 May 2026.

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1.0 Introduction

BPS Planning & Development Consultants LTD, a firm of Irish Planning Institute accredited town planning consultants, have been instructed by Lemanaghan Heritage & Conservation Group CLG, C/O Ciara Egan, Thumbeag, Ballinahown, Athlone, Co. Westmeath [hereafter, this report refers to "Client" or "LHCG"] to prepare and to lodge a planning observation on its behalf in respect of An Coimisiún Pleanála [hereafter "ACP"] RED III planning application - Case reference: PAX19.324161 - which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly. (www.lemanaghanwindfarmplanning.ie).

This planning application was submitted to ACP on 27/03/2026. The deadline for submissions is 10 weeks from this date. The final date for submission of observations is the 26/5/2026. This observation is lodged on or before this deadline.

LHCG maintains several significant planning concerns/grounds for observation in respect of this planning application. These are set out below.

1.1 Validation

Validation matters have been addressed in the attached covering letter and checklist form.

1.2 The community context for this submission

This submission is made to An Coimisiún Pleanála in respect of the proposed Lemanaghan Wind Farm development and associated infrastructure within the wider Lemanaghan and Boora peatland landscape in County Offaly. The submission has been prepared by concerned residents, community members and stakeholders who live within, use, value and care for the receiving environment affected by the proposed development.

This submission should be read as a whole, together with all appendices, photographic documentation, maps, technical reviews and supporting material accompanying it.

The submission raises concerns regarding:

- peatland impacts;
- hydrology and water quality;
- biodiversity and ecological integrity;
- Appropriate Assessment and Natura 2000 implications;
- cumulative impacts;
- landscape and visual effects;
- cultural heritage and archaeological setting;
- community impacts;
- renewable energy concentration;
- grid and transmission infrastructure;
- climate and carbon assumptions; and
- broader strategic planning concerns arising from the scale and location of the proposed development.

The submission also asks the Commission to consider the wider planning context within which this development is proposed, including the cumulative transformation of interconnected Midlands peatland landscapes through large-scale renewable energy and transmission infrastructure.

1.2.1 Community rationale for this objection/observation

This submission is not made lightly. The communities surrounding Lemanaghan recognise the importance of climate action, renewable energy and the transition away from fossil fuels. Many local residents have lived through the industrial peat extraction era and understand the changing role of the Midlands in Ireland's energy landscape.

However, support for renewable energy cannot mean that every landscape is suitable for industrial-scale renewable infrastructure, nor can climate action justify disproportionate environmental, landscape, hydrological, cultural and community impacts in locations of exceptional sensitivity.

This objection arises because many local residents genuinely believe that the proposed Lemanaghan Wind Farm represents the wrong development in the wrong location, at the wrong scale, within one of the most historically, culturally and environmentally significant peatland landscapes in the Midlands.

Lemanaghan is not an ordinary development site. It is a living peatland landscape containing:

- recovering peatland ecosystems;
- wetlands and hydrologically connected waterways;
- important biodiversity and protected species;
- archaeological and monastic heritage;
- historic routeways including the Slí Mór;
- traditional turbary landscapes;
- open and expansive Midlands views; and
- deeply rooted community identity and attachment.

The landscape surrounding Lemanaghan is defined by openness, sky, horizon and visibility across large areas of flat peatland terrain. It is precisely this openness and undeveloped character that gives the area its distinct sense of place and cultural identity.

The proposed development would introduce:

- turbines of unprecedented height within the local landscape;
- extensive new road infrastructure;
- large-scale excavation and peat disturbance;
- substantial hydrological intervention;
- a highly industrialised 220kV transmission compound;
- overhead electrical infrastructure; and
- permanent industrial features across an interconnected peatland landscape.

The proposed turbines, at approximately 220 metres in height, would become dominant vertical structures across an otherwise flat and open Midlands peatland landscape and would likely be visible across extensive areas of the wider region.

Particular concern also arises regarding the scale and character of the proposed 220kV substation and associated GIS infrastructure. The proposed transmission compound appears industrial in scale, visually bulky and highly prominent within a flat open bog landscape with little existing screening or topographical containment. While landscape planting is proposed, such mitigation would take many years, and potentially decades, to establish meaningful screening in a landscape defined by openness and long-distance visibility.

Many local residents consider that the proposed development would fundamentally alter the character of the Lemanaghan landscape from a recovering peatland environment into a highly industrialised renewable energy and transmission corridor.

This concern is heightened by the wider cumulative context emerging across the Boora peatland complex, where communities increasingly fear progressive encirclement by large-scale renewable and transmission infrastructure across interconnected peatland lands.

The objection is therefore not solely about individual turbines. It concerns:

- the cumulative industrialisation of the wider peatland landscape;
- the long-term transformation of rural character;
- the erosion of visual amenity and landscape identity;
- the impact on hydrologically sensitive peatland systems;
- the adequacy of ecological and cumulative assessment;
- the protection of archaeological and monastic heritage;
- the protection of biodiversity and recovering peatland habitats; and
- the broader question of whether this landscape is an appropriate location for infrastructure of this scale and intensity.

The Lemanaghan Conservation Plan recognises the exceptional heritage, landscape and ecological importance of the area and emphasises the importance of preserving the openness, visibility, setting and cultural landscape character surrounding the monastic site and wider peatland environment.

Many residents believe the proposed development conflicts fundamentally with those conservation objectives. This submission is also rooted in a strong sense of stewardship.

Across the local area, people have spent years documenting wildlife, protecting habitats, recording local history, supporting peatland recovery and participating in heritage and conservation initiatives connected to the Lemanaghan landscape. The local community does not see Lemanaghan merely as undeveloped land available for industrial use; it is viewed as a shared natural, historical and cultural landscape of long-term significance.

Residents are deeply concerned that the environmental costs of the proposed development — including peat excavation, hydrological alteration, landscape transformation, biodiversity disturbance and industrialisation of a

culturally significant bog landscape — may be permanent, while many of the claimed climate and public-interest benefits remain dependent upon future operational assumptions, electricity grid constraints and evolving national energy policy.

The communities surrounding Lemanaghan are therefore respectfully asking An Coimisiún Pleanála to consider not only the individual technical assessments contained within the EIAR and NIS, but also the broader planning question at the heart of this application, which is whether this particular peatland landscape, with its unique combination of ecological sensitivity, hydrological connectivity, archaeological significance, open landscape character and community importance, is an appropriate location for industrial-scale wind energy and transmission infrastructure of the scale now proposed.

Ultimately, this objection is rooted not in opposition to renewable energy itself, but in the belief that climate action must also protect landscapes, communities, biodiversity, cultural heritage and environmentally sensitive peatland systems, and that the transition to renewable energy must occur in a manner that is proportionate, sustainable and respectful of place.

1.2.2 The need for careful decision making in the best interests of the community

This submission respectfully requests An Coimisiún Pleanála to carefully consider whether the proposed development has demonstrated, to the required planning, environmental and legal standard, that:

- the proposed development is appropriate within this receiving environment;
- the cumulative environmental effects have been fully and adequately assessed;
- the hydrological, ecological and peatland risks have been sufficiently resolved;
- the cumulative impacts on the same receiving communities and landscapes have been adequately considered;
- the visual, landscape and cultural impacts are acceptable within this historically sensitive peatland setting;
- the scale and strategic nature of the proposed 220kV transmission infrastructure has been fully justified;
- the proposed development complies with the requirements of the EIA Directive, Habitats Directive and Water Framework Directive; and
- that the claimed climate and public-interest benefits clearly outweigh the permanent environmental, landscape, hydrological and community impacts identified throughout this submission.

In summary, the principal concerns raised within this submission include:

1. Peatland and Hydrological Concerns

Concerns are raised regarding:

- peat excavation and spoil management;
- drainage intervention and hydrological alteration;
- sedimentation and water-quality impacts;
- downstream hydrological connectivity;
- flood and runoff implications; and
- long-term impacts on recovering peatland systems.

The submission also raises concerns regarding hydrological connectivity to downstream European sites and the adequacy of Appropriate Assessment and Water Framework Directive assessment.

2. Biodiversity and Ecological Concerns

The submission raises concerns regarding:

- impacts on peatland habitats and recovering bog ecosystems;
- impacts on protected species and aquatic ecology;
- habitat fragmentation;
- cumulative biodiversity loss; and
- the adequacy of ecological survey, mitigation and cumulative assessment.

Particular concern is raised regarding the ecological sensitivity of the wider receiving environment and the cumulative effect of ongoing industrial and infrastructure activity across interconnected peatland lands.

3. Landscape, Visual and Cultural Heritage Concerns

The submission raises substantial concerns regarding:

- the visual dominance of turbines approximately 220 metres in height;
- the industrialisation of a flat open Midlands peatland landscape;

- impacts on protected views and landscape character;
- impacts on the setting of the Lemanaghan monastic landscape;
- impacts on archaeological and cultural heritage; and
- and the scale and visual prominence of the proposed 220kV substation and associated transmission infrastructure.

The submission also raises concern that the proposed development conflicts with the landscape and heritage objectives identified within the Lemanaghan Conservation Plan.

4. Community and Human Environment Concerns

The submission raises concerns regarding:

cumulative impacts on rural communities;
residential amenity impacts;
visual encirclement;
traffic and road safety;
construction impacts;
noise and shadow flicker; and
the cumulative transformation of the wider community landscape.

Particular concern is raised regarding the concentration of large-scale renewable and transmission infrastructure affecting the same receiving communities across the wider Boora peatland complex.

5. Strategic Planning and Cumulative Development Concerns

The submission raises concerns regarding:

- cumulative renewable energy concentration within the Midlands;
- the strategic scale of the proposed transmission infrastructure;
- potential segmentation and deferred assessment concerns;
- coordinated renewable infrastructure across interconnected peatland lands; and
- whether the wider cumulative transformation of the Boora peatland landscape has been adequately assessed.

6. Climate, Carbon and Public Interest Concerns

While recognising the importance of renewable energy and decarbonisation, the submission raises concerns regarding:

- the carbon implications of peat disturbance;
- uncertainty regarding future renewable dispatch-down and curtailment;
- cumulative grid and transmission constraints;
- the robustness of projected climate benefits; and
- whether the environmental costs of the proposed development are proportionate within the overall planning balance.

This submission respectfully requests the Board to consider whether the proposed development, taken as a whole and within its wider cumulative context, represents sustainable development and an appropriate form of development within this exceptionally sensitive peatland landscape.

Go raibh míle maith agat,
Lemanaghan Bog Heritage & Conservation Group CLG.

2.0 Part 1 – Executive Planning Case

2.1 Overarching climate objection

The proposed development raises significant tension between renewable energy generation objectives and the protection of peatland carbon stores and sequestration functions.

While presented as a renewable energy project, it involves:

- disturbance of peat soils.
- loss of carbon storage.
- reduction in carbon sequestration capacity.

The EIAR does not demonstrate that the development delivers a net climate benefit when these factors are taken into account.

In the absence of such demonstration, the EIAR does not clearly demonstrate that the proposal is consistent with Ireland's legally binding climate obligations.

Section 15(1) of the Climate Action and Low Carbon Development Act 2015 (as amended by the 2021 Act) is the key provision that was central to the recent Supreme Court judgment in Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5. It states:

> *A relevant body shall, in so far as practicable, perform its functions in a manner consistent with— (a) the most recent approved climate action plan, (b) the most recent approved national long term climate action strategy, (c) the most recent approved national adaptation framework and approved sectoral adaptation plans, (d) the furtherance of the national climate objective, and (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.*

An Coimisiún Pleanála must "In so far as practicable" act consistently with national climate goals where it is feasible to do so. The Act refers to "In a manner consistent with". Those assessing this planning application must perform their functions in a way that aligns with Ireland's climate action plans, carbon budgets, the 2050 climate-neutral objective, and efforts to reduce emissions and adapt to climate change.

Key points from the Supreme Court (Coolglass Judgment, February 2026) as to the practical effect of Section 15 as follows:

- It creates a real, binding legal obligation — not just a procedural "tick-box" exercise. Public bodies must engage with climate objectives in a real and substantive way.
- The obligation is enforceable by the courts if breached.
- Climate goals must be weighed alongside other planning considerations (e.g., local development plan policies, landscape impact, heritage, etc.)
- In the Coolglass case, the Court found that An Coimisiún Pleanála failed to properly consider the significant positive climate benefits of the proposed wind farm when refusing permission. This was an error of law, so the refusal was quashed.
- The Court rejected a simplistic "climate trumps everything" interpretation pushed in the High Court.

Practical Impact:

- Section 15 now requires planning authorities (and other public bodies) to actively demonstrate how their decisions align with national climate policy "in so far as practicable." This applies to decisions on housing schemes which raise climate implications, as here, by providing car parking where it is not required.
- It strengthens accountability for climate action in day-to-day decision-making on cases such as this one.

The Commission is asked to refuse planning permission as this proposal is wholly at odds with the Act and with Ireland's EU and international obligations as regards climate.

2.2 Detailed Climate and Carbon Assessment Concern

While the Proposed Development is presented and justified primarily as a climate mitigation project contributing to national renewable energy and decarbonisation objectives, it is respectfully submitted that the Environmental Impact Assessment Report (EIAR) does not clearly demonstrate that the development will result in an overall net climate benefit once the full range of direct, indirect, cumulative and long-term effects are properly considered. In particular, significant concerns arise regarding the adequacy of the assessment of:

- peat excavation and disturbance,
- hydrological alteration of peatland systems,
- release of stored peat carbon,
- loss of long-term carbon sequestration capacity,
- construction-related emissions,
- transport-related emissions,
- cumulative peatland degradation,
- habitat fragmentation,

- and long-term ecological change across the wider Midlands peatland landscape.

These issues are of particular significance having regard to:

- the Climate Action and Low Carbon Development (Amendment) Act 2021,
- Ireland's legally binding carbon budgets and sectoral emissions ceilings,
- Regulation (EU) 2021/1119 (EU Climate Law),
- the National Peatlands Strategy,
- the increasing policy emphasis on peatland restoration as a climate mitigation measure,
- and the obligations imposed under the Environmental Impact Assessment Directive and Habitats Directive.

The climate justification for the Proposed Development is central to the application. However, it is respectfully submitted that the EIAR does not provide sufficient information to enable the competent authority to determine on the basis of complete and reliable information that:

- the overall climate effects of the development have been fully quantified,
- the long-term carbon implications of peatland disturbance have been adequately assessed,
- cumulative climate impacts have been appropriately evaluated,
- or that the Proposed Development is clearly consistent with Ireland's legally binding climate obligations when considered as a whole.

This issue is not confined to a single chapter of the EIAR. Rather, concerns regarding climate assessment, peatland carbon impacts, cumulative effects and environmental uncertainty arise repeatedly across multiple aspects of the application, including:

- alternatives assessment,
- peat stability,
- hydrology,
- biodiversity,
- traffic and transport,
- cumulative effects,
- landscape impacts,
- and human health considerations.

Accordingly, it is respectfully submitted that these issues must be considered cumulatively and in an integrated manner, rather than through isolated chapter-by-chapter assessment alone.

The following submissions therefore raise significant concerns regarding whether the EIAR provides a sufficiently complete, precise and integrated basis upon which the competent authority can reach a reasoned conclusion on the significant environmental effects of the Proposed Development, including its overall climate and carbon implications.

3.0 Executive Summary and Core Request

3.1 Observations on The Planning Report

While further technical, ecological, archaeological, hydrological, landscape, noise, shadow flicker, transport, cultural heritage and legal submissions may be made hy the applicant in respect of the proposed development, the current submission draws the Commission's attention to material weaknesses in the planning case advanced by the Applicant and to demonstrate why the proposed development is not suitable for Lemanaghan Bog.

The community expressly recognises the importance of climate action and renewable energy. The issue is not whether Ireland requires renewable energy. The issue is whether this particular development, of this scale, in this particular peatland, archaeological, cultural and residential landscape, has been demonstrated to be acceptable having regard to proper planning and sustainable development, the EIA Directive, the Habitats Directive, the Water Framework Directive, Irish climate law, national peatland policy and the Offaly County Development Plan.

3.2 Executive Summary and Core Request

It is respectfully submitted that permission should be refused. In the alternative, the Commission should require significant further information and independent review before any positive decision could lawfully be contemplated. The application, as presented, does not provide a sufficiently complete, precise, reliable and integrated basis on which the competent authority can reach a reasoned conclusion on the likely significant environmental effects of the proposed development.

The Applicant's Planning Report identifies the proposed development as 15 turbines with a blade tip height of 220 metres, a rotor diameter of 150 metres, a hub height of 145 metres, an installed capacity of approximately 90MW, a 220kV onsite substation, a loop-in grid connection to the Shannonbridge-Maynooth 220kV overhead line and

associated infrastructure across an application site of approximately 1,111 hectares. This is not a modest rural renewable project. It is a major industrial energy project located in a sensitive peatland landscape.

Issue	Planning significance
Site-specific suitability not demonstrated	National renewable energy need is relied upon as if it answers the planning question. It does not. Need does not equal suitability.
Conflict with peatland carbon and restoration objectives	The proposal disturbs peat soils, alters hydrology and risks undermining restoration and sequestration functions. The net climate case is not clearly demonstrated.
Material development plan concern	The Applicant acknowledges that turbine T05 is on the boundary of an area identified as "Not Deemed Suitable for Wind Energy Developments", a designation linked to protection of the monastic site.
Cumulative concentration and landscape saturation	The development must be assessed against the existing, approved and proposed concentration of wind and energy infrastructure in County Offaly and the wider Midlands peatland landscape.
Human health and residential amenity uncertainty	The Applicant's own shadow flicker modelling, receptor issues and reliance on post-consent mitigation raise substantial concerns.
Peat stability, hydrology and substitute consent uncertainty	The lands have been historically extracted, are subject to EPA licence rehabilitation obligations and are also the subject of substitute consent. This is an unstable regulatory and environmental baseline.
Alternatives assessment deficient	The assessment does not adequately test lower-impact alternatives such as restoration-led climate action, different technologies, solar farm, lower turbine scale, fewer turbines or locations avoiding peat and heritage sensitivity.
Public participation concerns	The history of consultation, including early pandemic constraints and digital reliance, raises real concerns as to whether participation was meaningful in practice.

Fig. 1: Summary of core concerns pertaining to this planning application

3.3 Legal and Planning Framework

The Commission's statutory obligation is carry out its own assessment and not simply adopt the Applicant's conclusions. In particular, the Commission must be satisfied that the EIAR identifies, describes and assesses the direct and indirect significant effects of the project, including cumulative effects and interactions between factors such as population, human health, biodiversity, land, soil, water, climate, material assets, cultural heritage and landscape.

Article 5 of the EIA Directive requires an EIAR to include a description of the reasonable alternatives studied by the developer and the main reasons for the option chosen, taking into account the environmental effects of the project. The assessment must be capable of supporting a reasoned conclusion and must be based on complete and reliable information. The obligation is not satisfied by a general statement that renewable energy is desirable. The Climate Action and Low Carbon Development framework requires decarbonisation, but it does not create a blanket permission for all renewable infrastructure irrespective of side effects. Climate action includes emissions reduction, protection of carbon sinks, biodiversity restoration and climate resilience. A peatland wind farm therefore requires an especially careful carbon and environmental balance.

RED III and the 2025 Irish renewable energy planning regulations may recognise an accelerated public-interest context for renewable energy. However, that context does not disapply EIA, Appropriate Assessment, Water Framework Directive obligations, development plan policy, residential amenity assessment, cultural heritage assessment or the precautionary principle. The public interest includes environmental protection, cultural heritage, community wellbeing and restoration of damaged peatland landscapes, not electricity generation alone.

3.4 Fundamental Planning Error: Need is Treated as Suitability

The Planning Report repeatedly advances the strategic need for renewable energy and Ireland's 2030 targets. This is not disputed. However, the Applicant's case moves too quickly from national need to site-specific acceptability. That is a legal and planning weakness. A renewable project may be urgently needed in principle while being unacceptable in a particular place.

The proper question is whether the Applicant has demonstrated that Lemanaghan Bog is an appropriate receiving environment for 15 turbines of 220 metres, associated roads, borrow pits, drainage, substation infrastructure, overhead line works, telecoms infrastructure, amenity infrastructure and long-term operational effects. **It is respectfully submitted that this has not been demonstrated.**

In particular, the Applicant has not convincingly reconciled the following competing matters:

- the acknowledged peatland character and restoration potential of the site;
- the carbon storage and sequestration role of peatlands;
- the archaeological, monastic and cultural sensitivity of Lemanaghan;
- the presence of deep peat and hydrological uncertainty;
- the cumulative concentration of energy infrastructure in Offaly;
- residential amenity impacts arising from turbine scale and proximity; and
- the fact that part of the development is adjacent to, or interacts with, an area identified as not suitable for wind energy development.

3.5 Conflict with the Offaly Wind Energy Strategy and the Monastic Landscape

A significant concern arises from the Applicant's own acknowledgement that turbine T05 is located on the boundary of an area designated as "Not Deemed Suitable for Wind Energy Developments". The Planning Report further records that the rationale for excluding this area from the open-for-consideration designation was to protect the character of the monastic site. This is not a minor technicality. It goes directly to the site-specific planning acceptability of the development.

The Applicant tries to overcome this by referring to its own site-specific constraints assessment and by asserting no significant direct or indirect cultural heritage or landscape effects. That is not sufficient. Where the statutory development plan identifies an area as not suitable due to environmental, heritage, landscape and related constraints, the burden on the Applicant is high. The Commission should require clear, compelling, independent and evidence-based justification for placing any turbine at or adjacent to that policy boundary.

It is respectfully submitted that the Applicant has not demonstrated that T05 is necessary, unavoidable or acceptable. It has not demonstrated why omission, relocation, micrositing away from the sensitive boundary, reduction in turbine numbers or a less intrusive technology was not environmentally preferable. In the absence of such a demonstration, the T05 issue should weigh materially against permission.

The Lemanaghan Conservation Plan is also highly relevant. It identifies the landscape as having archaeological, historical, ecological and spiritual significance and emphasises that post-industrial uses of the bog should be sympathetic to the significance of the site. A 220 metre turbine array, substation, road network, borrow pits, crane pads, compounds and overhead line infrastructure cannot be assumed to be sympathetic merely because the site has been historically damaged by peat extraction. Prior industrial damage is not a planning justification for further permanent industrialisation.

3.6 Peatland Carbon, Climate Law and Net Climate Benefit

The Applicant presents the project as a climate mitigation measure. That is only one side of the climate equation. The development also involves peat disturbance, hydrological intervention, construction emissions, infrastructure embedded carbon, possible loss of restoration potential and long-term alteration of a peatland system. The EIAR must therefore demonstrate not only renewable electricity generation but an overall climate balance that accounts for peat carbon and lost sequestration potential.

It is respectfully submitted that the EIAR does not clearly establish a robust, verifiable and precautionary net climate benefit when all relevant peatland effects are included. The central weakness is that the climate benefit is treated as self-evident because the project is renewable, while the carbon cost of peatland disturbance and the opportunity cost of restoration are not given equivalent weight.

The Commission should not accept a climate case unless the following have been clearly quantified and tested: total peat excavation and peat handling volumes;

- direct and indirect peat carbon emissions from excavation, drainage, oxidation and spoil management;
- embedded carbon in turbine foundations, roads, substation, cables, OHL structures, borrow pit works and transport;
- loss or delay of peatland rewetting, recovery and sequestration;
- the comparative carbon effect of a restoration-led "do nothing" or "do minimum" alternative;
- the comparative carbon effect of lower-impact renewable alternatives, including solar or development on mineral soils; and
- the cumulative carbon effect of multiple renewable projects across cutaway bogs in Offaly and the Midlands.

In the absence of this integrated carbon analysis, it is not possible to conclude with confidence that the proposed development is consistent with the Climate Action and Low Carbon Development framework when considered as a whole. Climate law should not be interpreted as requiring the conversion of every available peatland into industrial energy infrastructure. Climate law also supports protection and restoration of carbon sinks.

3.7 Peat Stability, Hydrology and the Precautionary Principle

The Planning Report asserts that the site is suitable and at low risk of peat failure. That conclusion should be treated with caution. The site contains peat depths reported across a broad range, including deep peat. The development involves heavy infrastructure, turbine foundations, crane hardstands, roads, drainage, borrow pits, peat and spoil management, cabling, substation works and construction traffic. Peatland systems are hydrologically sensitive and can respond unpredictably to loading, drainage, excavation and altered water pathways.

The risk cannot be reduced to a simple slope-based or deterministic factor-of-safety exercise. A flat bog is not automatically a risk-free bog. The hydrological condition of Lemanaghan has been artificially modified by historic industrial drainage and peat extraction. The present baseline is not natural, stable or final. It is a transitional, disturbed and regulated baseline subject to rehabilitation obligations and substitute consent. That materially affects the reliability of any assessment that treats current conditions as the definitive environmental baseline.

This is especially important because Ireland has direct experience of the environmental consequences of inadequate assessment of wind farm construction on peatland. The Derrybrien litigation (see box below) demonstrates the seriousness of peatland wind farm risk and the EU law consequences of inadequate EIA. The point is not that every peatland project will repeat Derrybrien. The point is that where peatland uncertainty remains, the Commission must apply a rigorous precautionary assessment before consent, not rely on post-consent management plans to cure uncertainty.

The Derrybrien Wind Farm case (Co. Galway) is one of Ireland's most significant environmental law cases, involving breaches of the EU Environmental Impact Assessment (EIA) Directive and the Habitats Directive. In 2003, during construction of the 59.5 MW wind farm on Derrybrien Mountain (Slieve Aughty), a major landslide occurred, causing extensive environmental damage, including pollution of rivers and destruction of habitats. The project was built in phases without a proper Environmental Impact Assessment (EIA) for the entire development. The case remains a landmark precedent in Irish planning law regarding:

- The need for full EIA for phased developments.
- Retrospective assessment requirements.
- Strict enforcement of the Habitats Directive and EIA Directive.
- The high cost of non-compliance (fines + reputational damage).

The Applicant's reliance on mitigation and management should not be accepted unless the Commission is satisfied that the likely significant effects have first been fully identified, described and assessed. Mitigation cannot substitute for a complete baseline or cure a fundamental uncertainty in the receiving environment.

3.8 Substitute Consent, EPA Rehabilitation and Baseline Uncertainty

The Planning Report records that an application for substitute consent was made in respect of historical peat extraction and ancillary works from July 1988 at Lemanaghan Bog, and that the majority of the proposed project site lies within the area affected by that substitute consent context. It also records that commercial peat extraction ceased in June 2020 and that rehabilitation measures are to be implemented by Bord na Mona under EPA licence obligations.

This is a major planning concern. The same lands are being presented as suitable for further major industrial development while also being the subject of retrospective environmental regularisation and future rehabilitation obligations. The Commission should not treat this as a neutral background matter. It creates uncertainty as to:

- the correct baseline for EIA and Appropriate Assessment;
- the likely future condition of the bog under rehabilitation;
- the interaction between wind farm infrastructure and rewetting/restoration measures;
- the compatibility of permanent roads, turbine bases, drainage and substations with rehabilitation objectives;
- the cumulative effects of past peat extraction and future wind farm development; and
- the possibility that the project may frustrate or dilute restoration outcomes required under separate regulatory processes.

It is respectfully submitted that consent should not be granted unless the Commission is satisfied, on complete and reliable information, that the proposed development is compatible with the remedial phase, EPA licence obligations, hydrological restoration, peatland rehabilitation and the long-term climate and biodiversity value of the bog. That has not been clearly demonstrated.

3.9 Alternatives Assessment is Too Narrow and Developer-Led

The alternatives assessment set out in the EIAR is a key weakness. The Applicant's approach appears constrained by land ownership, grid proximity, commercial feasibility and the developer's renewable strategy. Those matters are relevant, but they cannot displace the EIA requirement to consider reasonable alternatives by reference to environmental effects.

A lawful and robust alternatives assessment should have considered, in a transparent and comparative way. Th following matters should have been included in the assessment of alternatives:

- a restoration-led alternative, prioritising peatland rewetting, carbon storage, biodiversity recovery and cultural landscape protection;
- a lower turbine number alternative;
- a lower turbine height alternative;
- an alternative omitting T05 and any turbines with the greatest heritage or residential effects;
- solar or hybrid alternatives with lower vertical landscape effect;
- alternative grid and infrastructure layouts reducing peat disturbance;
- development on mineral soils or less sensitive sites;
- a phased approach allowing rehabilitation outcomes to be assessed before any further industrial development; and
- an alternative which protects the monastic setting and designated "Not Deemed Suitable" boundary by a meaningful buffer.

The "do nothing" scenario should not be treated as a negative baseline simply because it does not produce electricity. On a peatland site, "do nothing" or "do minimum" may mean rehabilitation, rewetting, carbon recovery, biodiversity gain, hydrological stabilisation, archaeological protection and community amenity. Those are environmental benefits and must be assessed as such.

The failure to assess alternatives in carbon, peatland, heritage, landscape and community terms undermines the reliability of the site selection case.

3.10 Cumulative Renewable Energy Concentration and Landscape Saturation

The Applicant's Planning Report acknowledges numerous existing, permitted and proposed wind energy developments within 25km of the proposed turbines, including Bellair, Leabeg, Lea Mor, Derrinlough, Cloghan, Meenwaun, Cush, Umma More and Kilbeggan. This submission [Core Planning Theme 1] identifies a wider pattern of operational, approved and proposed wind energy development in County Offaly and the Midlands region.
The cumulative issue is not merely whether another wind farm appears in a photomontage. The issue is the cumulative transformation of the county's peatland and rural landscape into an energy infrastructure zone. The Commission should examine cumulative effects on:

- landscape character and visual dominance;
- sequential views from roads, homes, settlements, heritage routes and elevated viewpoints;
- the setting of the monastic landscape and cultural heritage assets;
- community identity and sense of place;
- residential amenity, including combined visibility, noise, shadow flicker perception and stress;
- peatland hydrology and fragmented restoration potential across bog systems;
- biodiversity corridors and habitat recovery;
- regional fairness and Just Transition; and
- the cumulative burden of roads, substations, overhead lines, grid infrastructure and construction traffic.

The Applicant's approach appears to assess cumulative impacts in project-by-project technical compartments rather than as a regional planning and landscape-capacity question. That is inadequate. Offaly's historic contribution to national energy production does not justify a continuing concentration of infrastructure without a clear assessment of environmental limits and community burden.

3.11 Landscape, Visual Impact and Residential Amenity

The Applicant relies heavily on compliance with setback distances and on the conclusion that the landscape can accommodate the development. **This is contested.** Compliance with a minimum setback is not the same as acceptability. It does not answer questions of visual dominance, living conditions, cumulative landscape change or the experience of residents whose homes, roads and community places become dominated by 220 metre tall structures.

The Planning Report acknowledges that the LVIA identifies one significant residual effect at viewpoint VP11, where turbines are in relatively close proximity to residential receptors. This is important. A significant residual effect is not made acceptable merely because the project also meets a setback standard. The Commission must consider whether the effect on residential amenity and living conditions is acceptable in planning terms.

The scale escalation is material. Turbines of 220 metres are extremely large structures in a low-lying peatland landscape. Their height, blade movement, lighting, associated infrastructure and cumulative visibility would fundamentally alter the character of the receiving environment. The assessment should not treat the cutaway industrial history of the bog as if it removes landscape sensitivity. A recovering peatland, cultural landscape and rural residential setting can be sensitive precisely because it is open, flat and visually connected.

3.12 Population, Human Health, Shadow Flicker and Vulnerable Receptors

Chapter 5 of this observation identifies serious concerns regarding the developer's Chapter 5 of the EIAR, including widespread shadow flicker modelling results, lack of receptor-specific assessment for schools, children and vulnerable groups, mischaracterisation of Corbeg, lack of an integrated human health assessment and reliance on generalised literature rather than site-specific analysis. These are material matters.

The Applicant's position appears to depend heavily on modelling, mitigation and future turbine shutdown systems. That approach raises planning and legal concerns. The Commission should require a clear pre-mitigation assessment of the actual impact arising from the layout, followed by a transparent residual assessment demonstrating that mitigation is certain, enforceable, monitored and effective. Where a project is only acceptable because of operational curtailment, the feasibility, reliability and enforceability of that curtailment must be proven at application stage.

Human health in EIA is not confined to proof of direct disease. It includes living conditions, wellbeing, sleep, annoyance, stress pathways, vulnerable groups and cumulative environmental burden. A rural community should not be required to accept significant changes to living conditions simply because no direct toxicological pathway is identified.

Particular weight should be given to the absence of a robust receptor-based assessment for children and schools. Where schools are within the receiving environment, the assessment should examine whether noise, shadow flicker, construction traffic, visual change and cumulative environmental effects may affect learning environments and vulnerable children. **A general conclusion of no significant effect is not sufficient without a clear receptor-specific pathway assessment.**

Additionally, the EIAR does not clearly demonstrate that the projected renewable energy output and associated climate benefits remain robust when operational constraints, including shadow flicker mitigation, noise mitigation, ecological curtailment and wider grid curtailment risks are taken into account. Therefore, the entire justification for the development is weakened because the claimed climate/public-interest benefits may not materialise to the extent asserted.

3.13 Consultation and Public Participation

The Applicant presents the consultation process as meaningful and iterative. That is strongly disputed. Chapter 4 and Appendix 1 & Appendix 2 of this submission, records concerns regarding consultation during COVID-19 restrictions, digital exclusion, inconsistent information delivery, one-way engagement, lack of demonstrated influence on design and sustained community opposition from 2021 to 2026.

The Commission should distinguish between information dissemination and meaningful participation. Public participation under EIA and Aarhus principles must be effective in practice and occur when options remain genuinely open. A process which presents a wind farm as the only realistic option, fails to consult meaningfully on alternatives and does not demonstrate design changes arising from community input is not a robust participatory process.

Community benefit funds do not cure defects in consultation and do not offset unacceptable environmental effects. Nor can rates, employment or local funds be treated as substitutes for compliance with EIA, development plan policy, peatland restoration obligations, heritage protection or residential amenity.

The Commission is asked to consider Aarhus Convention principles as they apply to RED III planning applications. The Aarhus Convention (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters) is fully incorporated into Irish law. It applies to all planning applications, including accelerated RED III renewable energy projects. Key Aarhus Principles Relevant to RED III Applications

Aarhus Pillar	Principle	Application to RED III Planning Applications
Access to Information	Public has right to environmental information held by public authorities	Applicants and planning authorities must make all application documents, EIARs, NIS, and reports publicly available promptly and free of charge (or at reasonable cost).
Public Participation	Effective, timely, and meaningful public participation in environmental decision-making	Even with RED III's accelerated timelines (e.g., 6–9 months for renewables), meaningful consultation must still occur. Reduced time

		periods are allowed but cannot undermine effective participation.
Access to Justice	Right to challenge environmental decisions in court / before an independent body	Third parties and NGOs have rights to appeal decisions (to An Coimisiún Pleanála or judicial review). Costs protection (via the "not prohibitively expensive" rule) applies.

Fig. 2: Key Aarhus Principles Relevant to RED III Applications

RED III (Directive (EU) 2023/2413) requires accelerated permitting for renewable energy projects, but Aarhus rights cannot be overridden. Important points for planning applications:

- Public Participation cannot be tokenistic. Even with shorter statutory timelines, the public must have early and effective opportunities to participate. Late or inadequate consultation is a common ground for judicial review.
- Full Environmental Impact Assessment Reports and Natura Impact Statements must be accessible from the date of validation of the planning application.
- The "Override Public Interest" Test applies. If a project is granted under RED III's overriding public interest provisions (to speed up delivery), the decision must still comply with Aarhus - particularly access to justice.
- Costs Protection Environmental NGOs and qualified environmental litigants benefit from costs caps in judicial reviews challenging RED III planning permissions (typically €10,000 for individuals, €5,000 for NGOs under the Environment (Miscellaneous Provisions) Act 2011, as amended).
- Standing Wide standing applies - members of the public and NGOs meeting certain criteria have the right to participate and appeal.

Concerns arise that:

- The accelerated process has resulted in inadequate public participation.
- Key documents (EIAR, NIS, traffic reports, etc.) have not been available for a reasonable period to allow expert analysis on behalf of the group.

3.14 Incomplete or Uncertain Project Description

The proposed development contains multiple infrastructure elements whose detailed design, final model selection, foundation approach, drainage implementation, lighting, cabling and construction sequencing may affect environmental outcomes. A flexible design envelope may be acceptable only where the worst-case scenario has been clearly assessed. **The Commission must be satisfied that the EIAR assesses the full realistic worst case, not an optimistic or generic version of the project.**

Given the sensitivity of peatland hydrology, archaeology, residential amenity and landscape, uncertainty in final design is not a minor matter. It may materially affect excavation volumes, traffic, spoil management, noise, shadow flicker, aviation lighting, visual impact, drainage pathways, water quality and peat stability. Any uncertainty should be resolved before consent, not delegated to post-consent compliance.

The Commission must consider whether this is a valid planning application having regard to all validation requirements and the need to fully inform all members of the public as to what is proposed.

3.15 Appropriate Assessment, Water Framework Directive and Indirect Pathways

Although this submission is focused on planning and EIAR weaknesses, the Commission must also consider whether the project could indirectly affect European sites, protected habitats, water quality or hydrological functioning. Peatland sites can create complex pathways through drainage, surface water, groundwater interaction, sediment mobilisation, nutrient release, altered flow regimes and cumulative disturbance.

The Water Framework Directive requires that projects do not cause deterioration in water body status and do not compromise the achievement of environmental objectives. A project involving extensive drainage, roads, peat disturbance, borrow pits and substations on peatland requires a particularly cautious assessment of hydrological effects. The Commission should not rely on generic mitigation where there is uncertainty regarding pathways, baseline conditions or cumulative effects.

3.16 Uncertainty Regarding Grid Capacity, Renewable Curtailment and Climate Benefit

The Planning Report places significant reliance on the renewable energy and climate benefits said to arise from the Proposed Development.
However, it is respectfully submitted that increasing levels of renewable dispatch-down and curtailment within the Irish electricity system raise legitimate questions regarding the extent to which the projected renewable energy output and associated climate benefits relied upon in support of the application remain achievable under realistic future operational conditions.
This issue is particularly relevant within County Offaly and the wider Midlands region, where there is already a substantial concentration of operational, permitted and proposed renewable energy infrastructure.

The Proposed Development may also be subject to additional operational constraints arising from:

- grid congestion and export limitations;
- renewable dispatch-down;
- residential amenity mitigation measures;
- ecological mitigation requirements; and
- turbine shutdown systems associated with shadow flicker mitigation.

In circumstances where substantial peat disturbance, hydrological alteration and long-term carbon loss would occur immediately and permanently, but the projected climate benefits remain dependent upon uncertain future operational assumptions, it is respectfully submitted that uncertainty regarding future operational output materially weakens the planning and climate justification advanced in support of the Proposed Development.

Please refer to Core Planning Theme 2: Grid Capacity, Renewable Curtailment and Operational Uncertainty.

3.17 Overall Planning Balance

The Applicant's case rests on a positive renewable energy policy context. That context is important but not determinative. The planning balance must consider the actual receiving environment and the actual effects of the project. In this case, the receiving environment is not an empty industrial wasteland. It is a recovering peatland, a carbon store, a hydrologically sensitive landscape, a culturally important monastic setting, a community landscape and part of a wider county already experiencing a substantial concentration of energy infrastructure. When the issues are considered cumulatively, the proposed development fails the proper planning and sustainable development test. The defects are not isolated. They reinforce each other:

- an inadequate alternatives assessment weakens the claim that this site and design are necessary;
- peat and hydrology uncertainty weakens the climate and biodiversity case;
- substitute consent and rehabilitation uncertainty weaken the baseline;
- T05 and the monastic sensitivity weaken development plan compliance;
- cumulative concentration weakens the landscape and community case;
- human health and shadow flicker concerns weaken the residential amenity case; and
- consultation shortcomings weaken confidence in the incorporation of local knowledge and alternatives.

The Commission is therefore asked to find that the Applicant has not discharged the burden of demonstrating that the development is acceptable at Lemanaghan Bog.

Additionally, The Planning Report places significant reliance on the renewable energy and climate benefits said to arise from the Proposed Development, including contribution to national decarbonisation targets, energy security and the public interest objectives identified in national and EU climate policy.

However, it is respectfully submitted that the Planning Report and accompanying EIAR do not clearly demonstrate that the projected renewable energy output and associated climate benefits remain robust under realistic operational conditions.

The Applicant's own assessment identifies significant residential shadow flicker impacts and proposes operational mitigation measures, including turbine shutdown systems and curtailment. The Proposed Development may also be subject to additional operational constraints arising from:

- noise mitigation requirements;
- ecological protection measures;
- grid congestion and export constraints; and
- wider renewable energy curtailment issues identified within the Midlands region.

In these circumstances, it is respectfully submitted that the Planning Report does not adequately assess:

- the extent to which operational curtailment may reduce annual energy yield;
- the effect of curtailment on projected carbon displacement benefits;
- the impact on carbon payback periods; or
- whether the Proposed Development would continue to deliver the level of climate benefit relied upon in support of the application.

This issue is of particular significance in the context of a peatland development involving substantial peat disturbance, hydrological alteration and long-term carbon loss, where the environmental effects would occur immediately and permanently, while the projected climate benefits remain dependent upon operational assumptions which may not ultimately be realised in practice.

It is therefore submitted that the climate justification advanced in support of the Proposed Development is subject to a level of uncertainty which has not been fully addressed in the planning balance or environmental assessment process.

Without prejudice to any further reasons that may arise from technical review, the following refusal reasons are respectfully proposed for the Commission's consideration:

- ***Reason 1 - Failure to demonstrate site-specific suitability***

  Having regard to the scale of the proposed development, including 15 turbines of approximately 220 metres in height and extensive associated infrastructure, and to the peatland, cultural, archaeological, landscape and residential sensitivity of Lemanaghan Bog, the Applicant has failed to demonstrate that the site is suitable for the proposed development. The proposed development is acknowledged by wall parties to present likely significant and adverse environmental impacts. The Applicant has failed to demonstrate that these can be mitigated down to less than significant. The proposal would therefore be contrary to the proper planning and sustainable development of the area.

- ***Reason 2 - Inadequate EIAR and alternatives assessment***

  The EIAR does not provide a sufficiently complete, precise, integrated and reliable assessment of reasonable alternatives, including restoration-led alternatives, lower-impact renewable technologies, lower turbine scale, omission or relocation of turbines affecting heritage sensitivity, and alternatives avoiding peat disturbance. The Commission is therefore not in a position to reach a reasoned conclusion on the significant environmental effects of the proposed development as required by the EIA Directive.

- ***Reason 3 - Peatland carbon and climate uncertainty***

  The proposal has not demonstrated a clear net climate benefit when peat disturbance, hydrological alteration, loss of carbon storage and sequestration potential, construction emissions and cumulative peatland degradation are fully considered. The proposal would significantly risk undermining national peatland restoration and climate objectives and would be inconsistent with a precautionary approach to peatland carbon sinks.

- ***Reason 4 - Peat stability, hydrology and baseline uncertainty***

  Having regard to the peatland nature of the site, the history of industrial peat extraction, ongoing EPA rehabilitation obligations, the substitute consent context and the extent of proposed excavation, roads, drainage and heavy infrastructure, the Applicant has not adequately resolved significant uncertainty regarding peat stability, hydrology and cumulative environmental effects. Consent in such circumstances would be premature and contrary to the precautionary principle.

- ***Reason 5 - Conflict with heritage and development plan sensitivity***
  The proposal, and in particular the relationship of T05 to an area identified as Not Deemed Suitable for Wind Energy Developments for reasons including protection of the monastic site, has not been adequately justified. The development would risk significant adverse effects on the setting, character and significance of the Lemanaghan monastic and cultural landscape and would be inconsistent with the requirement for sympathetic post-industrial use of the bog.

- ***Reason 6 - Cumulative landscape saturation and community burden***

  The proposed development would add further large-scale wind and grid infrastructure to an area already subject to a substantial concentration of existing, permitted and proposed energy infrastructure. The significant cumulative impact on landscape character, visual amenity, community wellbeing, peatland restoration and regional fairness has not been adequately assessed and would be contrary to balanced, sustainable and plan-led development.

- ***Reason 7 - Residential amenity and human health assessment deficiencies***

  The EIAR does not adequately assess population and human health effects in a receptor-specific and integrated manner, including shadow flicker, noise, visual dominance, schools, children, vulnerable groups and cumulative living-condition effects. Reliance on post-consent mitigation does not cure the absence of a robust pre-consent assessment. Significant concerns remain as to adverse and permanent impacts.

3.18 Final Statement

The community is not opposed to renewable energy. It is opposed to the selection of Lemanaghan Bog for a development of this scale where the significant environmental, cultural, hydrological, carbon, residential and cumulative planning concerns have not been resolved. Renewable energy must be delivered in the right places, through lawful assessment, meaningful participation and genuine respect for environmental limits.

For the reasons set out above, it is respectfully submitted that the proposed development should be refused permission. At minimum, the Commission should require further independent assessment and should not grant consent unless and until all uncertainty regarding peatland carbon, hydrology, peat stability, cumulative effects, human health, heritage setting, alternatives and development plan compliance has been fully and transparently resolved.

3.19 Key References

In preparing this part of the submission, our client and BPS have had regard to the following key references (which may repeat or be in addition to those included above):

- Directive 2011/92/EU on Environmental Impact Assessment, as amended by Directive 2014/52/EU.
- Planning and Development Act 2000, as amended.
- Climate Action and Low Carbon Development Act 2015, as amended by the Climate Action and Low Carbon Development (Amendment) Act 2021.
- Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality.
- Directive (EU) 2023/2413 (RED III).
- European Union (Planning and Development) (Renewable Energy) Regulations 2025, S.I. No. 274 of 2025.
- Directive 92/43/EEC (Habitats Directive).
- Directive 2000/60/EC (Water Framework Directive).
- Offaly County Development Plan 2021-2027 and County Wind Energy Strategy.
- Lemanaghan Conservation Plan, Heritage Council, 2007.
- National Peatlands Strategy.
- Commission v Ireland, Case C-215/06 (Derrybrien).
- Commission v Ireland, Case C-261/18.
- Holohan v An Bord Pleanala, Case C-461/17.
- Case C-50/09 Commission v Ireland.
- Case C-263/08 Djurgarden.
- Case C-243/15 Lesoochranarske zoskupenie.

4.0 Part 2 — Core Planning Themes

4.1 CORE PLANNING THEME 1: Cumulative Renewable Energy Concentration, Landscape Capacity and Just Transition Concerns

This section raises serious concerns regarding the cumulative concentration of existing, approved and proposed renewable energy infrastructure within County Offaly and the wider Midlands peatland landscape, and the failure of the current application to adequately assess these cumulative effects in accordance with Irish and European environmental law.

While recognising the importance of renewable energy generation and the State's obligations under national and EU climate policy, it is submitted that the proposed Lemanaghan Wind Farm cannot appropriately be assessed in isolation from the wider pattern of infrastructure concentration now emerging across the county of Offaly.
The receiving environment is already subject to a substantial concentration of:

- operational wind farms,
- approved but unconstructed developments,
- proposed large-scale renewable energy projects,
- substations,
- transmission infrastructure,
- internal road networks,
- associated industrial infrastructure,
- and extensive peatland disturbance.

The cumulative transformation of this landscape raises significant concerns regarding:

- landscape carrying capacity,
- cumulative visual dominance,
- cumulative infrastructure concentration,
- cumulative ecological and hydrological effects,
- cumulative impacts on communities,
- long-term environmental sustainability,
- and whether the Midlands is now carrying a disproportionate share of national renewable energy infrastructure.

4.1.1 Existing, Approved and Proposed Renewable Energy Concentration in County Offaly

Publicly available planning information demonstrates that County Offaly and the wider Midlands region are experiencing a very substantial concentration of wind energy infrastructure relative to the scale, sensitivity and character of the receiving peatland landscape.

The following operational, approved and proposed developments are either wholly or partially located within County Offaly (see Fig. x).

Development	Status	No. Turbines in Offaly	Total Turbines	Tip Height
Cush	Approved	8	8	185m
Rin	Approved	1	1	149.38m
Clonarrow	Approved	4	4	~180m
Mountlucas	Operational	28	28	150m
Cloncreen	Operational	21	21	170m
Yellow River	Operational	29	29	~156–166m
Cushaling	Operational	8	9	185m
Meenwaun	Operational	4	4	169m
Leabeg	Operational	2	2	149.38m
Derrinlough	Operational	21	21	185m
Cloghan	Operational	9	9	150m
Moanvane	Operational	12	12	169m
Lemanaghan	Planning Submitted	15	15	220m
Ballinla	Planning Submitted	7	7	185m
Ballincor / Sharavogue / Corolanty	Planning Submitted	9	11	179.5–180m
Derrynadarragh	Planning Submitted	5	9	186–187m
Ballydermot	Proposed	18	47	~200–220m
Garryhinch	Proposed	10	12	~200m
Derrygreenagh	Proposed	8	25	200m
Cushina	Proposed	11	11	220m
Bellair	Proposed	Not yet determined	Not yet determined	Unknown
Cush Windfarm Phase 2	Proposed	3	3	200m
TOTAL		**233**	**288**	

Fig. 3: operational, approved and proposed developments either wholly or partially located within County Offaly

The above figures are approximate and based on publicly available planning information available at the time of submission. Certain developments extend across county boundaries, and some projects remain subject to ongoing planning or design processes.

Even excluding developments where turbine numbers within Offaly remain unclear, approximately:

- 229 turbines are operational, approved or proposed within Offaly, and
- approximately 284 turbines are operational, approved or proposed across interconnected Midlands developments.

This figure does not include additional cross-boundary developments such as Carrig Windfarm in Tipperary, located near Birr Co. Offaly, which may affect the same receiving environment and communities.

The cumulative scale of renewable energy infrastructure now emerging across the Midlands peatland landscape is therefore significant and must be recognised as such within the assessment process and be reflected in the EIAR and the AA Reports.

4.1.2 Spatial Concentration, Landscape Capacity and Just Transition Concerns

The scale of renewable energy development now emerging across County Offaly and the wider Midlands peatland landscape is no longer capable of being understood through isolated project-by-project assessment alone.

The turbine concentrations identified above demonstrate that the receiving environment is undergoing rapid and cumulative transformation arising from:

- operational wind farms,
- approved but unconstructed developments,
- proposed industrial-scale turbine schemes,
- substations,
- transmission infrastructure,
- extensive internal road networks,
- peatland disturbance,
- and associated infrastructure.

This concentration is particularly significant in the context of the Midlands peatland landscape, which is characterised by:

- extensive open bog landscapes,
- long-distance intervisibility,
- ecological and hydrological sensitivity,
- internationally significant peatland habitats,
- archaeological and monastic heritage landscapes,
- and dispersed rural communities.

Furthermore, the cumulative concentration of renewable energy infrastructure across the Midlands must also be considered in the context of evolving national and European climate policy relating to peatlands, carbon sequestration and climate resilience.

The Climate Action and Low Carbon Development (Amendment) Act 2021 commits Ireland not merely to decarbonisation, but to transition toward a:

- climate resilient,
- biodiversity rich,
- climate neutral economy,
- while also embedding principles of:
- climate justice,
- and just transition.

These principles are directly relevant to the Midlands peatland landscape, which is simultaneously:

- targeted for peatland rehabilitation,
- recognised as an important national carbon sink,
- and increasingly subjected to concentrated industrial-scale renewable energy infrastructure.
- There is therefore a significant policy tension arising from the fact that the same peatland landscapes identified within national and EU climate policy as requiring:
- restoration,
- rewetting,
- carbon sequestration,
- and biodiversity recovery
- are also increasingly experiencing:
- large-scale turbine development,
- extensive road construction,
- drainage alteration,
- cable trenching,
- and associated infrastructure intensification.

This raises important questions regarding the long-term compatibility of cumulative renewable infrastructure concentration with:

- national peatland rehabilitation objectives,
- carbon storage objectives,
- hydrological restoration objectives,
- biodiversity recovery targets,
- and broader climate resilience policy.

Unlike more geographically dispersed renewable energy patterns elsewhere in the State, the Midlands is increasingly experiencing concentrated clustering of very large-scale turbine development within a relatively contained peatland landscape.

The scale of cumulative development now proposed raises serious questions regarding:

- landscape carrying capacity,
- cumulative visual dominance,
- cumulative peatland degradation,
- cumulative ecological fragmentation,
- cumulative impacts on rural communities,
- and whether a disproportionate burden of national renewable energy infrastructure is being placed upon a single region.

This issue must also be considered in the context of the European Union Just Transition Mechanism and the EU Just Transition Fund, which were specifically intended to support the Midlands transition away from industrial peat extraction in a manner that is:

- fair,
- socially sustainable,
- environmentally balanced,
- economically diverse,
- and community-centred.

There is a legitimate concern that the Midlands transition process is increasingly characterised by concentrated delivery of national-scale energy infrastructure without any equivalent strategic assessment of:

- cumulative regional carrying capacity,
- cumulative community impact,
- long-term landscape sustainability, or
- balanced spatial distribution of renewable infrastructure across the State.

The issue before An Coimisiún Pleanála is therefore no longer confined to the effects of a single wind farm development in isolation.

Rather, the key strategic issue is whether the cumulative concentration of renewable energy infrastructure now emerging across the Midlands peatland landscape remains environmentally sustainable, socially balanced, and compatible with the principles underpinning:

- the Environmental Impact Assessment Directive,
- the SEA Directive,
- balanced regional development,
- and the EU Just Transition framework.

The absence of any meaningful strategic regional assessment of renewable energy concentration across the Midlands raises significant concerns regarding incremental and piecemeal landscape transformation through repeated project-level consent processes.

4.1.3 Failure to Adequately Assess Cumulative Effects

Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires that projects be assessed not only individually, but also in terms of their cumulative effects with:

- existing developments,
- permitted developments, and
- and reasonably foreseeable future developments.

Similarly, Article 6(3) of the Habitats Directive requires assessment of projects: "individually or in combination with other plans or projects."

These obligations are central requirements of European environmental law.

It is respectfully submitted that the EIAR accompanying this application does not adequately assess the cumulative impact arising from:

- existing operational wind farms,
- approved but unconstructed developments,
- associated transmission infrastructure,
- substations,
- cumulative peatland disturbance, and
- and wider cumulative landscape transformation across the Midlands peatland region.

The assessment is heavily reliant on project-by-project visibility analysis while not clearly demonstrating how the broader cumulative effects of infrastructure concentration have been evaluated at an appropriate regional scale.

In particular, the EIAR does not clearly demonstrate:

- how cumulative landscape carrying capacity has been assessed,
- how cumulative peatland impacts have been integrated,
- how cumulative community effects have been evaluated, or
- how the cumulative concentration of renewable infrastructure across the Midlands remains environmentally sustainable over the long term.

4.1.4 Sensitive Peatland Landscape and Environmental Concerns

The Midlands peatlands represent a landscape of:

- ecological importance,
- hydrological sensitivity,
- archaeological significance,
- cultural heritage value,
- and historical importance.

Lemanaghan itself forms part of a wider monastic and peatland landscape of recognised archaeological and cultural significance. The cumulative disturbance arising from multiple renewable energy developments across peatland areas raises significant concerns regarding:

- peat stability,
- hydrological alteration,
- habitat fragmentation,
- carbon release,
- biodiversity impacts, and
- long-term ecological degradation.

The cumulative hydrological implications of repeated peatland infrastructure intervention are also of particular concern. Peatlands function as highly sensitive hydrological systems and important long-term carbon stores. Even where peatlands have experienced previous industrial disturbance, they frequently remain hydrologically interconnected and environmentally sensitive.

The cumulative effects arising from:

- turbine foundations,
- access roads,
- drainage works,
- cable trenching,
- excavation,
- hardstanding areas,
- and associated construction activity
- may collectively contribute to:
- progressive alteration of peatland hydrology,
- fragmentation of hydrological connectivity,
- localised peat drying,
- altered runoff patterns,
- peat instability, and
- long-term degradation of peatland ecological function.

These concerns are particularly significant given the increasing recognition within Irish and EU climate policy that peatland rehabilitation and rewetting form an essential component of national carbon reduction and climate adaptation strategies.

The cumulative concentration of infrastructure across peatland landscapes therefore raises broader questions regarding whether sufficient regard has been given to:

- long-term peatland restoration potential,
- catchment-scale hydrological integrity,
- carbon sequestration objectives, and
- the avoidance of cumulative degradation of peatland systems.

These concerns cannot be fully understood through isolated project-level assessment alone and require meaningful cumulative evaluation across the wider receiving environment.

4.1.5 Human Environment and Community Impact

The cumulative burden being placed upon communities across Offaly and the wider Midlands must also be considered. Residents are increasingly located within landscapes containing:

- operational wind farms,
- approved developments,
- and further proposed projects.
- The cumulative effects of:
- repeated landscape change,
- visual encirclement,
- shadow flicker,
- turbine lighting,
- construction traffic, and
- and ongoing infrastructure intensification

require meaningful and integrated assessment.

There is a growing concern within affected communities that the Midlands is becoming disproportionately targeted for large-scale renewable infrastructure without adequate consideration of cumulative social, environmental and community consequences.

4.1.6 Economic Sustainability and Just Transition Principles

The concentration of renewable energy infrastructure across Offaly also raises important economic sustainability and Just Transition considerations.

The EU Just Transition Mechanism was specifically intended to support regions transitioning away from peat extraction and carbon-intensive industries in a manner that is:

- fair,
- balanced,
- socially sustainable,
- economically diverse,
- and community-centred.

However, there is concern that the Midlands transition process is becoming increasingly characterised by concentrated energy infrastructure development without sufficient emphasis upon:

- long-term local economic diversification,
- sustainable indigenous employment,
- heritage-led regeneration,
- landscape-based tourism,
- balanced regional development, and
- long-term community sustainability.

There is also concern that the current transition model risks reducing the Midlands to a disproportionately concentrated national energy landscape while insufficiently recognising the wider economic, environmental and cultural value of the region.

The Midlands peatlands possess significant long-term potential in relation to:
peatland rehabilitation,

- biodiversity restoration,
- climate resilience,
- heritage tourism,
- ecological tourism,
- recreation,
- education, and
- sustainable regional development.

A genuinely balanced Just Transition should not solely focus upon the concentration of industrial-scale energy infrastructure, but should also safeguard:

- landscape quality,
- environmental sustainability,
- cultural heritage,
- community wellbeing,

- and future diversified economic opportunity.

The cumulative industrialisation of the peatland landscape risks undermining these broader regional development objectives and may ultimately conflict with the underlying principles of climate justice and balanced territorial transition embedded within both Irish climate legislation and the EU Just Transition framework.

A Just Transition should not result in one region carrying a disproportionate concentration of national-scale infrastructure without equivalent strategic consideration of cumulative environmental and social effects.

The cumulative transformation of the peatland landscape therefore raises broader questions regarding whether the long-term objectives of the Just Transition process are being fully realised in practice.

4.1.7 Strategic Environmental Assessment and Regional Planning Concerns

The scale of development now emerging across Offaly and the wider Midlands demonstrates the need for strategic regional assessment of:

- renewable energy concentration,
- landscape carrying capacity,
- cumulative peatland impacts,
- cumulative visual effects, and
- community sustainability.

Directive 2001/42/EC (SEA Directive) was specifically introduced to ensure that environmental effects are assessed at an appropriate strategic level rather than solely through fragmented project-by-project assessment. In acknowledging that Strategic Environmental Assessment is generally undertaken at plan and programme level rather than for individual projects. However, the extraordinary concentration of operational, approved and proposed renewable energy infrastructure now emerging across the Midlands peatland landscape raises legitimate concerns regarding whether the cumulative environmental consequences of this level of infrastructure concentration have been adequately anticipated or evaluated at a strategic level.

This concern is particularly significant having regard to:

- the increasing scale and height of modern turbines,
- the cumulative concentration of associated transmission infrastructure and substations,
- the sensitivity of the receiving peatland landscape,
- the growing policy emphasis upon peatland rehabilitation and carbon sequestration, and
- the cumulative interaction between renewable energy infrastructure, hydrology, biodiversity, climate resilience and community sustainability.

It is respectfully submitted that continued reliance upon fragmented project-level assessment risks incremental landscape transformation and cumulative peatland degradation without any comprehensive strategic evaluation of:

- regional carrying capacity,
- long-term peatland landscape sustainability,
- cumulative carbon implications, or
- the balanced spatial distribution of renewable energy infrastructure across the State.

This issue is particularly relevant in circumstances where many strategic planning frameworks and earlier wind energy policy assessments were prepared prior to the emergence of:

- 220m tall industrial-scale turbines,
- major associated transmission infrastructure, and
- the current scale of renewable energy concentration now emerging across the Midlands peatland region.

It is respectfully submitted that the continued piecemeal assessment of large-scale renewable energy projects across the Midlands risks incremental and cumulative landscape transformation without meaningful evaluation of wider regional consequences. The cumulative impact of:

- operational developments,
- approved developments, and
- reasonably foreseeable future developments

requires assessment at an appropriate strategic and regional scale.

4.1.8 CORE PLANNING THEME 1 - Conclusion

This submission does not oppose renewable energy development in principle. However, it is respectfully submitted that the proposed Lemanaghan Wind Farm cannot appropriately be assessed in isolation from the substantial concentration of renewable energy infrastructure already operational, approved or proposed across County Offaly and the wider Midlands peatland landscape.

The EIAR does not clearly demonstrate that the cumulative effects arising from this concentration have been adequately assessed, particularly in relation to:

- landscape carrying capacity,
- cumulative visual dominance,
- cumulative peatland impacts,
- cumulative ecological fragmentation,
- cumulative community effects, and
- broader Just Transition considerations.

It is respectfully submitted that climate policy and renewable energy policy cannot be interpreted as requiring unrestricted concentration of industrial-scale infrastructure within sensitive peatland landscapes without corresponding consideration of cumulative environmental effects, peatland carbon function, hydrological integrity, biodiversity recovery objectives and the principles of climate justice and just transition.

Accordingly, An Coimisiún Pleanála is respectfully requested to:

- critically examine the adequacy of the cumulative impact assessment,
- assess whether cumulative landscape carrying capacity may now be approaching or exceeding sustainable limits,
- consider whether the cumulative concentration of renewable energy infrastructure within the Midlands peatland landscape remains environmentally and socially sustainable,
- ensure compliance with the requirements of the EIA Directive, Habitats Directive and SEA Directive, and
- determine whether the cumulative concentration of renewable infrastructure within Offaly and the wider Midlands is compatible with the principles of balanced regional development and a genuinely just transition for local communities.

4.2 CORE PLANNING THEME 2: Grid Capacity, Renewable Curtailment and Operational Uncertainty

This appendix raises concerns regarding the extent to which the Irish electricity transmission system will be capable of accommodating the cumulative renewable energy output arising from the substantial concentration of operational, permitted and proposed renewable energy developments within County Offaly and the wider Midlands region.

4.2.1 Introduction

The Planning Report and Environmental Impact Assessment Report (EIAR) place significant reliance on the projected renewable energy generation and associated climate benefits of the Proposed Development.

It is respectfully submitted that the climate justification advanced in support of the Proposed Development depends not merely upon installed capacity, but upon the extent to which the electricity generated can be reliably exported, utilised and displaced within the national electricity system under realistic future operating conditions. This issue is of particular relevance in circumstances where the Proposed Development is advanced as a project of overriding public interest primarily on climate and renewable energy grounds.

This issue is particularly significant in circumstances where substantial peat disturbance, long-term hydrological alteration and permanent landscape impacts would occur.

4.2.2 Existing Renewable Energy Concentration

County Offaly and the wider Midlands region already contain a substantial concentration of renewable energy infrastructure, including operational, permitted and proposed wind energy developments.

This concentration of infrastructure raises legitimate planning questions regarding cumulative transmission demand, export capability, operational curtailment and long-term system capacity.

It is respectfully submitted that the issue is not merely one of individual grid connection capability, but rather the cumulative operational effect arising from the continued concentration of very large-scale renewable generation within the Midlands region.

While individual projects may secure grid connection agreements, this does not necessarily establish that the cumulative renewable output arising from multiple operational, permitted and proposed developments can be consistently accommodated by the national electricity system without increasing levels of dispatch-down, curtailment or transmission reinforcement requirements.

While publicly available dispatch-down figures are generally published at national and transmission-system level rather than by county, it is nevertheless significant that EirGrid's own published evidence confirms substantial and increasing levels of renewable dispatch-down across the Irish electricity system.

Published analysis of the Irish grid further identifies a positive correlation between increasing installed wind capacity and increasing curtailment levels.

In circumstances where County Offaly and the wider Midlands region already contain a substantial concentration of operational, permitted and proposed renewable infrastructure, it is respectfully submitted that legitimate planning questions arise regarding:

- the cumulative renewable generation capacity now proposed within the region;
- the extent to which future cumulative output can be consistently accommodated by the transmission system; and
- whether increasing levels of dispatch-down, curtailment and transmission reinforcement dependency may materially affect the projected climate and public-interest benefits relied upon in support of the Proposed Development.

These issues become particularly relevant where large-scale peatland development is proposed on the basis of overriding climate and renewable energy benefits.

4.2.3 EirGrid Evidence Regarding Curtailment

EirGrid and SONI's Annual Renewable Constraint and Curtailment Report (2024) confirms that substantial volumes of renewable electricity are already being dispatched down across the Irish electricity system.

The report states: "Dispatch-down is energy from variable renewable generators that is available but cannot be accommodated by the power system."

The report further confirms that approximately 2,181 GWh of wind energy was dispatched down during 2024, representing approximately 14% of total available wind energy on the island.
EirGrid identifies the principal causes of dispatch-down as including:

- transmission constraints;
- local network limitations;
- renewable oversupply;
- wider system stability requirements.

EirGrid's published evidence therefore demonstrates that renewable dispatch-down and curtailment are existing operational characteristics of the Irish electricity system rather than purely theoretical future risks.

4.2.4 Operational Implications

The Proposed Development may be subject to operational constraints arising from:

- transmission congestion;
- renewable dispatch-down;
- local network limitations;
- ecological mitigation measures;
- noise mitigation requirements;
- and shadow flicker mitigation through turbine curtailment or shutdown systems; and
- future transmission reinforcement dependency and network upgrades.

The Applicant's own assessment identifies significant residential shadow flicker impacts affecting multiple receptors and proposes operational mitigation measures involving turbine shutdown systems.

It is respectfully submitted that the EIAR does not adequately assess:

- the likely effect of curtailment on annual energy yield;
- the impact on projected carbon displacement benefits;
- the effect on carbon payback periods; and
- or whether the projected climate benefits remain robust under realistic operational conditions.

4.2.5 Carbon and Climate Implications

The Proposed Development involves peat excavation, hydrological alteration, extensive road construction and permanent alteration of peatland conditions.

In circumstances where substantial peat disturbance and carbon loss would occur immediately and permanently, but the claimed climate benefits remain dependent upon uncertain future operational assumptions, it is respectfully submitted that a precautionary approach is required.

- The EIAR does not clearly demonstrate:
- the extent to which projected climate benefits may be affected under future curtailment and dispatch-down scenarios;
- whether the projected renewable energy output remains achievable under realistic future grid conditions; or
- whether the overall net climate balance remains positive under such operational condi

4.2.6 Public Interest and System Cost Considerations

Publicly available information confirms that renewable dispatch-down, redispatch and curtailment within the Irish electricity market give rise to significant electricity system management costs and compensation-related issues. It is respectfully submitted that where substantial environmental impacts would occur and the climate justification depends upon projected renewable generation, the extent to which that projected generation may be materially reduced by curtailment and grid constraints becomes a relevant and legitimate planning consideration.

EirGrid and SONI's Annual Renewable Constraint and Curtailment Report confirms that approximately 2,181 GWh of available wind energy was dispatched down during 2024, representing approximately 14% of total available wind generation across the island (EirGrid & SONI Annual Renewable Constraint and Curtailment Report 2024).

Public reporting and market analysis based on EirGrid data further indicate that renewable dispatch-down and unused wind generation may now involve substantial electricity system and market management costs. Public reporting in December 2025 estimated that approximately 1,169 GWh of wind energy went unused during the first ten months of 2025, representing an estimated market value in the order of €414 million (Extra.ie, December 2025, based on EirGrid data).

While it is acknowledged that electricity market pricing and compensation arrangements are complex matters extending beyond the scope of this submission, it is nevertheless submitted that increasing levels of renewable dispatch-down raise legitimate public-interest and infrastructure-efficiency considerations within the overall planning balance.

It is further noted that compensation and redispatch mechanisms exist within the Single Electricity Market framework in respect of renewable curtailment and constraint management. Official legal and regulatory analysis confirms that generators subject to redispatch, curtailment and constraints may receive compensation through the electricity market framework (Mason Hayes & Curran LLP – "Dispatch, Redispatch and Compensation"; SEM Committee documentation).

It is not submitted that economic cost considerations alone determine the appropriateness of the Proposed Development.

However, in circumstances where:

- substantial peat disturbance would occur;
- permanent hydrological alteration would arise;
- long-term landscape and environmental impacts would occur; and
- the principal justification for the Proposed Development is founded upon projected climate and renewable energy benefits,

it is respectfully submitted that the Board is entitled, as part of the overall public-interest planning balance, to consider:

- whether the cumulative concentration of renewable infrastructure within County Offaly and the wider Midlands region may materially increase future dispatch-down and curtailment risk
- whether the projected renewable energy output relied upon in support of the application remains achievable under realistic future grid conditions;
- whether the associated climate and carbon displacement benefits remain sufficiently robust and certain; and
- whether significant electricity system and market management costs associated with increasing renewable curtailment have been adequately considered in the overall public-interest assessment.

This issue is particularly significant in circumstances where the environmental impacts of the Proposed Development, including peat excavation, hydrological alteration and landscape transformation, would occur immediately and potentially permanently, while the projected climate and energy benefits remain dependent

upon future operational assumptions, transmission capacity and electricity system conditions which may not ultimately materialise as projected.

It is respectfully submitted that these issues introduce a material degree of uncertainty into the climate and public-interest justification advanced in support of the Proposed Development and therefore warrant careful consideration by the Board within the overall planning balance.

4.2.7 Planning and Precautionary Principle

It is respectfully submitted that uncertainty regarding future operational output, renewable dispatch-down and cumulative transmission constraints materially weaken the planning and climate justification advanced in support of the Proposed Development.

In circumstances where the environmental impacts would be immediate and long-term, but the claimed climate benefits remain dependent upon uncertain future operational assumptions, it is respectfully submitted that the precautionary principle requires significant weight to be attached to scientific and operational uncertainty. This is particularly significant in the context of peatland development, where the environmental impacts associated with peat excavation, drainage intervention and hydrological alteration may be immediate and long-lasting, while the level of future renewable generation ultimately achieved remains dependent upon evolving transmission capacity, system stability requirements and electricity market conditions over the operational lifetime of the development.

4.2.8 Key References

In preparing this part of the submission, our client and BPS have had regard to the following key references (which may repeat or be in addition to those included above):

- EirGrid & SONI, Annual Renewable Constraint and Curtailment Report 2024 https://cms.eirgrid.ie/sites/default/files/publications/Annual-Renewable-Constraint-and-Curtailment-Report-2024-V1.0.pdf
- Government of Ireland, National Planning Framework (First Revision) https://www.gov.ie/en/publication/daa55-national-planning-framework/
- Government of Ireland, National Peatlands Strategy https://www.gov.ie/en/publication/9a9e2-national-peatlands-strategy/
- William Fry LLP, "Renewable Curtailment and Supreme Court Reference" https://www.williamfry.com/knowledge/supreme-court-looks-for-european-guidance-on-constrained-curtailed-electricity/
- Extra.ie, December 2025, reporting based on EirGrid data regarding renewable dispatch-down and unused wind generation.

4.3 CORE PLANNING THEME 3 Concerns Regarding Potential Project Splitting, Segmentation of Assessment, Cumulative Community Impacts and the Emerging Renewable Energy and Transmission Hub Across the Boora Peatland Complex

Significant concern arises that the current application may assess the proposed Lemanaghan Wind Farm as an isolated standalone development when, in reality, the planning documentation and wider publicly available material increasingly suggest that the proposal may form part of a broader coordinated renewable energy and transmission infrastructure strategy across the wider Boora peatland system.

The proposed development is not limited to wind turbines and minor ancillary works. The planning documentation demonstrates that the application includes a highly substantial and permanent electricity transmission and export installation comprising, *inter alia:*

- a major 220kV substation compound;
- extensive GIS (Gas Insulated Switchgear) infrastructure;
- multiple dedicated 220kV substation compound plans, sections and elevation packages;
- an IPP (Independent Power Producer) Control Building associated with operational grid management infrastructure;
- extensive internal collector trench systems and underground electrical infrastructure;
- overhead line export infrastructure including dedicated 28m transmission towers; and
- comprehensive "Grid Infrastructure Overall Arrangement" infrastructure drawings.

Collectively, the scale, permanence and complexity of this infrastructure appear more consistent with a strategic electricity transmission and export node of regional significance than with infrastructure merely ancillary to an isolated 15-turbine wind energy development.

In this regard, it is noted that:

- both the Lemanaghan and Bellair wind energy projects are being advanced by the same Bord na Móna / SSE Renewables joint venture partnership;
- both developments are located on interconnected peatland lands within the wider Boora Bog Group;
- both developments occupy historically integrated Bord na Móna industrial peatlands linked through existing and historic bog railway and infrastructure corridors;
- Bord na Móna documentation explicitly identifies a "Boora Lemanaghan Rail Link";
- Bellair South appears geographically proximate to the same broader infrastructure corridor associated with the proposed Lemanaghan 220kV substation and export infrastructure;
- both projects form part of the wider Midlands renewable energy strategy publicly promoted by the developer partnership; and
- the proposed Lemanaghan infrastructure includes transmission-scale export infrastructure typically associated with long-term strategic grid integration and renewable energy hub development.

Importantly, the developments do not affect separate or unrelated receiving environments. Rather, they affect the same interconnected rural communities, settlements and social infrastructure across the wider Ballycumber, Boher, Lemanaghan, Kilnagarnagh, Cooldorragha and surrounding hinterland areas.

The same:

- families;
- schools;
- rural residential clusters;
- local roads;
- sports clubs;
- churches;
- graveyards;
- community facilities;
- and wider rural settlement patterns
- are likely to experience the cumulative effects of both developments, including:
- cumulative visual impact;
- cumulative landscape industrialisation;
- cumulative construction traffic;
- cumulative noise and shadow flicker exposure;
- cumulative loss of rural amenity;
- cumulative human health and wellbeing impacts; and
- the progressive industrialisation of the wider peatland landscape.

This is a matter of particular importance in circumstances where the same receiving communities may become progressively surrounded or encircled by large-scale renewable energy and transmission infrastructure developed sequentially across interconnected peatland lands.

The issue therefore extends beyond simple proximity between projects. It concerns the cumulative transformation of one shared community landscape and one interconnected receiving environment. The assessment of cumulative effects under the EIA Directive must therefore consider not merely turbine locations, but the cumulative effects experienced by the same receiving population and community landscape.

The cumulative concentration of renewable generation, transmission and associated infrastructure now emerging across the wider Boora peatland system also raises broader strategic planning and climate policy concerns extending beyond the assessment of individual turbine layouts in isolation.

In particular, serious concern arises regarding whether the cumulative environmental consequences of:

- progressive renewable energy concentration,
- transmission infrastructure intensification;
- peatland landscape transformation, and
- sequential industrial-scale development across interconnected Bord na Móna peatlands have been adequately assessed at an appropriate strategic and regional scale.

This issue is especially significant having regard to:

- the increasing policy emphasis upon peatland rehabilitation and carbon sequestration,
- the recognition of peatlands as long-term climate and biodiversity assets,
- the scale of transmission infrastructure now proposed, and
- the emergence of increasingly concentrated renewable energy clustering across the Midlands peatland landscape.

In circumstances where adjoining renewable energy lands are being advanced sequentially by the same development partnership within one interconnected peatland system, serious concern arises regarding whether cumulative effects may become incrementally segmented through repeated project-level assessment processes rather than evaluated as part of one wider evolving renewable generation and transmission landscape affecting the same receiving environment cumulatively.



Fig. 4: Indicative map illustrating the spatial relationship between Lemanaghan and Bellair, the historic bog rail/infrastructure corridor, and the shared receiving communities affected cumulatively by both developments

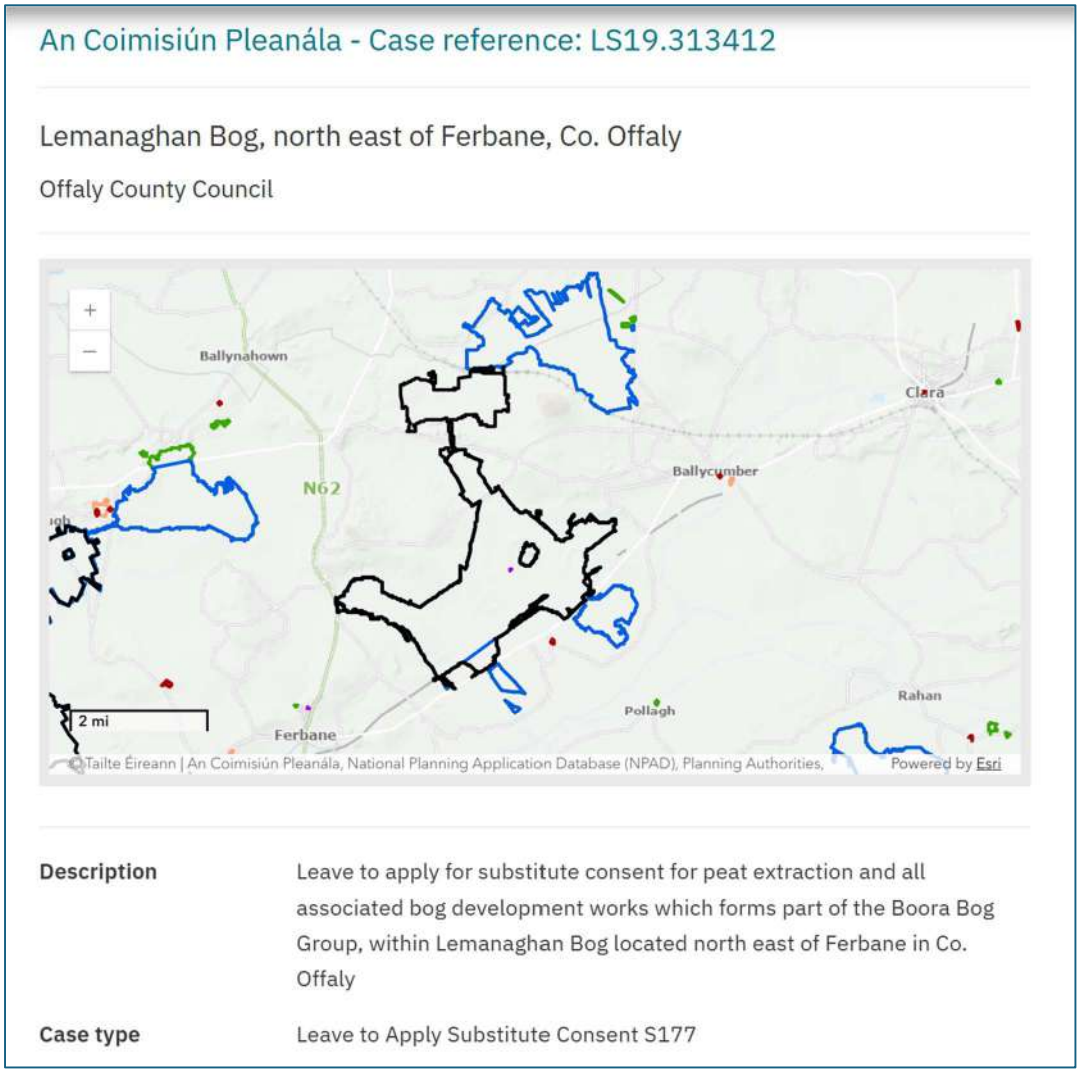


Fig. 5: Official mapping submitted as part of An Coimisiún Pleanála Case Reference LS19.313412

Fig. 5 illustrates official mapping submitted as part of An Coimisiún Pleanála Case Reference LS19.313412 relating to substitute consent for peat extraction and associated development works at Lemanaghan Bog. The description accompanying the case expressly states that the development "forms part of the Boora Bog Group." The mapping demonstrates that Lemanaghan has historically been considered within the context of a wider interconnected peatland system rather than as an isolated standalone landscape unit.

This is of particular relevance in the context of the current application because both the proposed Lemanaghan Wind Farm and the adjoining Bellair wind energy lands are located within the same wider Boora peatland complex and within historically interconnected Bord na Móna industrial peatlands linked through rail and infrastructure corridors.

The historic and planning context therefore supports the position that the receiving environment should not be assessed as a series of isolated and unrelated development parcels, but rather as one interconnected peatland landscape now undergoing progressive renewable energy and transmission infrastructure development. The Board is therefore respectfully requested to assess the current application within this wider cumulative landscape and infrastructural context.

In circumstances where:

- the developments are being promoted by the same development partnership;
- substantial transmission-scale infrastructure is proposed;
- the projects occupy interconnected peatland systems within the wider Boora Bog Group; and
- the same rural communities, schools, roads and settlements are likely to experience cumulative impacts,
- serious concern arises regarding whether the EIAR has adequately assessed the cumulative and functionally linked nature of renewable energy and transmission infrastructure development occurring across the wider Boora peatland landscape.

The cumulative significance of these matters raises serious concern that the current EIAR may materially understate:

- the true strategic scale of the proposed infrastructure;
- the extent of coordinated renewable energy development occurring across the wider Boora peatland complex;
- the extent of functional interrelationship between adjoining renewable energy lands;
- the cumulative transformation of the wider Midlands peatland landscape into a large-scale renewable generation and transmission corridor; and
- the cumulative impacts on the same rural communities, schools, settlements and social infrastructure. This is particularly when considered in the context of long-term sequential renewable energy development across the wider Boora peatland complex.

The cumulative evidence now publicly available gives rise to a serious concern that the current application may not represent a standalone wind energy development in the ordinary sense, but rather one component of a broader coordinated renewable generation and transmission infrastructure strategy across the wider Boora peatland complex.

In circumstances where:

- adjoining renewable energy lands are being advanced by the same development partnership;
- the developments occupy interconnected peatland systems within the wider Boora Bog Group;
- the projects are linked through historic and existing infrastructure corridors;
- substantial transmission-scale infrastructure is proposed including a 220kV GIS substation, IPP Control Building and dedicated export infrastructure;
- the same communities and social infrastructure are likely to experience cumulative impacts from both developments; and
- the wider Midlands renewable energy programme has been publicly promoted by the developer partnership,
- serious concern arises regarding whether the environmental assessment has fully assessed the cumulative and functionally interrelated nature of renewable generation, transmission infrastructure and associated landscape transformation occurring across the wider Boora peatland complex.

Accordingly, An Coimisiún Pleanála is respectfully requested to consider whether the current application raises issues of:

- project segmentation;
- deferred assessment;
- functionally interdependent infrastructure;
- inadequate cumulative assessment;
- cumulative community and human health underassessment;
- or potential project splitting or segmentation concerns within the meaning of the EIA Directive and associated European jurisprudence requiring assessment of the whole project and its cumulative effects.

In particular, the applicant should be required to clarify:

1. Strategic Grid and Infrastructure Integration

Whether the proposed 220kV substation, GIS infrastructure, IPP Control Building, collector network systems, overhead line infrastructure and associated export infrastructure have been designed solely for the operational requirements of the current 15-turbine proposal, or whether future renewable energy generation and export capacity associated with adjoining Bord na Móna peatlands — including Bellair and other lands within the wider Boora Bog Group — informed the sizing, siting, layout, configuration or strategic positioning of this infrastructure.

It is notable that the proposed Lemanaghan development includes extensive 220kV transmission-scale infrastructure, GIS facilities and export infrastructure of a scale materially greater than that associated with other large peatland wind energy developments in the region, including the 21-turbine Derrinlough Wind Farm by Bord Na Móna Powergen Ltd. which included a 110kV grid connection arrangement. This raises legitimate questions regarding whether the proposed infrastructure has been designed solely for the operational requirements of the current 15-turbine proposal, or whether it has been strategically configured having regard to wider future renewable energy generation and export capacity across interconnected Bord na Móna peatlands including Bellair, within the wider Boora Bog Group.

2. Coordinated Renewable Energy Development

Whether any assessment has been undertaken regarding:

- shared or coordinated transmission infrastructure;
- coordinated export capacity;

- future renewable hub development;
- shared access or infrastructure corridors;
- shared drainage or peatland management systems;
- or staged/sequential renewable energy development across interconnected Boora peatlands.

3. Cumulative Community and Human Health Effects

Whether the EIAR adequately assesses the cumulative effects arising from:

- the concentration of renewable energy infrastructure within the wider Boora peatland landscape;
- cumulative landscape industrialisation;
- cumulative visual dominance;
- cumulative residential encirclement effects;
- sequential industrialisation of the same receiving environment;
- cumulative peatland degradation and hydrological alteration;
- cumulative biodiversity fragmentation;
- cumulative traffic and road safety impacts;
- cumulative impacts on schools, community facilities and local services;
- and cumulative human health and residential amenity impacts affecting the same receiving communities.

4. Compliance with EIA Law

Whether An Coimisiún Pleanála is satisfied that the current application complies with the requirements of the EIA Directive and associated European jurisprudence requiring assessment of:

- the whole project;
- functionally linked infrastructure;
- cumulative and interdependent development effects;
- cumulative human and community impacts;
- cumulative landscape and settlement effects; and
- prohibiting the artificial separation or segmentation of projects or environmental assessment in a manner which may obscure the true cumulative effects of the overall development.

The extensive transmission and export infrastructure now proposed — when viewed cumulatively alongside the adjoining Bellair lands, the historic Boora infrastructure network, the shared receiving communities and the wider Bord na Móna/SSE Midlands renewable programme — gives rise to a legitimate and serious concern that the current application may represent one component of a broader coordinated renewable generation and transmission strategy across the interconnected Boora bog system, yet the EIAR appears to assess the proposal predominantly as a standalone development rather than within the context of an emerging interconnected renewable energy and transmission landscape.

In this regard, it is respectfully submitted that cumulative assessment cannot be confined solely to the direct footprint of individual turbine layouts or red-line boundaries. The Board is required to consider the wider functional, infrastructural, landscape, social and community context within which the development is proposed, including cumulative and sequential impacts arising across interconnected peatland lands affecting the same receiving environment and rural population.

Accordingly, An Coimisiún Pleanála is respectfully requested to require the applicant to:

- fully disclose any strategic, engineering, grid, infrastructure or land-use integration between Lemanaghan, Bellair and other adjoining Bord na Móna renewable energy lands;
- clarify whether the proposed 220kV infrastructure is intended to facilitate wider renewable energy expansion beyond the immediate red-line boundary of the application site;
- clarify the extent to which future renewable development across adjoining peatland lands informed the infrastructure design strategy; and
- demonstrate that the environmental assessment undertaken is not materially deficient by reason of segmentation, deferred assessment, inadequate cumulative assessment or failure to assess the true strategic scale of the renewable energy and transmission infrastructure now emerging across the wider Boora peatland complex and affecting the same receiving rural communities cumulatively.

4.4 CORE PLANNING THEME 4 Turbary Rights

4.4.1 Turbary Rights – Material Omission and Failure of Assessment

4.4.1.1 Introduction

This submission is made on behalf of the Lemanaghan Bog Heritage & Conservation Group and raises a substantive legal and planning objection to the proposed development.

It is submitted that the Environmental Impact Assessment Report (EIAR) is materially deficient and does not demonstrate compliance with applicable legal requirements, arising from the Applicant's failure to identify, assess, or evaluate impacts on turbary rights.

Turbary rights constitute:

- legally protected property rights
- an ongoing and lawful land use
- a "material asset" within the meaning of Directive 2011/92/EU (EIA Directive)

This failure arises across multiple elements of the EIAR, including:

- Chapter 8 – Land, Soils & Geology.
- Appendix 8-1 – Peat Stability Risk Assessment.
- Chapter 9 – Hydrology & Water.
- Water Framework Directive Compliance Assessment.
- Aquatic & Fisheries Report.
- Appendix 2-4 – Rehabilitation Plan.

The cumulative effect is a failure to assess a known and affected receptor, rendering the EIAR incomplete and unreliable.

4.4.1.2 Express Acknowledgement of Turbary

The Applicant explicitly acknowledges turbary within the site: "There are some areas of active turbary around the margins of the site" (Appendix 2-4, Section 3.1.2) and "Parts of Lemanaghan Bog … are currently being used by domestic turf cutters …" (Appendix 2-4, Section 1.1). Chapter 8 further states: "small areas of active turbary peat cutting … volumes are minor …"

4.4.1.3 Failure to Assess Turbary Lands

The Applicant states: "It is beyond the scope of this rehabilitation plan to address turf cutting issues …". Assessment concerns arise. This statement mischaracterises the legal obligation. The issue is not the regulation of turf cutting practices, but the requirement to assess:

- impacts on lands subject to turbary rights.
- interference with legally protected property rights.
- interaction between development and existing lawful land use.

The proposed development includes:

- excavation and removal of peat.
- construction of turbines, roads and infrastructure.
- drainage alteration and re-wetting.

The Rehabilitation Plan confirms: "Drain-blocking… to raise water levels …"

The Applicant cannot reasonably rely on an EIAR which:

- acknowledges the existence of turbary rights;
- proposes extensive physical alteration of peatland and hydrology; and
- does not assess the impact of those works on turbary lands.

This represents a material omission in the assessment.

4.4.1.4 Failure Legal Status of Turbary Rights

Under the Land and Conveyancing Law Reform Act 2009:

A profit à prendre includes a right to enter land and take part of the natural produce of that land.

Turbary rights therefore constitute:

- property rights.
- rights of access and extraction.
- legally protected interests.

They are further protected under:

- Article 40.3 and Article 43 of the Constitution.
- established principles of Irish property law.

Relevant case law includes:

- Blake v Attorney General [1982] IR 117
- State (Foley) v Minister for Agriculture
- Dellway Investments v NAMA [2011] IESC 14 (property rights must be fairly considered in decision-making)

Planning and EIA Context

Under EU law:

Holohan v An Bord Pleanála (C-461/17) confirms that all affected aspects of the environment must be assessed this includes interactions between environmental factors and human use of land

Conclusion

Turbary rights constitute an ongoing and lawful land use explicitly acknowledged by the Applicant.

Any alteration to the hydrological regime has the potential to materially affect the exercise of those rights and must therefore be assessed.

This has not been carried out.

4.4.1.5 Failure of Appendix 8-1 – Peat Stability Assessment

Appendix 8-1 confirms:

- excavation into peat.
- groundwater control measures.
- peat depths of up to 6–7 metres.

Assessment

Despite this, the assessment:

- does not identify turbary rights
- does not assess ownership or legal status of peat
- treats peat solely as a geotechnical material
- without recognising that it may also constitute a resource subject to legally protected rights.

Conclusion

This represents a failure to assess a known receptor and materially weakens the EIAR.

4.4.1.6 Hydrology and Turbary – Failure to Assess Interdependence

Chapter 9 confirms:

- the site is artificially drained.
- extensive drainage infrastructure is present.

The Rehabilitation Plan confirms drain blocking and re-wetting proposals.

Assessment

Turbary is inherently dependent on:
- peat moisture content.
- drainage conditions.
- ground stability.

This interdependence between hydrology and turbary represents a critical pathway of impact which must be assessed under the EIA Directive.

Conclusion

The EIAR does not assess the interaction between hydrological change and turbary rights.

This is a material omission.

4.4.1.7 Water Framework Directive (WFD) – Failure to Assess Human Use

The WFD Assessment refers to: "Cumulative Effects with Turbary Peat Cutting"

However, it does not assess:

- the impact of hydrological change on turbary
- the interaction between drainage and land use

Legal Context

Under:

- Directive 2000/60/EC (Water Framework Directive).
- Directive 2011/92/EU (EIA Directive).

The Applicant must assess hydrological impacts and their interaction with human use of land

Conclusion

The EIAR does not demonstrate compliance with the requirements of the Water Framework Directive in this regard.

4.4.1.8 Reliance on Draft Rehabilitation Plan

The Applicant confirms that the Rehabilitation Plan:

- remains in draft form.
- will be revised post-consent.

Legal Context

Under:

- Wells v Secretary of State (C-201/02)
- Commission v Ireland (C-215/06)
- Environmental effects must be assessed prior to consent

Conclusion

Reliance on a draft plan introduces uncertainty and raises significant concerns as to the reliability of the EIAR.

4.4.1.9 Public Participation – Aarhus Convention

The Applicant states that consultation has not commenced.

Assessment

Under the Aarhus Convention:

- affected parties must be informed.

- meaningful participation must be enabled.

In the absence of identification and assessment of turbary rights:

- affected rights holders cannot fully understand impacts.
- meaningful participation is restricted.

Conclusion

This represents a procedural deficiency in the assessment process.

Fig. x offers a summary of key assessment deficiencies

Issue	Requirement	Deficiency	Consequence
Turbary rights not identified, mapped.	EIA Directive	Not assessed	Incomplete EIAR
Turbary not assessed as receptor	Holohan (CJEU)	Interaction ignored	Invalid assessment
Peat treated as engineering material	Property law	Rights not considered	Legal defect
Hydrology not linked to turbary	EIA Directive	Interdependence omitted	Material omission
WFD assessment incomplete	WFD Directive	Human use not assessed	Non-compliance
Draft plan relied upon	Wells / CJEU	Deferred assessment	Uncertainty
Participation restricted	Aarhus Convention	Impacts unclear	Procedural defect

Fig. 6: Summary of key assessment deficiencies in this planning application as regards the matters set out under Core Planning Theme 4

4.4.1.10 Grounds for Refusal - Core Planning Theme 4

It is submitted that the proposed development should be refused on the following grounds:

- failure to assess turbary rights as a material asset and land use.
- failure to assess interaction between hydrology and turbary.
- failure to demonstrate compliance with the Water Framework Directive.
- reliance on an artificial and contested baseline.
- reliance on draft and incomplete documentation.
- failure to facilitate meaningful public participation.

4.4.1.11 Conclusion - Core Planning Theme 4

It is submitted that:

- the EIAR fails to assess a legally protected property right.
- the assessment is incomplete and unreliable.
- the application does not provide a sufficient basis for decision-making.

4.4.1.12 Final Legal Statement - Core Planning Theme 4

In circumstances where a known and legally protected property right is directly affected by the proposed development, and no assessment of that impact has been carried out, the EIAR cannot be reasonably relied upon by the competent authority.

Precautionary Principle

Under Article 191 TFEU - Where uncertainty exists, development should not proceed unless and until such uncertainty is resolved.

Overall Conclusion

The Applicant has acknowledged the existence of turbary rights while failing to assess their interaction with the proposed development. This omission, combined with reliance on incomplete hydrological assessment and draft rehabilitation proposals, gives rise to a clear and unresolved risk. The EIAR therefore does not demonstrate compliance with the requirements of EU law and does not provide a sufficient basis for the grant of consent.

5.0 CORE PLANNING THEME 5 – See attachment 1

Please refer to Attachment 1 of this observation submission.

6.0 EIAR Review

Please refer to Attachment 2 of this observation submission.

7.0 Conclusion

The Lemanaghan Wind Farm application (PAX19.324161) is fundamentally flawed. While the need for renewable energy is acknowledged, the Applicant has failed to demonstrate that this specific site, scale, and design of development is suitable for Lemanaghan Bog.

The EIAR and Planning Report contain material deficiencies in assessment, particularly regarding:

- Peatland carbon balance and net climate benefit.
- Cumulative landscape and infrastructure saturation.
- Heritage and development plan conflicts (especially Turbine T05).
- Turbary rights (a significant legal omission).
- Inadequate alternatives assessment.
- Uncertainty around grid curtailment and actual climate delivery.
- Project segmentation concerns with the wider Boora peatland complex.
- The proposal represents a significant industrialisation of a sensitive recovering peatland and monastic cultural landscape without adequate justification or environmental safeguards.

Having regard to the scale and nature of the proposed development, the sensitivity of the receiving peatland and cultural landscape, the failure to demonstrate a net climate benefit, the material omissions in the EIAR (including turbary rights), the conflict with the Offaly County Development Plan, and the inadequate assessment of cumulative effects, it is considered that the proposed development would not be in accordance with the proper planning and sustainable development of the area and should be refused.

8.0 Recommendation

BPS recommends that the Commission refuse permission for the proposed development.

Failing this, the Commission should require the Applicant to submit substantial further information and independent expert review on the following before any decision is made:

- Full integrated carbon balance assessment (including peat disturbance and lost sequestration).
- Comprehensive cumulative impact assessment at regional (Midlands) scale.
- Detailed assessment of impacts on turbary rights.
- Revised alternatives assessment including restoration-led scenarios.
- Clarification on project segmentation and strategic grid infrastructure intentions.
- Receptor-specific human health and residential amenity assessment.

It is recommended that, for the reasons set out above that this planning application be refused for the reasons set out in Section 6.1 below.

8.1 Recommended reasons for refusal

This planning application should be refused for the reasons set out below.

- ***Failure to Demonstrate Site-Specific Suitability -*** The Applicant has not shown that Lemanaghan Bog is an appropriate location for 15 no. 220m turbines and associated infrastructure, having regard to peatland sensitivity, cultural heritage, and residential amenity.

- ***Inadequate EIAR –*** Failure to Provide Complete and Reliable Information The EIAR does not contain the complete, precise, and integrated assessment required under the EIA Directive, particularly regarding cumulative effects, alternatives, and climate implications.

- ***Absence of Demonstrated Net Climate Benefit -*** The proposal has not adequately quantified peat carbon loss, hydrological impacts, or lost sequestration potential. It therefore fails to demonstrate consistency with the Climate Action and Low Carbon Development Act 2015 (as amended) and national carbon budgets.

- ***Conflict with Development Plan and Heritage Policy -*** Turbine T05 conflicts with the Offaly County Development Plan's designation of an area as "Not Deemed Suitable for Wind Energy Developments" to protect the Lemanaghan monastic landscape.

- ***Inadequate Assessment of Cumulative Effects -*** The EIAR fails to properly assess the significant cumulative landscape, visual, ecological, hydrological, and community impacts arising from the substantial concentration of renewable energy projects across Offaly and the Midlands peatlands.

- ***Material Omission – Turbary Rights -*** The EIAR fails to identify and assess the impact of the development on existing legally protected turbary rights, rendering the assessment incomplete and contrary to the EIA Directive and property law protections.

- ***Peat Stability, Hydrology and Precautionary Principle -*** Significant uncertainty remains regarding peat stability and hydrological effects on a historically disturbed peatland subject to EPA rehabilitation obligations and substitute consent. The precautionary principle has not been properly applied.

- ***Inadequate Alternatives Assessment*** - The assessment of reasonable alternatives is too narrow and developer-led, failing to give proper weight to restoration-led scenarios or lower-impact options.

- ***Residential Amenity and Human*** - Health Insufficient receptor-specific assessment of shadow flicker, visual dominance, noise, and cumulative living condition impacts, with over-reliance on post-consent mitigation.

- ***Uncertainty Regarding Actual Climate Benefit (Curtailment) -*** The projected climate benefits are undermined by unaddressed risks of grid curtailment and dispatch-down, particularly given the high concentration of renewables in the region.

Signed:

Brendan Buck

Brendan Buck MIPI
BPS Planning & Development Consultants LTD
Members of the Irish Planning Institute
21 May 2026

Appendix 1 - Turbary Agreement – Plot 18K, Lemanaghan Bog

Turbary Agreement – Plot 18K, Lemanaghan Bog

Description of Document

This Appendix comprises a turbary agreement dated 5 March 2019, executed by Bord na Móna Energy Limited, together with the accompanying location map identifying Turbary Plot 18K within the townland of Lemanaghan, County Offaly.

The agreement allocates an exclusive right of turbary over Plot 18K to named third-party individuals, being Sean Halligan and Jacinta Halligan, their successors and assigns.

The agreement and map were executed and issued by Bord na Móna Energy Limited and constitute documentary evidence of the existence of identified third-party proprietary rights within lands forming part of Lemanaghan Bog.

Relevance to the Substitute Consent Application

This Appendix is submitted for the purposes of demonstrating that:

- identifiable third-party turbary rights existed within Lemanaghan Bog as of 2019;
- such rights were expressly recognised and granted by Bord na Móna Energy Limited;
- the rights are site-specific and mapped; and
- the existence of such rights is not addressed in the applicant's Landowner Letter of Consent or accompanying maps submitted in support of the substitute consent application.

The Appendix does not seek to determine the current status of these rights but demonstrates that the applicant's assertion of unqualified freehold ownership is not supported by the application documentation and that third-party proprietary interests must be identified and addressed for the purposes of Article 22 of the Planning and Development Regulations 2001 (as amended) and Section 177E of the Planning and Development Act 2000 (as amended).

The relevance of this Appendix lies in demonstrating the existence of formally allocated third-party proprietary interests, not in determining their present enforceability.

Contents

This Appendix contains copies of the following documents:

- Turbary Agreement dated 5 March 2019 Executed by Bord na Móna Energy Limited, signed by the Company Secretary, allocating an exclusive right of turbary over Plot 18K.
- Location Map – Turbary Plot 18K Map accompanying the agreement, identifying the location and extent of Plot 18K within Lemanaghan Bog, County Offaly.

Notes

The documents reproduced in this Appendix are submitted as copies of originals in the possession of the undersigned.

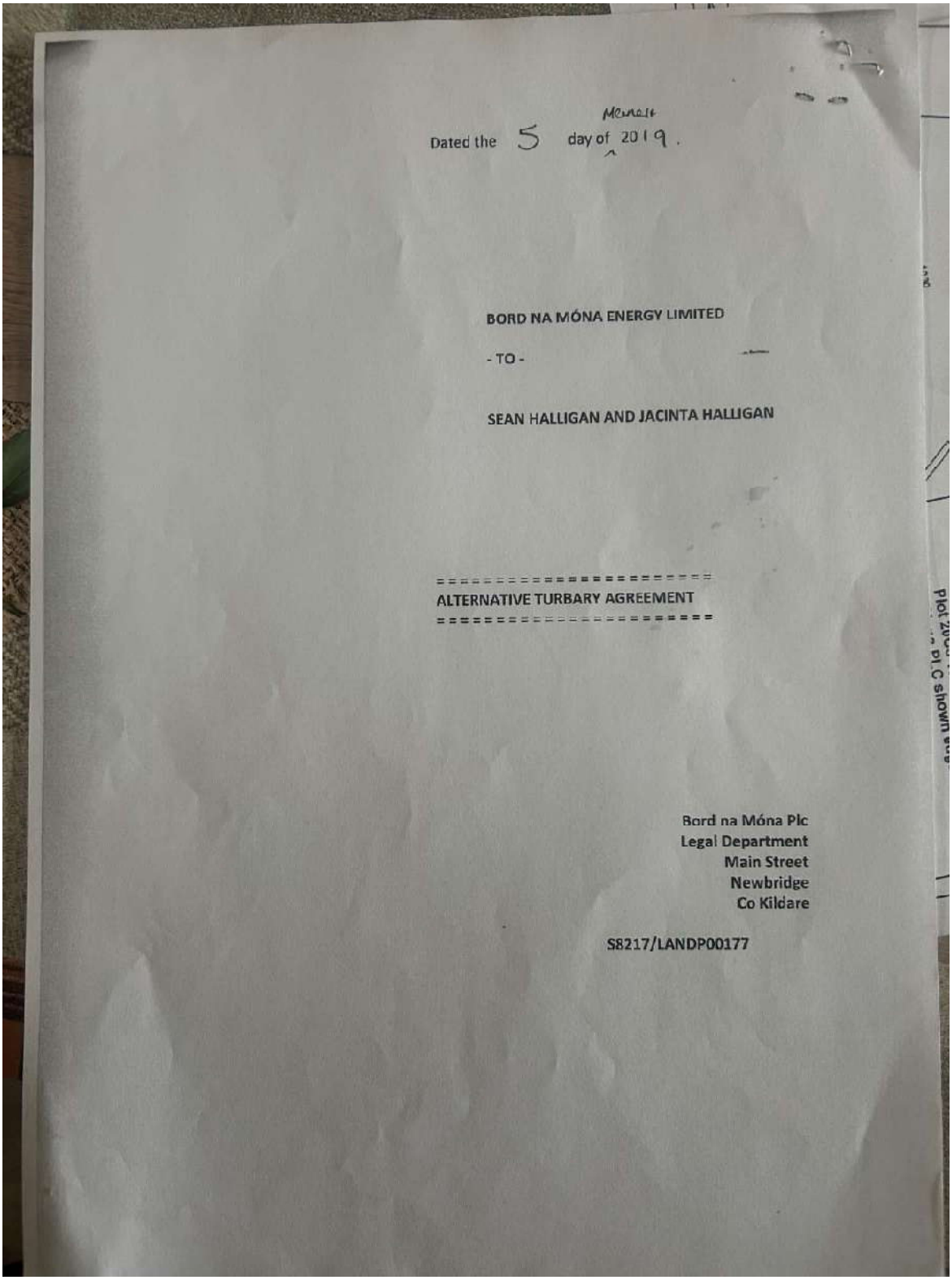
No part of this Appendix was included in the application documentation or in the further information submissions made by the applicant.

The turbary plot identified in the appended agreement is designated by the alphanumeric reference "18K", reflecting a formal internal plot identification system used by Bord na Móna for the allocation and management of turbary rights.

The use of a numbered and lettered plot designation indicates that turbary rights within Lemanaghan Bog have been systematically identified and mapped, rather than arising on an ad hoc or incidental basis.

This Appendix is submitted as documentary evidence of the existence of identified third-party proprietary rights within the application lands. It does not seek to characterise the full extent of such rights beyond what is evidenced by the appended agreement and map.

The documents reproduced in this Appendix are submitted as illustrative evidence of the existence of formally allocated turbary rights within Lemanaghan Bog. They are not intended to represent a complete or comprehensive record of all turbary plots or rights affecting the application lands.



Dated the 5 day of March 2019.

BORD NA MÓNA ENERGY LIMITED

- TO -

SEAN HALLIGAN AND JACINTA HALLIGAN

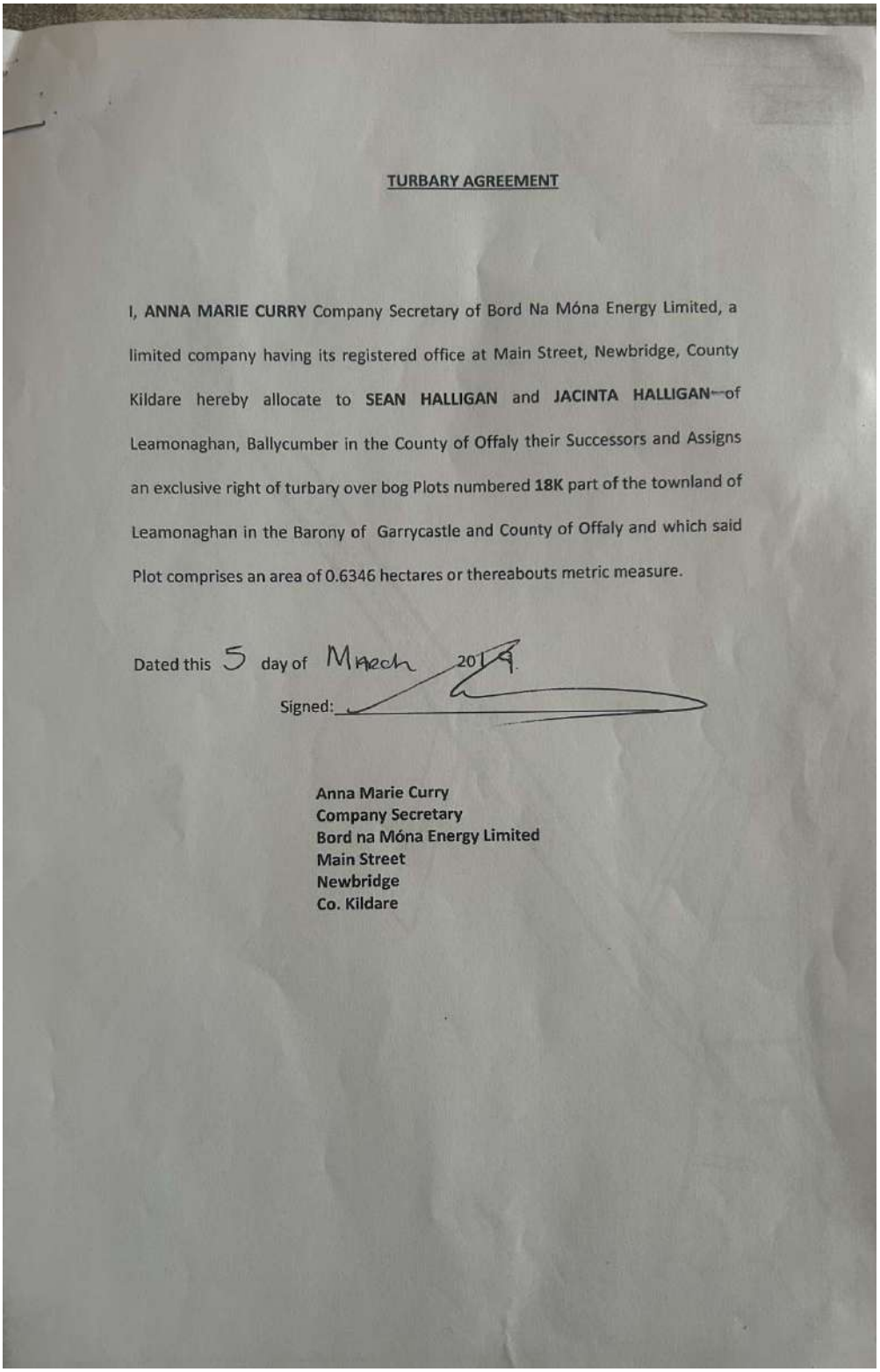
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ALTERNATIVE TURBARY AGREEMENT

==========

Bord na Móna Plc
Legal Department
Main Street
Newbridge
Co Kildare

S8217/LANDP00177



TURBARY AGREEMENT

I, **ANNA MARIE CURRY** Company Secretary of Bord Na Móna Energy Limited, a limited company having its registered office at Main Street, Newbridge, County Kildare hereby allocate to **SEAN HALLIGAN** and **JACINTA HALLIGAN** of Leamonaghan, Ballycumber in the County of Offaly their Successors and Assigns an exclusive right of turbary over bog Plots numbered **18K** part of the townland of Leamonaghan in the Barony of Garrycastle and County of Offaly and which said Plot comprises an area of 0.6346 hectares or thereabouts metric measure.

Dated this 5 day of March 2019.

Signed: _____

Anna Marie Curry
Company Secretary
Bord na Móna Energy Limited
Main Street
Newbridge
Co. Kildare


N
18K
0.24
0.35
0.77
0.33
7.79
2.06
1.54
1.39
0.54
29.51
1.05
1.21
0.46
Meters
0 50 100 200 300 400 500
BORD NA MÓNA
Naturally Driven
Lemanaghan Bog - Boora Works
Townlands: Lemanaghann, Co. Offaly
O.S. Raster Tile No. 3367, O.S. Sheet: 15.
Scale: 1:5,000
Turbary Plot 18K shown edged RED
ORDNANCE SURVEY IRELAND PERMIT No. EN 0035617
© ORDNANCE SURVEY IRELAND GOVERNMENT OF IRELAND

Appendix 2 - Turbary Agreement – Plot 18L, Lemanaghan Bog

Description of Document

This Appendix comprises a turbary agreement dated 23 June 2000, executed on behalf of Bord na Móna Energy Limited, together with the accompanying location map identifying Turbary Plot 18L within the townland of Lemanaghan, County Offaly.

The agreement grants a right of turbary over Plot 18L to Thomas Finnerty, his successors and assigns. The plot is delineated by reference to an Ordnance Survey base map and is identified by an alphanumeric plot designation consistent with Bord na Móna's turbary allocation system.

The agreement and accompanying map were executed and issued by Bord na Móna Energy Limited and constitute documentary evidence of the existence of identified third-party proprietary rights within lands forming part of Lemanaghan Bog.

This Appendix is submitted for the purposes of demonstrating that:

- turbary rights within Lemanaghan Bog were formally allocated by Bord na Móna Energy Limited as early as 2000;
- such rights were plot-specific, mapped, and allocated to named individuals;
- the turbary plot identified (Plot 18L) forms part of a numbered alphanumeric plot system used by Bord na Móna; and
- the existence of such rights is not addressed in the applicant's Landowner Letter of Consent, or accompanying maps submitted in support of the substitute consent application.

This Appendix does not seek to determine the current status of the turbary right but demonstrates that Bord na Móna Energy Limited itself created and recognised third-party proprietary interests within Lemanaghan Bog which must be identified and procedurally addressed for the purposes of Article 22 of the Planning and Development Regulations 2001 (as amended) and Section 177E of the Planning and Development Act 2000 (as amended).

The relevance of this Appendix lies in demonstrating the existence of formally allocated third-party proprietary interests, not in determining their present enforceability.

Contents of Appendix

- This Appendix contains copies of the following documents:
- Turbary Agreement dated 23 June 2000 Executed on behalf of Bord na Móna Energy Limited, granting a right of turbary over Plot 18L to Thomas Finnerty.
- Location Map – Turbary Plot 18L Map accompanying the agreement, identifying the location and extent of Plot 18L within Lemanaghan Bog, County Offaly.

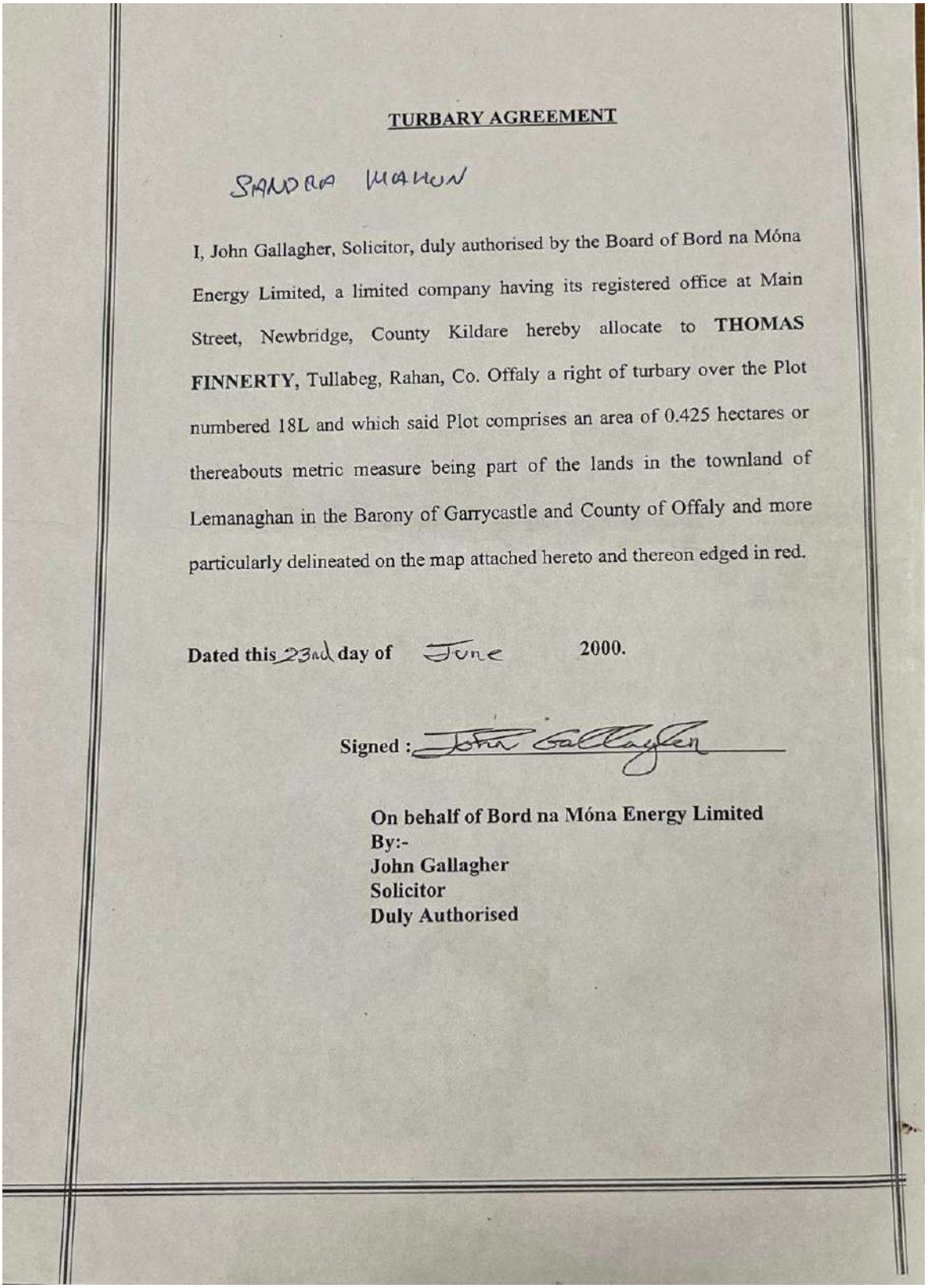
Notes

The documents reproduced in this Appendix are submitted as copies of originals in the possession of the undersigned.

No part of this Appendix was included in the application documentation or in the further information submissions made by the applicant.

This Appendix is submitted as documentary evidence of the existence of identified third-party proprietary rights within the application lands. It does not seek to characterise the full extent of such rights beyond what is evidenced by the appended agreement and map.

The documents reproduced in this Appendix are submitted as illustrative evidence of the existence of formally allocated turbary rights within Lemanaghan Bog. They are not intended to represent a complete or comprehensive record of all turbary plots or rights affecting the application lands.



TURBARY AGREEMENT

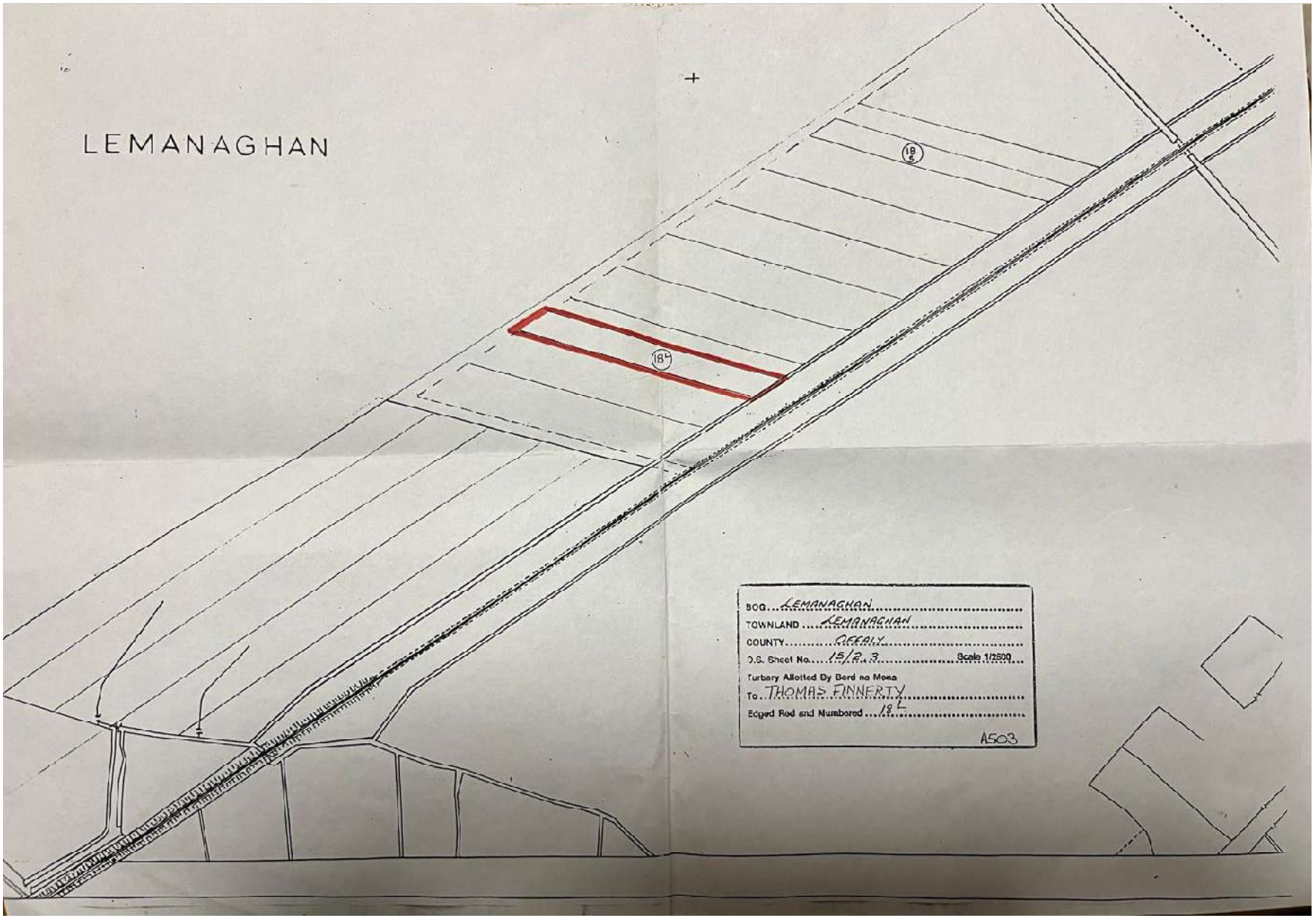
SANDRA MAHON

I, John Gallagher, Solicitor, duly authorised by the Board of Bord na Móna Energy Limited, a limited company having its registered office at Main Street, Newbridge, County Kildare hereby allocate to **THOMAS FINNERTY**, Tullabeg, Rahan, Co. Offaly a right of turbary over the Plot numbered 18L and which said Plot comprises an area of 0.425 hectares or thereabouts metric measure being part of the lands in the townland of Lemanaghan in the Barony of Garrycastle and County of Offaly and more particularly delineated on the map attached hereto and thereon edged in red.

Dated this 23rd **day of** June **2000.**

Signed : John Gallagher

On behalf of Bord na Móna Energy Limited
By:-
John Gallagher
Solicitor
Duly Authorised


LEMANAGHAN
18
18
BOG LEMANAGHAN
TOWNLAND LEMANAGHAN
COUNTY OFFALY
O.S. Sheet No. 15/2.3 Scale 1/2500
Turbary Allotted By Bord na Mona
To THOMAS FINNERTY
Edged Red and Numbered 18
A503

Appendix 3 - Bord na Móna Turbary Allocation Maps (OS Sheet 15/3)

Description:

This Appendix comprises copies of Bord na Móna turbary allocation maps prepared on Ordnance Survey Sheet 15/3 (scale 1:2500), titled "Turbary Allotted by Bord na Móna".

The maps identify multiple turbary plots edged in red, with alphanumeric plot references and named turbary holders, including Donald Walsh.

The maps demonstrate the systematic identification, allocation and spatial mapping of turbary rights within Lemanaghan Bog.

Relevance:

This Appendix is submitted for contextual and corroborative purposes only. It demonstrates that third-party turbary rights within Lemanaghan Bog were historically capable of precise spatial identification using Ordnance Survey base mapping.

The Appendix does not seek to establish the current legal status or extent of any individual turbary right, but illustrates that such rights were treated by the applicant as identifiable proprietary interests capable of mapping and management.

Whether individual turbary rights remain extant is not determinative for Article 22 purposes in the context of a substitute consent application; the existence of documented third-party proprietary interests triggers a requirement for identification and procedural reconciliation.

The relevance of this Appendix lies in demonstrating the existence of formally allocated third-party proprietary interests, not in determining their present enforceability.

Notes:

The document reproduced in this Appendix are submitted as illustrative evidence of the existence of formally allocated turbary rights within Lemanaghan Bog. They are not intended to represent a complete or comprehensive record of all turbary plots or rights affecting the application lands.


BOG..LEMANAGHAN
TOWNLAND..LEABEG & LEMANAGHAN
COUNTY...OFFALY
O.S. Sheet No...15/3
Scale 1/2500
Turbary Allotted By Bord na Mona
To...DONALD....WALSH
Edged Red and Numbered 20R 38Q 20Sa 38R
O.S. PERMIT No. 85/86
A863
152

Appendix 4 - Historic Mapping & Aerial Evidence (Corroborative)

These images are submitted for corroborative purposes only.

They illustrate long-established, linear peat-cutting patterns consistent with turbary use within the application lands and support the documentary evidence of third-party turbary rights referenced elsewhere in this submission.

Image 1: Screenshot of 1996 OS / aerial (showing peat cutting patterns consistent with turbary use)

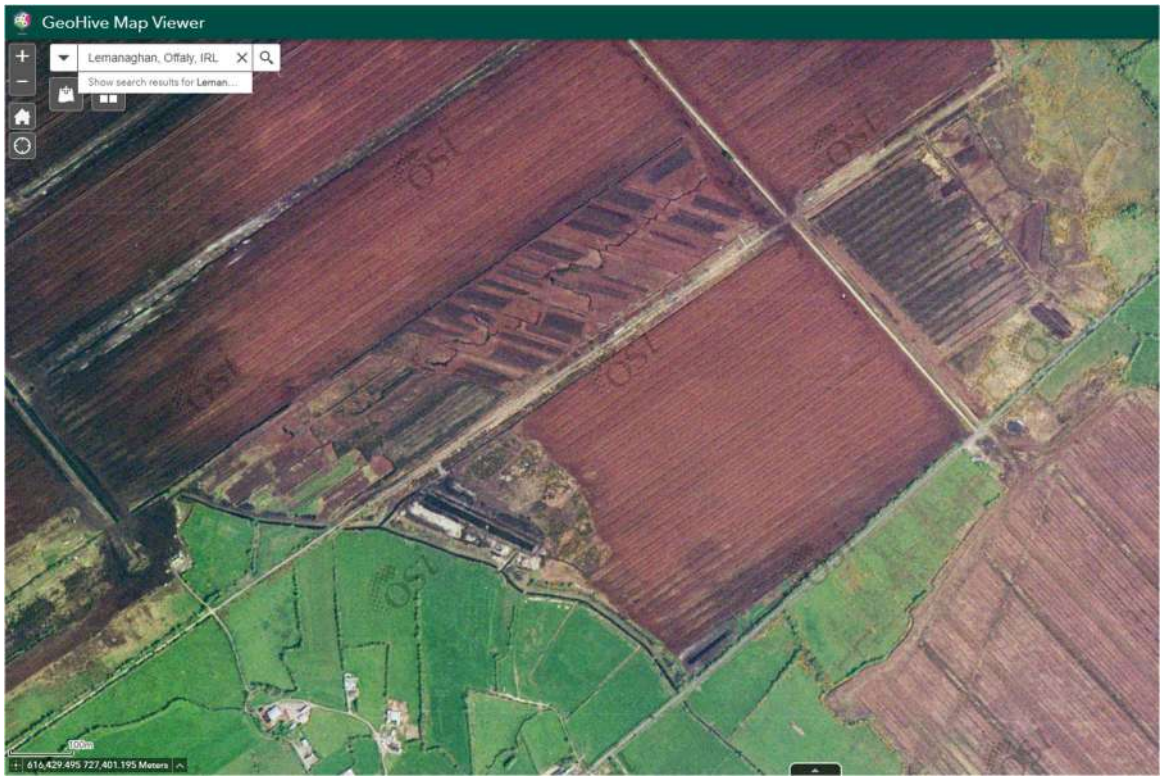


Image 2: Screenshot of 2001 OS / aerial (showing peat cutting patterns consistent with turbary use)



Image 3: Screenshot of 2013 OS / aerial (showing peat cutting patterns consistent with turbary use)



Image 4: Screenshot, Satellite image from Google Maps, 2026 (showing peat cutting patterns consistent with turbary use)



BPS
Planning & Development Consultants

Section 5.0 - Attachment 1

CORE PLANNING THEME 5: The significance of the Lemanaghan Bogs as an exceptional archaeological landscape holding one of the highest densities of wetland archaeological sites in the world. Comments from the Irish Peatland Archaeology Across Time project.

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An Coimisiún Pleanála - Case reference: PAX19.324161 – Archaeology and Cultural Heritage - Comments from the Irish Peatland Archaeology Across Time project

Response 1

13.2.2.1.3 Recorded Monuments within the Proposed Project site

The report states:

> A variety of monument types are located within the site but are typical of those found in a peatland environment which largely comprise roads (trackways or toghers of either stone or wood), and structures – peatland.

Comment: The 491 archaeological monuments recorded in the Lemanaghan peatlands are not typical of those found in a peatland environment. The number and range of site types is by far the densest concentration of archaeological sites in the county. Their variety and dated time period of use (over 5000 years) is also exceptional. The Lemanaghan peatlands contain an extraordinary archaeological landscape. The recorded monuments are highly unusual for a peatland environment, where archaeological remains are typically scattered and limited in type. In contrast, Lemanaghan preserves an exceptionally dense and diverse concentration of sites, making it the richest archaeological landscape in County Offaly and one of the highest densities of wetland archaeology in the world (McDermott 2001, 14).[1]

What makes the area particularly remarkable is not only the sheer number of monuments, but also the wide variety of site types represented and the long duration of human activity preserved there. Evidence from the peatlands spans more than 5,000 years, revealing continuous interaction between people and the landscape from prehistoric times through the medieval period. This includes ritual sites, trackways, settlements, burial monuments, and ecclesiastical remains associated with Saint Manchan and the monastic heritage of Lemanaghan.

Together, these features demonstrate that the peatlands were not isolated wastelands but dynamic cultural landscapes that played an important role in settlement, travel, ritual, and religion across millennia.

Response 2

Chapter 13, 13.2.2.1.4

The report states:

> An assessment and mitigation survey of Lemanaghan Bog was undertaken in 1998 (McDermott et al. 1999. Final report on the assessment and mitigation project 1998 undertaken in Lemanaghan, Co. Offaly. Unpublished report by the Irish Archaeological Wetland Unit for BnM) and did not identify any sightings of archaeological material within the Proposed Project site.

Comment: This is incorrect - 162 archaeological sites were identified during the reassessment survey of Lemanaghan. These were located in Lemanaghan (26), Killaghintober (19), Castletown (34), Derrynagun (63) and Tumbeagh (18) and included the discovery of the Tumbeagh Bog Body (McDermott *et al* 1999, 3).[2]

[1] Trekkers through time: Recent archaeological survey results from Co. Offaly, Ireland, in B. Raftery & J. Hickey (eds), *Recent developments in wetland research*. Seandálaíocht, Department of Archaeology, University College Dublin, Monograph Series, Vol. 2 Warp (Wetland Archaeology Research Project) Occasional Paper 14, pp. 18-25.

[2] McDermott, C, Bermingham, N., OCarroll, E. & Whitaker, J. 1999. Final report on the assessment and mitigation project 1998 undertaken in Lemanaghan, Co. Offaly. Unpublished report commissioned by Bord na Móna.

Response 3

Chapter 13, Section 13.2.2.1.6

The following statement is made on p. 13-71

> While the routes of any original pathways or toghers which definitively led to the monastic complex have not been identified, the presence of toghers dating to the 6th/7th century AD within Lemanaghan Bog and within the Proposed Project site has been established through excavations carried out therein.

Comment: This is incorrect, several trackways have been shown to link the monastic site with the wider area. (OCarroll 2001)[3]

Response 4

Chapter 13, 13.2.2.1.7

Comment: The Tumbeagh Bog body is omitted. More detail is known and should be stated with regards to many of the objects found in the proposed development site. Known find locations should also be plotted to help in assessing the archaeological and cultural heritage impacts of the development (e.g. the silver coins that date to Edward I (1272-1307).

Response 5

Chapter 13.6 Report Conclusion

The report states:

> Floating the proposed new roads and associated cabling where they cross the extant gravel/stone trackway OF007-350---- and archaeological monitoring of all construction stage ground works. (p.160)

Comment: No details or plans on how this floating road will be constructed and used are given in the Cultural Heritage Impact Assessment to properly assess the proposed construction impacts.

Response 6

Chapter 13.6 Report Conclusion

Report states:

> No significant direct or indirect effects to the recorded cultural heritage resource as a result of the Proposed Project have been identified. Where potential direct effects to sub-surface archaeology have been identified appropriate mitigation measures are proposed in order to ameliorate this potential effect. (p.160)

Comment: Indirect impacts or effects have not been assessed, discussed, detailed or mitigation measures provided. Indirect threats such as dewatering or water fluctuations will lead to the long-term instability and threaten the preservation of the 491 known archaeological monuments in the peatbogs, unknown archaeological remains as well as the palaeo-environmental resource. Any process which leads to a reduction in the levels of saturation or to the quality of the water itself within a peatland environment, can impact negatively on the long-term survival of the archaeological and palaeo-environmental record. Organic material such as wood is especially vulnerable, but inorganic archaeological remains including stone may be at risk from any process which leads to exposure and hence weathering, biological and chemical decay. Once this archaeological and palaeo-environmental information is lost or damaged it cannot be retrieved.

[3] OCarroll, E. 2001. *The archaeology of Lemanaghan - the story of an Irish bog*. Wordwell, Bray.

Response 7:

Appendix 13-5, 1.3

The assessment states:

> The early medieval toghers subject to partial excavation as discussed above, do not have any above-ground expression and are not visible at ground level within the Proposed Project site. There is not therefore any visible physical connectivity between these monuments and the monastic site at Lemanaghan. The Conservation Plan (ibid., p. 52) also acknowledges this lack of physical connection stating 'There are no established walking routes across the bogs'. (p.15)

And

> As has been noted above, evolving and ever-changing landscapes frequently obscure or remove the traces of such ancient features. In this regard, while an association between Lemanaghan and the Slí Mhór may exist, the physical manifestation of that connection has been lost. (p.17)

Comment: Regardless of whether there is any visible connectivity between these monuments and the monastic site, they still form part of a wider archaeological complex and landscape of sites and monuments (see Responses 1 and 3) that are also foundational to the intangible cultural heritage (i.e. folklore, mythology) and historic significance of the area. Thus, any groundworks undertaken in part of this landscape will damage the integrity of an important archaeological landscape that is of cultural, spiritual and scientific value for the local population as well as for national and international communities. Moreover, 'Disregard for tangible and intangible heritage can be detrimental to the resilience of cultural identities and the well-being of vulnerable populations'[4]. This latter point should be taken into account with regard to all the findings and proposals in this planning application. While there may be 'no established walking routes across the bogs', are there unofficial pathways that are used by local people to cross the bog.

Response 8:

Appendix 13-5, 1.3

The assessment details its plans to mitigate damage to Togher OF007-350:

> The potential direct and indirect effects to this monument as a result of the Proposed Project are detailed in Chapter 13 with proposed mitigation measures to include floating proposed new roads and cabling over the monument. (p.15)

Comment: Regardless of mitigation measures such as floating roads, the drainage work necessary for the erection of the windfarm, hardstanding, infrastructure and the associated access roads will irreparably damage this site and all of the other remaining in situ archaeological sites within the proposed project through unavoidable desiccation (see Response 6). This is supported by the following statement that was previously made by MKO in Chapter 13 Cultural Heritage Remedial Environmental Impact Assessment Report - F - 2025.09.12 - 200804-e, p67 (see text below in bold):

[4] James-Williamson, Sherene A., Jorjan E. Dolphy and Stephanie Parker. 2024. "Absence heritage: A critical analysis for awareness, preservation and resilience". *International Journal of Geoheritage and Parks*, 12(1): 1-19.

> Chapter 4, the primary and greatest land-use change associated with peat extraction and ancillary activities on the Application Site occurred during the initial drainage and vegetation removal of the bogs in advance of peat extraction and ancillary activities. This effect would have predominantly occurred at the Application Site in advance of 1988. **It is likely that the pre 1988 drainage, shrinkage, compression and the extraction of peat could have had permanent and profound negative cultural heritage effects should sub-surface finds and features exist in areas which were subject to peat extraction and ancillary activities.** This is particularly the case between 1988 and 1993 when fewer archaeological investigations and surveys had taken place. When considered cumulatively with activities which took place between 1950 and 1988, there is potential for increased cumulative direct negative effects to sub-surface archaeology if present within the Application Site.

Response 9:

Appendix 13-5, 1.5.2

The report states:

> As part of the impact assessment in this EIAR, both Landscape and Cultural Heritage surveys were conducted to assess the location of turbine T05 and the line delineating the 2021 Amended Wind Energy Zoning. Site investigations determined that the landscape immediately adjacent to this line, and the location of proposed turbine T05 is characterised by the same cutaway peatland landscape (as shown in the images below), which is of 'Moderate' Landscape Sensitivity as per the OCDP on both sides of the line. The immediate environs of turbine T05 and the boundary between the wind energy zoning does not have any specific sensitive landscape or immediately adjacent cultural heritage features that would constitute it being an area of higher sensitivity. (p.25)

Comment: While no cultural heritage features were identified in the recent archaeological monitoring of these areas, some of the investigations such as the Tobar testing work admitted that 'the trial pits were small in footprint and were positioned away from archaeological constraints previously identified' (see below for further discussion on this point). Furthermore, all of the archaeological investigations report that the area has moderate to high potential for in situ archaeology (e.g. see Appendix 13-6, 5.3.1: 'It must be considered therefore that there remains a moderate to high potential for additional buried features to be uncovered during the course of any future development works in the Lemanaghan Bogs, particularly but not exclusively, within the previously identified archaeological zones'). Therefore, the location of T05 and surrounding, adjacent area could contain sensitive cultural heritage features.

Response 10:

Appendix 13-5, 1.61

The report states:

> Similarly, the togher OF015-084---- located in Derrynagun bog to the north-east of the monastic complex is located outside the Proposed Project site at a distance of c. 817m from the nearest proposed turbine, T14, at its closest point. Visual effects to the immediate setting of this recorded monument will also not occur given the set-back between the Proposed Wind Farm infrastructure and this peatland site. It should also be noted that while the togher in question is extant and is visible within Derrynagun Bog, such sites by their nature comprise low visibility monuments within the landscape and are not visually dominant. As demonstrated in the figures above, this monument is most visible from an aerial perspective rather than at ground level. (p.27)

Comment: Togher OF015-084 is very much visible at ground level, and can be easily identified when walking along the bog. This is particularly the case for local residents, as well as visitors coming to the area e.g. such as those walking the Offaly Way route and on pilgrimage to the Monastic settlement at Lemanaghan. As such, it is perceived as a very special and meaningful cultural aspect of the landscape that forms a key part of the landscape narrative that characterizes the area, and which will only be compromised by development in the surrounding area.

Response 11:

Appendix 13-6: Section 5.4 (Results of Archaeological Monitoring Phase I) states:

> No positively identified archaeological features or structures were uncovered in any of the excavated trial pits. The trial pits were positioned away from archaeological constraints.

Comment: The report acknowledges that multiple test pits did not reach subsoil. In Appendix 13-6, section 6., the report states: 'Natural subsoil and clay/gravel was not exposed within the excavated trial pits due largely to the depths of peat and in some cases collapse'. Thus, excavation in these instances was not fully completed and could have overlooked archaeological evidence as a result. Likewise, this intervention was carried out by an archaeological company that appears to have no expertise in monitoring or excavating peatland archaeology. Peatland archaeology is a very specialist area and people with experience in wetland archaeology should be undertaking these EIARs. As a result, there is potential for oversight of any archaeology present.

In addition, Section 6 states 'It must be noted, however, that the trial pits were small in footprint and were positioned away from archaeological constraints previously identified'. As such, the archaeological investigation in this instance was minimal and suggests that further investigation is required. Indeed, this is the recommendation in the 2023 IAC report in the document (Appendix 13-6, section 3.3, p. vii), which states: 'In alignment with the attached condition however, additional monitoring may be required for further ground disturbance works associated with the development.'

Response 12:

Appendix 13-6, Archaeological Monitoring Site Investigations at Lemanaghan Bog, Co. Offaly, 2.1.

Section 2.1 states:

> While the trial pits were archaeologically monitored under licence, it was not a full archaeological investigative exercise. An opportunity to assess for the presence or otherwise of potential archaeological features was presented however, **albeit limited by the programme timeframe and Health and Safety constraints**.

Comment: This statement indicates that the investigation, limited time and health and safety constraints, was essentially not completed to a sufficient degree and that more thorough investigation is necessary before any development is considered.

Response 13:

Appendix 13–6, 5.3.1

The assessment states: 'A significant number of these sites are now considered to be 'redundant' records owing to their fragmentary nature at the time of recording'

Comment: Redundant records no longer exist, but the descriptions for a lot of smaller sites finish with the statement: The evidence is not sufficient to warrant its acceptance as the remains of an archaeological monument. However, this is a misnomer, because firstly, these features have Sites and Monument Record numbers as part of the Archaeological Survey of Ireland. Furthermore, if, for instance, one of these records is a deposit of bronze age wood,

then it will likely be the remains of an archaeological monument and thus requires detailed archeological excavation before any development on the site is considered.

Response 14:

Appendix 13-7, p. 2

The report states:

> This report on the known archaeological heritage in Lemanaghan Bog has been prepared to support an application for substitute consent for historic peat extraction and ancillary activities. Lemanaghan Bog is located c.3km northeast of Ferbane, Co. Offaly, to the north of the R436 road. The application area occupies the townlands of Cooldorragh, Cappanalosset, Killaghintober, Castlearmstrong, Leabeg, Lemanagh, Rosfaraghan, Derricamore, Lisdermot, Corbane, Cormore and Corbeg, Rashnagh, Straduff, Tumbeagh, Kilnagarnagh and Kilnagoolny and Derrynagun. (p. 2)

Comment: Derrynagun is south of the R436 and is outside the red line boundary as indicated on Figs. 1 & 2 and should not be included

Response 15:

Appendix 13-7, p. 4

The report states:

> Lemanaghan Bog was surveyed by the Irish Archaeological Wetland Unit (IAWU) in 1993-4 as part of the Archaeological Survey of Ireland Peatland Survey (unlicensed). (p.4)

Comment: This is incorrect: Kilnagarnagh was surveyed in 1997, Tumbeagh was surveyed in 1997

Response 16:

Appendix 13-7, p. 12

The report states:

> The 1998 assessment and mitigation survey identified no sightings of archaeological material in the application area (McDermott et al. 1999).

Comment: This is incorrect, see Response 2 above

Response 17

Appendix 13-7, p. 13

The report states:

> Derrynagun Bog was inspected on 14 December 2023 by Jane Whitaker and Enda Lydon of IAC to assess the current status of previously recorded peatland sites. No new sightings were made in the application area.

And

> Archaeological assessment 2024. In April 2024 a full licensed field survey was carried out by IAC Ltd in Derrynagun townland. There were no sightings of archaeological material made in the application area.

Comment: Based on the red line boundary shown in Figs 1 & 2 Derrynagun Bog is outside the red line boundary.

Response 18

Appendix 13-7, p.13-14 Reported Finds

Comment: This section lists finds from Ballydaly and Derrynagun Bogs which are outside the red line boundary as indicated on Figs 1 & 2. Additionally the Tumbeagh bog body is not included in the list of finds from the area.

Response 19: General comment on the Cultural Heritage Assessment

The significance of the intangible cultural heritage value is omitted from this entire chapter

Comment: The assessment does not include value of intangible cultural heritage (e.g. folklore) that was attached to landforms within the area during the periods concerned. It should arguably be included, especially since there are 183 entries from the school in Lemanaghan in the Schools Collection: https://www.duchas.ie/en/cbes/5044612

Response 20: General comment on the Cultural Heritage Assessment

Details, impacts and mitigation measures on the four types of archaeological remains that can be preserved in peatland environments are not provided. These include:

1. Sub-peat archaeology;
2. Archaeological remains contained within the peat matrix itself;
3. Archaeological remains located on the surface of the peat;
4. The palaeo-environmental record preserved within the peat.

1. Sub peat archaeology

Sub-peat archaeological remains include archaeological remains that are found on the subsoil layers prior to being enveloped and preserved by peat. Examples of sub-peat archaeological remains include the significant Mesolithic site of Lough Boora, located 12km metres from the proposed development site. There is no discussion or regard for the potential of said remains in the Cultural Heritage Report.

2. Archaeological remains contained within the peat matrix itself

Four hundred and ninety-one archaeological sites have been uncovered within peat layers as well as many objects. The sites and objects date from the Neolithic (stone axe head) to recent times (Derrynagun roadway). More detail on the artefacts found in the Lemanghan complex of bogs is required. Location points are known for most of the objects (OCarroll and Whitaker 2009)[5] and these need to be plotted against the proposed development plans. For example, the twenty silver coins are actually Edward I silver coins and are extremely significant. They date to between 1272 and 1307 and are among the most important medieval English coins. During his reign (1272–1307), Edward reformed the English coinage system, producing high-quality silver pennies that became widely used across England, Ireland, and parts of Europe. One of these coins found on Corrhill bog (Lisdermot townland) was minted in London and 19 in Waterford.

Burnt mounds or *fulachta fiadh* sites have also been recorded at the edge of many peatland areas (Gowan et al 1996)[6]. There is the potential that many exist either as sub-peat archaeological remains or preserved within the peat layers in Lemanaghan.

[5] OCarroll, E. & Whitaker J. 2009. *Peatland Excavations 1999-2000: Lemanaghan Excavations.* Wordwell., Dublin.

[6] Gowen, M, O'Neill J. and Phillips M. *The Lisheen Mine Archaeological Project 1996–8*, Wordwell, Dublin.

3. Archaeological/Industrial remains located on the surface of the peat - this has not been assessed.

4. The palaeo-environmental record preserved within the peat
Peat also preserves the remains of ancient plant and animal life, referred to as the 'palaeo-environmental record': pollen grains, fragments of insects and other microscopic evidence that can be analysed to reconstruct changes in past vegetation and climate. We can therefore consider peatland archaeology as comprising two interrelated strands of evidence: past cultures evidenced by artefacts, sites and other finds which allows cultural changes to be placed within broad frameworks of vegetation change and human impact on the landscape, through settlement, agriculture and later on by urban and industrial expansion (Gearey et al. 2024) [7]. The loss or significance of the palaeo-environmental record has not been assessed.

Please Note: The many factual errors regarding the interpretation of trackways in Lemanaghan and in particular the incorrect statement regarding the 1998 reassessment survey indicate a lack of consideration and due diligence. These errors have clearly been copied between the authors of Chapters 13 and Appendix 13-7, suggesting that independent research and factchecking was not completed. Consequently, this EIAR is not currently fit for purpose and will require in-depth research and serious re-drafting before it is considered as part of this planning application. This lack of rigour and inherent disregard for the archaeology of Lemanaghan devalues the past, the planning process and the profession of Irish archaeology. Moreover, any further destruction to this landscape will destroy the manifold sociocultural and potential economic benefits that its intact archaeological remains hold for current and future generations. The significance of the Lemanaghan Bogs as an exceptional archaeological landscape cannot be overstated, and they hold one of the highest densities of wetland archaeological sites in the world.

As signed by the Irish Peatland Archaeology Across Time project

[7] Gearey, B. Moore, C. OCarroll, E. and Nolan, C. 2024. *Our Ancient landscapes: Peatland Archaeology*. The Heritage Council.

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Section 6.0 - Attachment 2

EIAR & NIS REVIEW.

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Section 1: EIAR CHAPTER 1 REVIEW

Third Party Planning Observation

An Coimisiún Pleanála — Case Reference: PAX19.324161

15 no. Wind Turbines, 220kV On-Site Substation and Associated Infrastructure

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1.0 Introduction

This submission addresses Chapter 1 (Introduction) of the Environmental Impact Assessment Report (EIAR) accompanying planning application PAX19.324161 for the proposed Lemanaghan Wind Farm. It is submitted that Chapter 1 contains material deficiencies in three respects: the adequacy of public consultation and scoping; the genuine consideration of alternatives; and transparency regarding the limitations of the assessment process.

These deficiencies are not confined to Chapter 1 in their consequences. A flawed consultation and scoping process undermines the reliability of the EIAR as a whole. An Coimisiún Pleanála cannot be satisfied that the assessment is founded on complete and reliable information where the process which generated that information was materially compromised.

2.0 Legal Framework

The legal obligations engaged are well established. The EIA Directive (2011/92/EU as amended) requires that public participation be effective in practice, that reasonable alternatives be genuinely considered, and that the EIAR be based on complete and reliable information. The Aarhus Convention requires early, meaningful participation while options remain genuinely open.

The CJEU has confirmed these standards in Case C-263/08 Djurgården, Case C-50/09 Commission v Ireland, and Case C-243/15 Lesoochranárske zoskupenie. Participation that is merely formal, or which occurs after the fundamental development concept is fixed, does not meet the legal threshold.

The assessment must also be read in the context of Ireland's legally binding climate obligations under the Climate Action and Low Carbon Development (Amendment) Act 2021, EU Climate Law (Regulation (EU) 2021/1119), and the EU Nature Restoration Law 2024. These require protection of carbon sinks and restoration of degraded peatlands — obligations that are directly relevant to the adequacy of the environmental assessment for a development of this nature on this site.

3.0 Core Concern 1 — Failure of Meaningful Public Consultation and Scoping

3.1 The Developer's Own Admission

The most significant evidence regarding the adequacy of the consultation is the developer's own public acknowledgement of its failure. In a broadcast interview on Midlands 103 on 20 July 2021, Bord na Móna CEO Tom Donnellan made the following statement:

> *"We are very anxious to get out and do public consultation, the online doesn't work for us at all, because we can't get the proper interaction."*

Source: Midlands 103, 20 July 2021 — https://www.midlands103.com/news/midlands-news/bord-na-mona-sensitive-to-site-concerns-of-offaly-wind-farm/

This is not a third-party criticism. It is an unambiguous admission by the developer's own Chief Executive that the consultation methods employed were inadequate and had failed to achieve meaningful engagement. In the same broadcast, Mr Donnellan further confirmed:

- strong local opposition to turbines being built on Lemanaghan Bog

- that the developer would not proceed if development infringed on a heritage site
- that the developer was eager to defer public consultation until an in-person meeting could be held

The broadcast also confirmed, in the words of the report:

> *"There's strong local opposition to turbines being built on Lemanaghan Bog…"*

No evidence is provided anywhere in the EIAR that the deficiency acknowledged by the CEO was subsequently remedied. The consultation proceeded in its deficient online format. The Commission is asked to treat this admission as a material fact in its assessment of the reliability of the EIAR. The concerns were raised formally with Mr Donnellan at the time. They were not addressed.

3.2 Scoping During COVID-19 Restrictions

The scoping process took place during Level 5 COVID-19 restrictions, when residents were legally prohibited from travelling or meeting, and many older members of the community were cocooning. Meaningful engagement with the affected population was not achievable in these conditions. A scoping exercise that did not and could not reach the community it was designed to consult does not satisfy the EIA Directive's requirement for effective participation in practice.

3.3 Systemic Failures in the Consultation Process

Beyond the acknowledged deficiency, the following further failures are evidenced:

- Information packs were not delivered to all affected residents; materials were in some instances received after consultation deadlines had passed
- The process relied exclusively on digital platforms — virtual rooms, Zoom meetings, online materials — in a dispersed rural area with variable broadband access and a significant older population, resulting in systemic exclusion
- Residents were directed to submit queries by email with no structured response or feedback mechanism; questions could not be answered at the point of contact
- No evidence is provided of any design change, layout alteration, or mitigation measure arising from community input; the consultation did not demonstrably influence the development
- Public representatives received information in advance of local residents, undermining equality of participation

Taken together, these failures demonstrate a process that amounted to information dissemination rather than consultation within the meaning of the Aarhus Convention.

3.4 Five Years of Unresolved and Sustained Community Opposition

Independent media reporting from 2021 to 2026 establishes a consistent, unresolved pattern of community opposition. This directly contradicts any characterisation of the consultation process as having addressed or resolved community concerns.

Year	Source	Evidence
2021	Offaly Independent	Large local protest; residents described as 'totally opposed'
2021	Midlands 103	CEO admits online consultation inadequate; confirms strong opposition
2024	Offaly Express	'This is not true consultation' — 'dissemination of information'

Year	Source	Evidence
2024	Agriland	Thousands of written objections; development 'unwanted and unloved'
2025	Irish Independent	Protest outside Offaly County Council; strong local opposition
2026	Offaly Independent	Vigorous campaign of opposition ongoing to application stage

Fig. 1: Independent media evidence of sustained community opposition, 2021–2026

4.0 Core Concern 2 — Alternatives Not Genuinely Considered

4.1 Predetermined Developer-Led Process

Article 5 of the EIA Directive requires that reasonable alternatives be genuinely studied and that the main reasons for the chosen option be set out by reference to environmental effects. The Aarhus Convention requires that participation occur while options remain genuinely open.

The evidence demonstrates that neither requirement was met. No alternatives to a wind farm were presented to the community at any stage of the consultation. No discussion of alternative land uses or alternative technologies took place. Residents were informed by Bord na Móna that the project would 'rise or fall in the planning process' — a formulation which clearly indicates that the developer regarded the planning authority, not the community, as the relevant decision-maker on suitability, and that the development concept was fixed before meaningful engagement began.

This approach is directly inconsistent with the Aarhus Convention's requirement that participation take place when options remain open, and with the EIA Directive's requirement for genuine assessment of reasonable alternatives. A consultation that presents a single predetermined development option is not compliant consultation.

4.2 Failure to Have Regard to the Lemanaghan Conservation Plan — A Material Omission

The most significant omission in Chapter 1, and one with direct consequences for the adequacy of the alternatives assessment, is the complete failure to engage with the Lemanaghan Conservation Plan (Heritage Council, 2007).

The Conservation Plan is the established heritage-sensitive framework for the future use of this site. It was developed in partnership with the local community, Offaly County Council, and State heritage bodies. It explicitly states:

> *"...it is important that the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."*

This is not a general policy aspiration. It is a site-specific framework, developed through a community-based process, which directly addresses the question of appropriate future use of Lemanaghan Bog. It is the precise document that should have informed both the alternatives assessment and the consultation process.

Instead, the EIAR makes no reference to the Conservation Plan in Chapter 1. No consultation took place on appropriate post-industrial land use within the Conservation Plan's framework. No heritage-sensitive alternatives — including peatland restoration, ecology-based tourism, or low-impact renewable technologies — were discussed with the community. A wind farm of 15 turbines at 220 metres was presented as the only option.

It is submitted that this is a material omission. The Commission cannot properly assess whether the proposed development is sympathetic to the significance of the site if the established heritage framework for that site has not been considered in the assessment.

5.0 Core Concern 3 — Transparency Failure: Sections 1.8 and 1.9

Section 1.9 of the EIAR states or implies that no significant difficulties were encountered in preparing the assessment. This is not credible in the light of the evidence set out above.

Significant and documented difficulties existed, including pandemic-constrained scoping, the acknowledged inadequacy of the online consultation format, and the systematic exclusion of sections of the community from meaningful participation. The EIA Directive requires that limitations on the assessment be disclosed so that the competent authority can give appropriate weight to areas of uncertainty and incompleteness.

A failure to disclose known limitations is not a minor procedural matter. It undermines the Commission's ability to assess the completeness and reliability of the information before it. Where the methodology described in Section 1.8 depends upon a consultation process that was admittedly inadequate, the robustness of the baseline data — including community impact data, receptor identification, and local environmental knowledge — must be treated with corresponding caution.

6.0 Summary of Key Deficiencies — EIAR Chapter 1

Deficiency	Legal Requirement Breached	Consequence for Assessment
Scoping during Level 5 COVID-19 restrictions; community not effectively reached	EIA Directive — effective participation in practice	Scope of assessment not founded on adequate community engagement
Developer's own admission that online consultation did not achieve meaningful engagement; deficiency not remedied	EIA Directive; Aarhus Convention — Djurgården; C-50/09	Fundamental consultation failure unresolved and unacknowledged in EIAR
Digital-only process; exclusion of rural and older population; one-way engagement; no design influence demonstrated	Aarhus Convention — meaningful and effective participation	Participation did not meet legal threshold; assessment not reliably informed by community knowledge
No alternatives presented to the community; development concept fixed before consultation	EIA Directive Article 5; Aarhus Convention	Alternatives assessment legally deficient; participation not genuine

Deficiency	Legal Requirement Breached	Consequence for Assessment
Lemanaghan Conservation Plan (Heritage Council, 2007) not addressed	EIA Directive — heritage and cultural assessment; site-specific suitability	Material omission; established heritage framework for site use ignored
Section 1.9 fails to disclose significant limitations on assessment process	EIA Directive — transparency and completeness	Commission cannot properly assess reliability of baseline data and methodology

Fig. 2: Summary of key deficiencies in EIAR Chapter 1

7.0 Grounds for Refusal Arising from EIAR Chapter 1

It is submitted that the following grounds for refusal arise from the deficiencies identified in Chapter 1, whether considered independently or cumulatively with the grounds advanced in the principal Planning Observation:

Ground 1 — Failure of Meaningful Public Participation

The scoping and consultation processes described in Chapter 1 did not achieve meaningful public participation in compliance with the EIA Directive and the Aarhus Convention. The pandemic-constrained, digitally exclusive process was acknowledged by the developer itself to be inadequate, did not demonstrably reach or influence the affected community, and was not remedied. An Coimisiún Pleanála cannot be satisfied that the EIAR is founded on complete and reliable information where the process which generated that information was materially compromised at the outset.

Ground 2 — Deficient Alternatives Assessment and Absence of Genuine Participation on Site Suitability

The developer's own statement that the project would 'rise or fall in the planning process', combined with the failure to present any alternatives to the community and the complete omission of the Lemanaghan Conservation Plan from the assessment, demonstrates that the consultation did not comply with the EIA Directive's requirement for genuine consideration of reasonable alternatives. The alternatives assessment is materially deficient as a consequence, and the Commission is not in a position to reach a reasoned conclusion on whether the chosen option is environmentally justified.

Ground 3 — Material Omission: Lemanaghan Conservation Plan

The failure to have regard to the Lemanaghan Conservation Plan (Heritage Council, 2007) — the established, community-developed heritage framework for the future use of this site — represents a material omission in the environmental assessment. The Conservation Plan directly addresses the standard of post-industrial use appropriate to Lemanaghan Bog. In the absence of any assessment of whether the proposed development meets that standard, or any consideration of heritage-sympathetic alternatives, the assessment of site suitability and cultural heritage impact is incomplete.

8.0 Conclusion

Lemanaghan Heritage & Conservation CLG does not oppose renewable energy. The question before An Coimisiún Pleanála is whether this development, at this scale, in this particular landscape, has been assessed through a lawful, complete, and transparent process. The answer arising from Chapter 1 is that it has not.

The developer acknowledged at the time that its consultation was inadequate. The scoping process was compromised by pandemic restrictions. Alternatives were never genuinely offered to the community. The most important heritage framework for the site was not engaged with. These are not peripheral procedural matters. They go to the legal validity and completeness of the EIAR itself.

It is respectfully submitted that An Coimisiún Pleanála should refuse planning permission for the reasons set out above, and in the principal Planning Observation. At minimum, before any positive decision could lawfully be contemplated, the Commission should require independent review of the consultation process and a full assessment of alternatives conducted within the framework of the Lemanaghan Conservation Plan.

9.0 Key References

Legislation

- Directive 2011/92/EU (EIA Directive, as amended by Directive 2014/52/EU)
- UNECE Aarhus Convention on Access to Information, Public Participation and Access to Justice
- Climate Action and Low Carbon Development (Amendment) Act 2021
- Regulation (EU) 2021/1119 (EU Climate Law)
- EU Nature Restoration Law 2024
- Planning and Development Acts 2000–2023

Case Law

- Case C-263/08 Djurgården — effective public participation
- Case C-50/09 Commission v Ireland — completeness of EIA
- Case C-243/15 Lesoochranárske zoskupenie — standing and participation rights
- Sweetman v An Bord Pleanála — precautionary assessment

Policy and Heritage

- Lemanaghan Conservation Plan — Heritage Council, 2007
  - https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

Media and Consultation Evidence

- Midlands 103 (20 July 2021) — developer admission re consultation inadequacy
  - https://www.midlands103.com/news/midlands-news/bord-na-mona-sensitive-to-site-concerns-of-offaly-wind-farm/
- Offaly Independent (June 2021) — local protest and opposition
- Offaly Express (2024) — consultation characterised as information dissemination
- Agriland (2024) — thousands of written objections
- Irish Independent (2025) — ongoing community opposition
- Offaly Independent (March 2026) — vigorous ongoing campaign

Section 2: EIAR CHAPTER 2 REVIEW

Third Party Planning Observation

An Coimisiún Pleanála — Case Reference: PAX19.324161

15 no. Wind Turbines, 220kV On-Site Substation and Associated Infrastructure

1.0 Introduction

This submission addresses Chapter 2 of the Environmental Impact Assessment Report (EIAR) accompanying planning application PAX19.324161 for the proposed Lemanaghan Wind Farm. Chapter 2 purports to establish the need, policy context, and planning justification for the proposed development.

Lemanaghan Heritage & Conservation CLG acknowledges the urgency of climate action and the importance of renewable energy. That acknowledgement is not qualified. However, the need for renewable energy does not override the requirements of proper planning, appropriate site selection, environmental law, and meaningful public participation. The question for An Coimisiún Pleanála is not whether Ireland requires renewable energy — it plainly does — but whether this development, at this scale, has been demonstrated to be appropriate at this specific location.

It is submitted that Chapter 2 fails to answer that question. It relies on general policy arguments, misapplies the concept of overriding public interest, fails to demonstrate a net climate benefit, and does not address the significant planning issues that arise from the concentration of renewable infrastructure in County Offaly. The deficiencies identified are not confined to Chapter 2; they are indicative of broader weaknesses in the EIAR as a whole.

2.0 Legal Framework

The legal framework within which Chapter 2 must be assessed includes the following instruments and authorities:

- Directive 2011/92/EU (EIA Directive, as amended) — requires that need be distinguished from site-specific suitability and that reasonable alternatives be genuinely assessed
- Directive (EU) 2023/2413 (RED III) — accelerates permitting for renewable energy but does not displace EIA, Appropriate Assessment, Water Framework Directive obligations, development plan policy, or heritage assessment
- Climate Action and Low Carbon Development (Amendment) Act 2021 — requires protection of carbon sinks as well as emissions reduction; climate law does not create a blanket permission for all renewable infrastructure irrespective of environmental consequences
- Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5 — confirms Section 15 obligations are real and binding, but also confirms that the obligation to consider climate benefits must be balanced against other material considerations; the Supreme Court rejected a 'climate trumps everything' interpretation
- Offaly County Development Plan 2021–2027 and County Wind Energy Strategy — site-specific development plan policy is a material consideration which cannot be displaced by national policy alone
- Lemanaghan Conservation Plan (Heritage Council, 2007) — the established, community-developed framework for post-industrial use of this specific site

The fundamental legal principle engaged throughout this submission is that national renewable energy need does not equate to site-specific suitability. A project that is urgently needed at national level may nonetheless be unacceptable at a particular location. Chapter 2 of the EIAR conflates these two distinct questions. That is a legal and planning error.

3.0 Core Concern 1 — Need Does Not Demonstrate Site-Specific Suitability

3.1 The Legal and Planning Error in Chapter 2

Section 2.1.3 of the EIAR asserts that the proposed development is required to contribute to national and EU climate targets. That assertion is accepted. It is not, however, an answer to the planning question.

The proper question before An Coimisiún Pleanála is whether Lemanaghan Bog has been demonstrated to be an appropriate receiving environment for 15 turbines of 220 metres in height, together with a 220kV substation, extensive road infrastructure, peat excavation, borrow pits, drainage works, cable trenching and overhead line infrastructure across approximately 1,111 hectares of sensitive peatland. Chapter 2 does not answer that question. It substitutes a national policy argument for a site-specific planning assessment.

This is not a technicality. It is the fundamental planning test. The Commission is not asked to decide whether Ireland needs renewable energy. It is asked to decide whether this development is acceptable at this location. Chapter 2 provides no adequate answer to the second question.

3.2 Site-Specific Factors Not Addressed in Chapter 2

In assessing site-specific suitability, Chapter 2 fails to adequately address:

- why a development of 15 turbines at 220 metres is considered appropriate for a sensitive peatland landscape of recognised cultural, archaeological, and ecological significance
- whether the scale and design of the proposed development is the minimum necessary to achieve stated energy objectives
- how the proposal aligns with the Lemanaghan Conservation Plan's requirement that post-industrial use be sympathetic to the significance of the site
- why less intrusive forms of renewable energy development — including solar, lower turbine numbers, or lower turbine height — were not demonstrated to be inadequate before this scale was adopted
- whether the receiving environment has the landscape capacity to accommodate the proposed development given existing and approved renewable infrastructure in the wider Midlands region

A planning case founded on national need, without demonstrating why this site and this scale are appropriate, does not satisfy the legal test. The Commission should not accept Chapter 2's justification as a substitute for site-specific assessment.

4.0 Core Concern 2 — Conflict with the Lemanaghan Conservation Plan and Failure to Consider Appropriate Alternatives

4.1 The Lemanaghan Conservation Plan — The Established Framework

Lemanaghan Bog is formally recognised as a landscape of exceptional significance through the Lemanaghan Conservation Plan, prepared under the auspices of the Heritage Council in 2007. The Conservation Plan is not a general policy document. It is a site-specific framework, developed in partnership with the local community, Offaly County Council, and State heritage bodies, which directly addresses the future use of this landscape.

The Conservation Plan identifies Lemanaghan as:

> *"The cultural landscape of Lemanaghan is of outstanding significance, combining archaeological, historical, ecological and spiritual values."*

On the question of future land use, the Conservation Plan is explicit:

> *"It is important that the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."*

Source: https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

These are not aspirational statements. They are the operative standards against which the proposed development must be assessed. Chapter 2 of the EIAR does not engage with this framework. It does not explain how a development comprising turbines of 220 metres, a 220kV substation compound, transmission towers, internal road networks, borrow pits, and crane hardstands can be considered sympathetic to a landscape of the cultural significance described by the Heritage Council.

4.2 The Distinction Between Industrial History and Planning Justification

Chapter 2 relies implicitly on the industrial history of peat extraction at Lemanaghan as a basis for arguing that the site is suitable for further development. This reasoning must be rejected.

Prior industrial damage to a landscape is not a planning justification for permanent further industrialisation. The fact that Lemanaghan Bog was previously used for commercial peat extraction does not reduce its heritage, ecological, or cultural sensitivity — and in many respects enhances the case for restoration rather than continued industrial use. The Conservation Plan itself was written in the context of the post-industrial landscape, precisely in order to ensure that its recovery and future use are guided by the significance of the site. Chapter 2 inverts this logic.

4.3 Failure to Consider Appropriate Alternatives

The EIA Directive (Article 5) requires that reasonable alternatives be genuinely assessed by reference to their environmental effects. It is submitted that Chapter 2 does not comply with this requirement.

In particular, the EIAR does not demonstrate that the following alternatives were adequately assessed:

- peatland restoration and rewetting as a primary climate response — offering carbon sequestration, biodiversity recovery, hydrological stabilisation, and heritage protection without permanent landscape industrialisation
- solar or hybrid renewable technologies with materially lower vertical landscape impact and without the peat disturbance implications of turbine foundations and road infrastructure
- a lower turbine number and lower turbine height alternative demonstrating reduced heritage, landscape, and residential amenity effects
- development on mineral soils avoiding peat disturbance and its associated carbon consequences
- a phased approach allowing rehabilitation outcomes to be assessed before further permanent industrial development is committed

The failure to assess the restoration alternative is particularly significant. On a peatland site, a 'do nothing' or 'do minimum' scenario is not a negative baseline — it represents a positive environmental outcome involving carbon recovery, biodiversity gain, hydrological restoration, and long-term heritage protection. The EIAR does not treat it as such.

5.0 Core Concern 3 — Failure to Demonstrate Net Climate Benefit

5.1 The Climate Justification Requires More Than Installed Capacity

Chapter 2 presents wind energy as a climate solution. That framing is accepted as far as it goes. However, the climate justification for a peatland wind farm must account for both sides of the carbon equation: not only the emissions displaced by renewable generation, but also the carbon cost of the development itself and the lost opportunity cost of peatland restoration.

It is submitted that Chapter 2 — and the EIAR more broadly — does not establish a clear, quantified, and verifiable net climate benefit when the following factors are properly considered:

- peat excavation, disturbance, and handling during construction — releasing stored carbon directly
- hydrological alteration and drainage works — accelerating peat oxidation and ongoing carbon loss

- embedded carbon in turbine foundations, roads, substation, cable infrastructure, and transmission structures
- loss of long-term carbon sequestration potential arising from the permanent alteration of peatland conditions
- the opportunity cost of peatland restoration — the carbon that would have been stored and sequestered had the site been rewetted and rehabilitated instead

The EIAR treats the climate benefit as self-evident because the project is renewable. It does not treat peatland carbon loss as a material factor in the climate balance. That omission undermines the central justification for the development.

5.2 Operational Curtailment Undermines Projected Climate Benefits

The climate case for the proposed development depends not only on installed capacity but on electricity actually generated, exported, and displacing carbon-intensive alternatives. The EIAR's projected climate benefits are therefore directly dependent on future operational assumptions which may not be realised.

EirGrid and SONI's Annual Renewable Constraint and Curtailment Report (2024) confirms that approximately 2,181 GWh of available wind energy was dispatched down during 2024, representing approximately 14% of total available wind generation across the island. Published reporting based on EirGrid data estimates that in the first ten months of 2025 alone, approximately 1,169 GWh of wind energy went unused, representing an estimated market value of approximately €414 million.

An Offaly TD has formally raised concerns at national level regarding wasted renewable energy generation in the Midlands, including the utilisation of electricity from existing wind developments in the region:

Source: https://www.midlands103.com/news/midlands-news/offaly-td-raises-concerns-over-wasted-renewable-energy-in-the-midlands/

The Proposed Development may be subject to further operational constraints arising from:

- grid congestion and transmission limitations in the Midlands region
- renewable dispatch-down arising from cumulative renewable energy concentration in County Offaly
- turbine shutdown systems required as mitigation for significant shadow flicker impacts identified in the Applicant's own assessment
- noise curtailment requirements
- ecological protection curtailment

In circumstances where the permanent peat disturbance, hydrological alteration, and carbon loss associated with the development would occur immediately and irreversibly, while the projected climate benefits remain contingent on uncertain future operational conditions, the climate justification presented in Chapter 2 is not adequately demonstrated. The precautionary principle requires that this uncertainty be given material weight.

5.3 Peatlands as Climate Infrastructure — The Missed Opportunity

County Offaly's peatlands have historically been a significant national energy resource. That contribution has been made. These landscapes now present a different and increasingly recognised opportunity: their restoration and rewetting represents a measurable, long-term contribution to Ireland's climate obligations through carbon sequestration and storage.

National and EU climate policy — including the EU Nature Restoration Law 2024 and Ireland's National Peatlands Strategy — increasingly recognises peatland rehabilitation as an essential component of climate mitigation. Chapter 2 does not engage with this dimension of climate policy. It presents wind generation as the only legitimate climate response available for this site. That is an incomplete and ultimately inadequate assessment of the climate case.

6.0 Core Concern 4 — Misapplication of Overriding Public Interest Under RED III

6.1 The Legal Scope of Overriding Public Interest

Chapter 2 relies on the provisions of RED III (Directive (EU) 2023/2413) and the associated European Union (Planning and Development) (Renewable Energy) Regulations 2025 (S.I. No. 274 of 2025), which recognise renewable energy development as being in the overriding public interest. It is submitted that this principle is misapplied.

The concept of overriding public interest in the renewable energy context arises in a specific legal context and does not operate to:

- disapply the requirements of the EIA Directive
- disapply the requirements of the Habitats Directive or the Water Framework Directive
- remove the requirement for site-specific assessment of environmental effects
- override the development plan or national peatland policy
- remove the requirement for meaningful public participation under the Aarhus Convention
- displace the precautionary principle where significant environmental uncertainty exists

RED III requires accelerated permitting timelines for renewable energy. It does not create a presumption in favour of any particular application regardless of its environmental effects. The Commission's obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions.

6.2 The Public Interest Includes Environmental Protection

The most significant legal error in Chapter 2 is its implicit treatment of the public interest as synonymous with the delivery of renewable energy infrastructure. That is not the legal position.

The public interest in the context of this application encompasses:

- the protection and enhancement of carbon sinks, as required by the Climate Action and Low Carbon Development (Amendment) Act 2021
- the conservation and appropriate management of heritage landscapes, as recognised in the Lemanaghan Conservation Plan
- the protection of residential amenity and the living conditions of communities in the receiving environment
- peatland restoration and biodiversity recovery, as required under the EU Nature Restoration Law 2024
- a fair and balanced distribution of energy infrastructure across the State, consistent with Just Transition principles

Community opposition to the proposed development is not a private interest to be weighed against the public interest in renewable energy. It is evidence that the public interest is not monolithic — and that a development which permanently industrialises a recovering heritage landscape, without demonstrating a net climate benefit, without consulting the community on alternatives, and in the face of sustained and documented opposition, may not serve the public interest in any meaningful sense.

7.0 Core Concern 5 — Regional Concentration, Just Transition, and Evolving National Policy

7.1 Disproportionate Concentration in County Offaly

Chapter 2 does not address the question of regional balance in the distribution of renewable energy infrastructure. This is a significant omission.

County Offaly has already made an exceptional contribution to Ireland's energy transition, both historically through commercial peat extraction and in the current period through the concentration of operational, approved, and proposed wind energy development. Offaly Independent reported in March 2026:

> *"Offaly is a leader in renewables — now other counties must step up"*

Source: https://www.offalyindependent.ie/2026/03/11/offaly-is-a-leader-in-renewables-now-other-counties-must-step-up/

That assessment is consistent with the views of elected representatives on Offaly County Council. At a meeting of the Council in April 2026, Councillor Masterson stated plainly:

> *"We have more than carried our weight when it comes to renewables."*

Source: https://www.offalyindependent.ie/2026/04/24/concerns-over-windfarms-impact-on-health-and-quality-of-life-raised-at-offaly-council-meeting/

These are not expressions of opposition to renewable energy. They are statements by democratically elected representatives of the affected county that the cumulative burden of infrastructure concentration has reached a level that requires recognition. The EIAR does not address whether County Offaly has the landscape capacity, environmental capacity, or community capacity to absorb further large-scale energy infrastructure at this scale. Chapter 2's silence on this question is a material deficiency.

The EU Just Transition Mechanism was specifically designed to support the Midlands transition in a manner that is fair, balanced, socially sustainable, economically diverse, and community-centred. It is submitted that the continued concentration of industrial-scale renewable infrastructure across Offaly, without a strategic assessment of cumulative regional capacity, is not consistent with the underlying purpose of Just Transition policy. A Just Transition should not result in one region carrying a disproportionate share of national infrastructure without equivalent strategic consideration of long-term environmental and social consequences.

7.2 Health and Quality of Life Concerns Formally Raised at Offaly County Council

At a meeting of Offaly County Council in April 2026, a motion was brought forward by Councillor Sean O'Brien calling for strict adherence to the Offaly County Development Plan and to the World Health Organisation 2018 Environmental Noise Guidelines, which are specifically designed to protect public health. The Council further called on its Chief Executive to ensure that all future reports to An Coimisiún Pleanála explicitly confirm compliance with those standards.

The WHO 2018 Environmental Noise Guidelines represent the current international evidence-based standard for protecting communities from the health effects of environmental noise. The fact that elected representatives of Offaly County Council found it necessary to pass a formal motion requiring explicit confirmation of compliance with those guidelines — in the context of wind energy development in the county — is a directly material consideration for this application.

Councillor O'Brien, who brought the motion, stated:

> *"There has to be a balance. It impacts tourism potential, the future rehabilitation of the peatlands, the visual and residential appeal of the area, and there is noise disturbance."*

Councillor Claire Murray added:

> *"The people of South Offaly are most impacted. Those standards are in place for a reason, to protect people. The number of windfarms here has caused stress to residents and impacted their quality of life."*

Source: https://www.offalyindependent.ie/2026/04/24/concerns-over-windfarms-impact-on-health-and-quality-of-life-raised-at-offaly-council-meeting/

These statements were made in April 2026 — one month before this planning observation was lodged. They represent the formally recorded position of elected representatives of the county within which this development is proposed, speaking specifically about the cumulative health and quality of life effects of wind energy development in Offaly.

It is submitted that these concerns carry material planning weight for three reasons. First, they are made by elected public representatives in a formal democratic forum — they are not anonymous objections. Second, they specifically invoke WHO noise standards, which are directly engaged by the EIAR's noise and human health assessment. Third, they speak to the cumulative burden on communities rather than any single development — which is precisely the cumulative assessment deficiency identified throughout this submission.

Chapter 2's reliance on general policy support for renewable energy does not answer health and quality of life concerns that have been formally placed on the public record by the elected representatives of the receiving county. The EIAR does not provide a thorough, receptor-specific, and integrated human health assessment adequate to address these concerns. That deficiency begins in Chapter 2 and runs throughout the document.

7.3 Evolving National Policy — Wind Energy Guidelines and Dáil Debates

Chapter 2 presents the current policy framework as settled and supportive of the proposed development. That characterisation requires significant qualification.

Updated national Wind Energy Development Guidelines — addressing turbine height, setback distances, noise standards, and landscape assessment — remain under development and have not yet been published. In a Dáil debate on 25 March 2026, in response to concerns raised by Deputy Brian Stanley regarding the scale and distribution of onshore wind development, Taoiseach Micheál Martin acknowledged:

> *"…when these guidelines emerge, they will probably lead to a reduction in the number of wind farms"*

The Taoiseach further indicated that:

> *"offshore is where we need to go now for the next decade"*

Source: https://www.oireachtas.ie/en/debates/debate/dail/2026-03-25/13/?highlight%5B0%5D=brian&highlight%5B1%5D=stanley

These are not opposition statements. They are statements by the head of government in the context of a national debate about the future of onshore wind energy policy. They are directly relevant to the assessment of this application for the following reasons:

- they confirm that national policy on the scale and distribution of onshore wind development is in active transition

- they indicate that updated guidelines, when published, may apply more restrictive criteria for developments of this scale in sensitive locations
- they signal a recognised policy shift toward offshore wind as the preferred large-scale renewable technology for the coming decade
- they raise a legitimate question as to whether the Commission should grant consent for a major onshore development in a sensitive peatland landscape in advance of updated guidance that may not permit it

It is submitted that in circumstances where national policy is in a period of acknowledged transition — and where the Taoiseach has publicly indicated that updated guidelines will likely reduce the number of onshore wind farms — a precautionary and plan-led approach is required. It is not appropriate to lock in permanent, large-scale, irreversible development in sensitive peatland landscapes in advance of that updated framework.

8.0 Summary of Key Deficiencies — EIAR Chapter 2

Core Concern	Deficiency in Chapter 2	Legal / Planning Consequence
Need vs Suitability	Chapter 2 conflates national renewable energy need with site-specific planning acceptability	Fundamental planning error; need is not a proxy for suitability at Lemanaghan Bog
Conservation Plan	Chapter 2 does not engage with the Lemanaghan Conservation Plan or demonstrate that the development is sympathetic to the significance of the site	Material omission; heritage framework for the site directly engaged
Alternatives	Peatland restoration, solar, reduced scale, and mineral soil alternatives not genuinely assessed	EIA Directive Article 5 breach; alternatives assessment legally deficient
Net Climate Benefit	Carbon cost of peat disturbance, hydrological alteration, and lost sequestration not quantified; curtailment risk not assessed	Climate justification undemonstrated; precautionary principle engaged
RED III / Public Interest	Overriding public interest invoked without acknowledging that public interest includes heritage, environment, and community wellbeing	Legal misapplication; RED III does not displace EIA or heritage obligations
Regional Concentration / Just Transition	Chapter 2 does not address the disproportionate concentration of renewable infrastructure in County Offaly or cumulative regional capacity	Just Transition principles not applied; SEA Directive concerns arise

Core Concern	Deficiency in Chapter 2	Legal / Planning Consequence
Evolving National Policy	Chapter 2 does not acknowledge that wind energy guidelines are under review and that Government policy is shifting toward offshore	Material consideration omitted; precautionary approach required

Fig. 1: Summary of key deficiencies identified in EIAR Chapter 2

9.0 Grounds for Refusal Arising from EIAR Chapter 2

The following grounds for refusal are submitted arising from the deficiencies identified in Chapter 2, whether considered independently or cumulatively with the grounds advanced in the principal Planning Observation and the Chapter 1 review:

Ground 1 — Failure to Demonstrate Site-Specific Suitability

Chapter 2 of the EIAR does not demonstrate that Lemanaghan Bog is an appropriate receiving environment for a development of this scale. The reliance on national renewable energy need as a proxy for site-specific suitability is a legal and planning error. The Commission is entitled to and required to assess this application on its site-specific merits. Chapter 2 does not provide an adequate basis for that assessment.

Ground 2 — Conflict with the Lemanaghan Conservation Plan and Deficient Alternatives Assessment

The failure to engage with the Lemanaghan Conservation Plan — the established heritage framework for the future use of this site — and the failure to genuinely assess peatland restoration, lower-impact renewable technologies, and reduced-scale alternatives, represents a material deficiency in the environmental assessment. The Commission cannot be satisfied that the chosen development option is environmentally justified where the alternatives have not been properly examined.

Ground 3 — Failure to Demonstrate Net Climate Benefit

The EIAR does not quantify the carbon cost of peat disturbance, hydrological alteration, and lost sequestration potential, and does not assess the impact of grid curtailment on projected climate benefits. The climate justification that is central to the planning case for the development is therefore not adequately demonstrated. In circumstances where the environmental costs would be permanent and immediate, reliance on uncertain future operational assumptions to establish climate benefit is not sufficient.

Ground 4 — Evolving National Policy and the Precautionary Principle

The Taoiseach's public statements in March 2026 regarding the likely effect of updated Wind Energy Development Guidelines, and the Government's indicated policy direction toward offshore wind energy, constitute material considerations which Chapter 2 does not address. In circumstances where national policy on onshore wind energy is in acknowledged transition and updated guidelines may be materially more restrictive, it is not appropriate to grant consent for permanent, large-scale, irreversible development in a sensitive peatland landscape in advance of that updated framework.

10.0 Conclusion

Lemanaghan Heritage & Conservation CLG supports climate action and renewable energy. The submissions above are not made in opposition to those objectives. They are made in support of a planning process that is lawful, complete, and capable of demonstrating that the chosen development option — at this scale, in this landscape — is genuinely the most appropriate response to the competing interests engaged.

Chapter 2 of the EIAR does not discharge that obligation. It substitutes policy assertion for site-specific assessment, invokes overriding public interest without adequately defining what that interest includes, fails to quantify the climate cost of what it proposes, and ignores an evolving national policy context that the head of government has publicly acknowledged will likely reduce onshore wind development.

The community's position is straightforward: Lemanaghan Bog has already made its contribution to the State's energy needs. It now presents an opportunity — recognised in the Heritage Council's Conservation Plan and in emerging climate policy — for restoration, carbon recovery, and heritage-sensitive sustainable use. That opportunity should not be foreclosed by a development that has not adequately demonstrated why it is the right choice for this site.

11.0 Key References

11.1 Legislation and EU Law

- Directive 2011/92/EU (EIA Directive, as amended by Directive 2014/52/EU)
- Directive (EU) 2023/2413 (RED III)
- Climate Action and Low Carbon Development (Amendment) Act 2021
- EU Nature Restoration Law 2024
- Offaly County Development Plan 2021–2027 and County Wind Energy Strategy
- European Union (Planning and Development) (Renewable Energy) Regulations 2025, S.I. No. 274 of 2025

11.2 Case Law

- Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5
- Holohan v An Bord Pleanála, Case C-461/17
- Commission v Ireland, Case C-215/06 (Derrybrien)

11.3 Policy and Heritage

- Lemanaghan Conservation Plan — Heritage Council, 2007
  - https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf
- National Peatlands Strategy — https://www.gov.ie/en/publication/9a9e2-national-peatlands-strategy/
- EirGrid & SONI, Annual Renewable Constraint and Curtailment Report 2024
  - https://cms.eirgrid.ie/sites/default/files/publications/Annual-Renewable-Constraint-and-Curtailment-Report-2024-V1.0.pdf

11.4 Parliamentary and Media Sources

- Dáil Éireann Debate, 25 March 2026 (Deputy Brian Stanley; Taoiseach Micheál Martin)
  - https://www.oireachtas.ie/en/debates/debate/dail/2026-03-25/13/
- Offaly Independent — Renewables concentration, March 2026

  - https://www.offalyindependent.ie/2026/03/11/offaly-is-a-leader-in-renewables-now-other-counties-must-step-up/
- Midlands 103 — Offaly TD raises concerns over wasted renewable energy
  - https://www.midlands103.com/news/midlands-news/offaly-td-raises-concerns-over-wasted-renewable-energy-in-the-midlands/
- Offaly Independent — Health concerns raised at Offaly County Council, April 2026
  - https://www.offalyindependent.ie/2026/04/24/concerns-over-windfarms-impact-on-health-and-quality-of-life-raised-at-offaly-council-meeting/

Section 3: EIAR CHAPTER 3 REVIEW

Site Selection and Reasonable Alternatives

Third Party Planning Observation

An Coimisiún Pleanála — Case Reference: PAX19.324161

15 no. Wind Turbines, 220kV On-Site Substation and Associated Infrastructure

1.0 Introduction

This submission addresses Chapter 3 (Site Selection and Reasonable Alternatives) of the Environmental Impact Assessment Report submitted in support of the proposed Lemanaghan Wind Farm (An Coimisiún Pleanála, Case Reference PAX19.324161).

Chapter 3 is a legally significant component of the EIAR. The obligation to assess reasonable alternatives is not procedural — it is a substantive requirement of EU environmental law under Article 5(1)(d) of Directive 2011/92/EU. Its purpose is to ensure that the competent authority can be satisfied that the chosen development option is environmentally justified, and that genuinely less harmful alternatives have been considered and rejected on proper environmental grounds — not simply on the basis of commercial preference or land ownership.

It is submitted that Chapter 3 does not meet that standard. The alternatives assessment is developer-led, commercially constrained, and fails to engage with the most significant environmental question before the Commission: whether peatland restoration at Lemanaghan would deliver superior environmental outcomes to the proposed development, and whether the Applicant has demonstrated why it would not. The assessment also materially mischaracterises the environmental sensitivity of the receiving environment, fails to acknowledge the ongoing discovery of archaeological resources, and relies upon a zoning designation whose evidential basis is demonstrably weak.

2.0 Legal Framework

The core legal obligation is contained in Article 5(1)(d) of Directive 2011/92/EU (as amended by Directive 2014/52/EU), which requires that an EIAR include:

> *"a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment."*

The CJEU has confirmed the legal content of this obligation in the following authorities:

- Case C-50/09 Commission v Ireland — the EIAR must identify, describe, and assess the direct and indirect effects of the project; a superficial treatment of alternatives does not satisfy this requirement
- Case C-461/17 Holohan and Others v An Bord Pleanála — information in the EIAR must be complete, precise, and definitive; where the assessment is incomplete, the competent authority may not lawfully reach a reasoned conclusion
- Case C-243/15 Lesoochranárske zoskupenie — public participation obligations require that alternatives be genuinely open at the point of consultation; a process that presents a single predetermined option does not satisfy Aarhus Convention requirements

The legal standard which flows from these authorities is that alternatives must be genuinely assessed, not merely listed and dismissed. The assessment must be objective — not constrained by the developer's land ownership, commercial programme, or predetermined development concept. And the reasons for the chosen option must be expressed by reference to environmental effects, not economic or engineering preference.

The obligation is reinforced in this case by the climate and peatland policy framework. The Climate Action and Low Carbon Development (Amendment) Act 2021 requires protection of carbon sinks as well as emissions reduction. The EU Nature Restoration Law 2024 and the National Peatlands Strategy identify peatland restoration as a positive environmental measure in its own right. In this context, the alternatives assessment must demonstrate not merely that wind energy is climate-beneficial, but that it is more climate-beneficial than the realistic alternative of peatland restoration — a case the EIAR does not make.

3.0 Core Concern 1 — Alternatives Assessment: Developer-Led, Commercially Constrained and Legally Deficient

3.1 Alternatives Constrained by Land Ownership and Commercial Feasibility

Chapter 3 of the EIAR limits the scope of the alternatives assessment by reference to factors including land availability, grid proximity, engineering feasibility, and commercial viability. It is submitted that this approach is legally inadequate.

The EIA Directive requires that alternatives be assessed by reference to their environmental effects. It does not permit the developer to pre-filter the alternatives pool to those that are commercially convenient before carrying out the environmental comparison. Where the developer owns the land, controls the grid connection, and has a commercial interest in wind energy development, restricting the alternatives assessment to options compatible with those commercial interests is precisely the outcome the Directive is designed to prevent.

The result is that Chapter 3 does not answer the question the law requires it to answer: is there a less environmentally harmful way of achieving the stated objectives — including the climate objectives relied upon in support of this application — that has not been adopted? The fact that peatland restoration, solar development on mineral soils, or a reduced-scale layout would not deliver the same commercial return to the developer is not a sufficient reason to exclude them from the comparative environmental assessment.

3.2 The 'Do-Nothing' Alternative: Restoration Not Assessed as a Positive Outcome

Chapter 3 presents the 'Do-Nothing' scenario as a negative baseline — the absence of renewable energy generation. That framing does not accurately reflect the environmental character of the do-nothing scenario on this site, and it produces an incomplete and unbalanced comparison.

On a peatland site subject to rehabilitation obligations, 'Do-Nothing' does not mean environmental stasis. It means active restoration: rewetting, drain-blocking, revegetation, carbon recovery, biodiversity gain, hydrological stabilisation, and protection of the archaeological and cultural landscape. These are not trivial side-effects — they are the primary objectives of national and EU peatland policy, including the National Peatlands Strategy and the EU Nature Restoration Law 2024.

The comparative environmental assessment must therefore address the following question directly: would peatland restoration at Lemanaghan, over the operational lifetime of the proposed wind farm, sequester more carbon, deliver greater biodiversity benefit, and better protect the archaeological and cultural landscape than the proposed development? Chapter 3 does not ask this question and does not answer it. That is a material deficiency under Article 5(1)(d) of the EIA Directive.

3.3 Alternative Technologies Not Environmentally Assessed

Chapter 3 refers to and dismisses solar and other renewable technologies as alternatives without providing a comparative environmental assessment. The dismissal appears to be based on commercial and engineering grounds — output capacity, land take, grid compatibility — rather than environmental effects.

Solar development, either on adjacent mineral soils or on peatland, would not require the scale of peat excavation, turbine foundations penetrating deep peat, or the extensive internal road infrastructure proposed here. It would not introduce 220-metre vertical structures into a flat, open, archaeologically sensitive landscape. It would not give rise to shadow flicker, blade movement, or the noise characteristics associated with large-scale turbines. These are environmental differences, not commercial ones, and they are required to be assessed.

The obligation under Article 5(1)(d) is not satisfied by noting that solar would generate less electricity on this site. It requires an explanation of why the greater environmental harm associated with the chosen option is justified by reference to the environmental benefits it delivers compared to the alternatives. No such explanation is provided in Chapter 3.

3.4 Carbon Alternatives: A Material Assessment Gap

Chapter 3 does not provide a comparative assessment of the carbon implications of the alternatives. This is a direct legal deficiency in the context of an application that is justified primarily on climate grounds.

The alternatives assessment must include, at minimum, a comparative assessment of:

- the net carbon balance of the proposed wind farm, including peat excavation, drainage alteration, construction emissions, embedded carbon, and lost sequestration potential — against projected renewable generation and carbon displacement
- the net carbon balance of full peatland restoration — including carbon recovery from rewetting, long-term sequestration, and the avoided emissions from peat oxidation
- the net carbon balance of solar development on adjacent mineral soils, avoiding peat disturbance entirely
- a phased approach, prioritising restoration in the near term while transmission infrastructure develops, before committing to permanent industrial development

None of these comparisons are provided. Chapter 3 presents the proposed wind farm as a climate solution without quantifying the climate cost of what is being displaced. In circumstances where the entire planning justification rests on a claimed net climate benefit, the failure to carry out this comparison is not a gap in the assessment — it is the gap at the centre of the case.

4.0 Core Concern 2 — Mischaracterisation of Environmental Sensitivity

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4.1 The EIAR's Classification of the Site as Low Sensitivity

Chapter 3 of the EIAR proceeds on a characterisation of the site as being of low environmental sensitivity, in part by reference to its industrial history of peat extraction. It is submitted that this characterisation is not supported by the available evidence and is fundamentally inconsistent with the established heritage, archaeological, and cultural significance of Lemanaghan.

> **Prior industrial damage to a landscape does not reduce its environmental sensitivity for planning purposes. On a peatland site, the history of extraction is precisely why restoration potential and heritage protection are at their most significant.**



Fig. 1: Aerial view of Mella's Cell enclosure (lower centre) — the site of the 2025 State archaeological discovery — within the wider agricultural and peatland landscape at Lemanaghan, Co. Offaly. The cutaway bog, visible in the background, forms part of the proposed development site. The openness and flatness of the landscape demonstrates its exposure to large-scale development. Photography: Kevin O'Dwyer, reproduced with permission.

4.2 The Lemanaghan Conservation Plan — The Governing Heritage Framework

The Lemanaghan Conservation Plan (Heritage Council, 2007) is the authoritative, site-specific heritage assessment of this landscape. It was prepared under the auspices of the Heritage Council in partnership with the local community, Offaly County Council, and State heritage bodies. It is not a general policy document — it is the established framework for the future use of this specific site.

The Conservation Plan identifies Lemanaghan as:

> *"a landscape of outstanding significance, combining archaeological, historical, ecological and spiritual values."*

On the question of future land use, the Conservation Plan is explicit:

> *"it is important that the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."*

Source: Lemanaghan Conservation Plan, Heritage Council, 2007 — https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

A wind farm comprising 15 turbines of 220 metres, a 220kV substation compound, transmission towers, crane hardstands, borrow pits, and an internal road network is not assessed in Chapter 3 against this standard. The question of whether this scale of permanent industrial development is sympathetic to the significance of the site — as the Conservation Plan requires — is not addressed. That is a material omission in an alternatives assessment that should identify this framework as the primary heritage constraint on site selection.

4.3 National and Independent Recognition of Significance — Including the Slí Mór

The significance of Lemanaghan extends well beyond local heritage policy. Independent historical analysis states:

> *"there are few places in Ireland of more historic importance than Lemanaghan"*

The same source confirms that the bog is criss-crossed with ancient toghers and contains extensive archaeological remains, many of which have not been fully recorded or assessed.

Source: Offaly History Blog, October 2023 — https://offalyhistoryblog.com/2023/10/25/bogs-turbines-and-toghers-what-will-be-the-fate-of-lemanaghan-is-it-next-by-a-special-corridor/

Lemanaghan is also recognised as a seventh-century monastic settlement, a site of active pilgrimage, and a location of enduring cultural and spiritual importance.

Source: Discover Ireland — Lemanaghan Monastic Site — https://www.discoverireland.ie/offaly/lemanaghan-monastic-site

A particularly significant feature of this heritage landscape — one that is not assessed in Chapter 3 — is the Slí Mór, the ancient pilgrim route connecting the monastic complex at Lemanaghan, including Mella's Cell, to Clonmacnoise, one of Ireland's most important and internationally recognised early Christian sites. The Slí Mór crosses the bog via a stone-lined causeway (togher) that has been in use for centuries and is documented in the archaeological record as a physical expression of the ongoing relationship between these two monastic centres. This connection is not a matter of historical abstraction. It is a physically extant and archaeologically documented feature of the receiving environment, visible from the air, and directly relevant to the assessment of heritage sensitivity in Chapter 3.



Fig. 2: Aerial view of Lemanaghan Bog showing the stone-lined Slí Mór causeway — the ancient pilgrim path connecting the Lemanaghan monastic complex to Clonmacnoise — visible as the diagonal vegetated strip running through the cutaway peatland. The rural settlement landscape is visible on the right horizon. Photography: Kevin O'Dwyer, reproduced with permission.

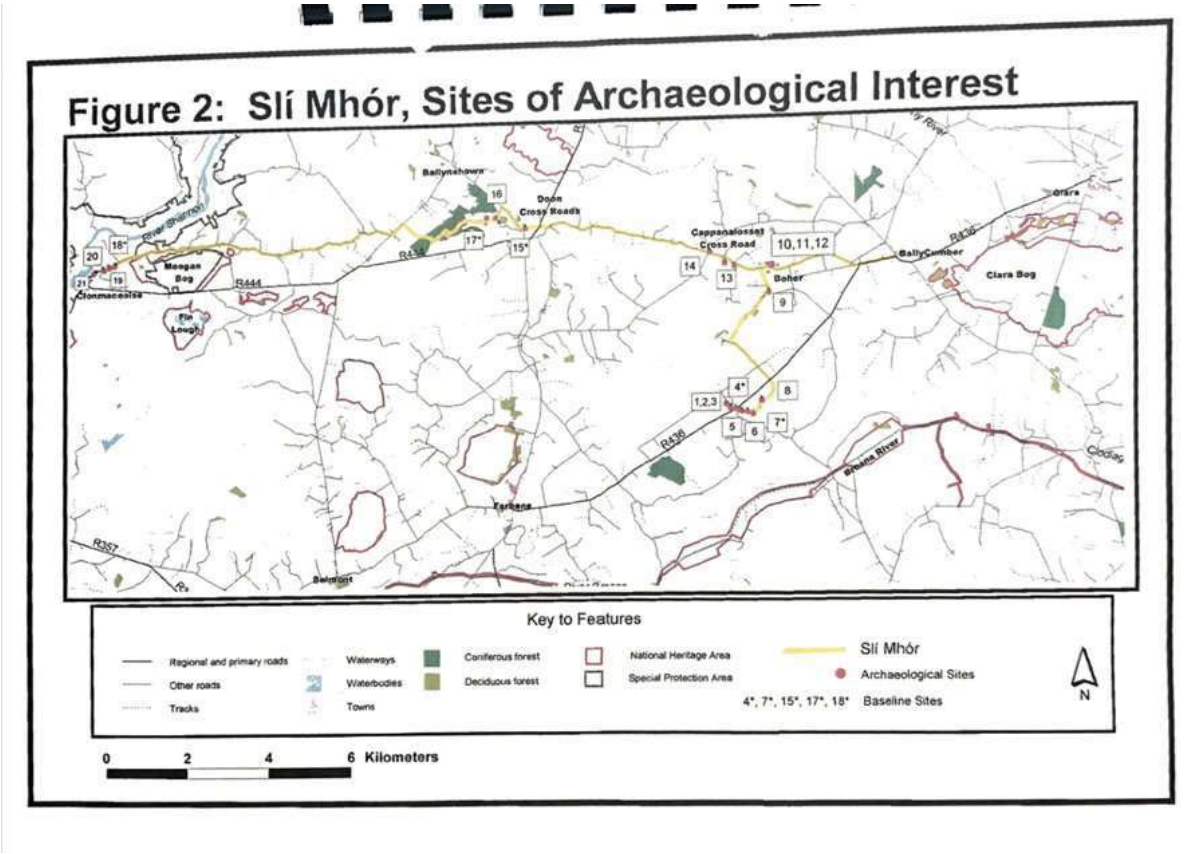


Fig. 3: 'Slí Mhór, Sites of Archaeological Interest' — Heritage Council commissioned mapping showing the Slí Mhór route (yellow) running from Clonmacnoise (left) eastward, crossing the R436 and continuing through Lemanaghan Bog, with archaeological sites marked in red along the route. Source: Tubridy, M. and Associates (1999), Slí Mhór Baseline Study: The Heritage Council Pilgrim Path Project, Dublin, p. 6. Reproduced for the purposes of this planning submission.

The Community Wetlands Forum describes the wider landscape as:

> *"shaped by wetlands, bog and floodplains... the approach to the site from all directions is defined by this wetland environment"*

Source: Community Wetlands Forum — https://communitywetlandsforum.ie/lemanaghan-bog-the-road-is-rising-to-meet-us/

Research by the UCD Just Transition Research Group confirms that Lemanaghan Bog is actively used by the community and provides significant wellbeing and social value.

Source: UCD Just Transition Research Group — https://jtrg.ucd.ie/meaning-making-and-embracing-change-in-the-midlands/

The Community Wetlands Forum's Peatland People report (2025) further identifies peatlands as cultural and ecological assets requiring stewardship — directly relevant to the assessment of alternative land uses at this site.

Source: Community Wetlands Forum — Peatland People, 2025 — https://communitywetlandsforum.ie/wp-content/uploads/2025/04/peatland_people.pdf

Collectively, this body of evidence — from State heritage bodies, national media, academic research, and community documentation — demonstrates that the classification of Lemanaghan as a site of low environmental sensitivity is not defensible. The Slí Mór alone, connecting two of Ireland's most significant early Christian monastic sites across a physically extant stone causeway through this bog, is sufficient to establish that the heritage sensitivity of the

receiving environment has been materially underassessed in Chapter 3. It represents a fundamental error in the baseline from which the alternatives assessment proceeds.

4.4 A Previously Unknown Early Christian Burial Ground: Failure to Update the Archaeological Baseline

On 24 January 2025, Storm Éowyn uprooted four mature trees within the enclosure of Mella's Cell at Lemanaghan monastery, exposing previously unknown human remains. This planning application was submitted on 27 March 2026 — fourteen months later. The EIAR does not reflect this discovery.

This is not a case where a discovery was made after the application was submitted and the Applicant had no opportunity to respond. The timeline makes the position clear:

- January 2025: Storm Éowyn exposes human remains; National Monuments Service, National Museum of Ireland, and Offaly County Council's Heritage Officer attend the site
- June–July 2025: Phase 1 archaeological recording and monitoring completed under licence 25E0558
- October 2025: Full rescue excavation completed; four articulated early Christian burials excavated, minimum 13 individuals identified, carbon-dated to 662–939 cal AD
- January 2026: The first anniversary of the discovery receives extensive coverage in national media including RTÉ News, the Irish Times, Irish Independent, and Irish Examiner; over 50 locals attend a ceremony at Mella's Cell
- 27 March 2026: This planning application is submitted
- 4 April 2026: Final archaeological report (Licence 25E0558) completed by the Irish Heritage School for the National Monuments Service and Offaly County Council

> **The Applicant submitted this application two months after the discovery received extensive national media coverage on its first anniversary, and five months after the State-funded rescue excavation had been completed. The EIAR baseline does not reflect any of this. In circumstances where this information was a matter of public record, national media reporting, and formal State archaeological documentation before the application was lodged, it is submitted that the EIAR does not provide the complete and reliable baseline that the EIA Directive requires.**

The formal archaeological report establishes the following facts, which the EIAR's Chapter 3 does not address:

- On 24 January 2025, Storm Éowyn felled four mature trees within the enclosure of Mella's Cell at Lemanaghan monastery. Their uprooting exposed human remains in three internal root plates.
- The National Monuments Service (NMS), the National Museum of Ireland (NMI), and Offaly County Council's Heritage Officer were immediately notified and attended the site. The NMS's in-house archaeologist and osteoarchaeologist, Dr Linda Lynch, confirmed the presence of remains of multiple individuals.
- A rescue excavation was commissioned and funded by the NMS under Archaeological Licence 25E0558. The excavation was carried out from 11–16 October 2025 by a specialist team including a licensed director and a human osteoarchaeologist.
- Four articulated burials were fully excavated and documented. A minimum of 13 individuals was established from the full assemblage, including adults, three juveniles, and one adolescent.
- Radiocarbon dating establishes that Burial 1 dates to 662–817 cal AD and Burial 3 dates to 707–939 cal AD — placing the burial ground firmly in the early Christian period, directly contemporaneous with the foundation of St Manchán's monastery at Lemanaghan.
- The report explicitly confirms: 'there was no existing historical evidence or local knowledge of a burial ground at Mella's Cell.' This was a completely unknown burial site before January 2025.
- No confirmed male burials were identified, which the excavation report notes supports the long-argued interpretation of Mella's Cell as a nunnery, making Lemanaghan one of only a handful of female monastic sites in Ireland with extant built heritage, comparable to Clonmacnoise and Glendalough.

- The report confirms that Mella's Cell is 'the only largely unaltered early medieval oratory in County Offaly' and sits within a wider complex described as one of twelve major monastic sites in the county.

Source: Dr Denis Shine and Dr Annamaria Diana, Excavations at 'Mella's Cell' Lemanaghan, County Offaly, Archaeological Licence 25E0558, Irish Heritage School, April 2026 (prepared for National Monuments Service and Offaly County Council)

The legal significance of this report for the Commission's assessment of Chapter 3 is direct.

The discovery, the State-funded rescue excavation, and its findings were a matter of public record, national media coverage, and formal archaeological documentation before this application was submitted. The existence of a completely unknown early Christian burial ground containing a minimum of 13 individuals, carbon-dated to the seventh to tenth centuries, was nationally reported in January 2025 and again in January 2026. A competent environmental assessment process should have reflected this material. The EIAR does not.

An EIAR that does not reflect a State-funded rescue excavation confirming the existence of a previously unknown early Christian burial ground at the proposed development site — where that excavation was completed five months before the application was submitted and its findings received extensive national media coverage — does not provide the Commission with the complete, precise, and reliable information required by Holohan and Article 5 of the EIA Directive. The incompleteness cannot be attributed to a lack of available information. The information was publicly available, formally documented, and nationally reported.

The Commission is therefore being asked to assess this application's site selection and alternatives assessment on an archaeological baseline that does not reflect material new information about the heritage significance of the receiving environment. That is not a basis on which a lawful reasoned conclusion can be reached under Article 8a of the EIA Directive. The Commission should require the Applicant to submit a full updated archaeological assessment incorporating the findings of the 2025 rescue excavation before any positive decision is contemplated.

5.0 Core Concern 3 — Landscape, Setting and Physical Impact Not Adequately Assessed

5.1 Internal Inconsistency in the EIAR

It is submitted that Chapter 3 contains a material internal inconsistency: it asserts that significant landscape and visual impacts have been avoided through the site selection process, while other parts of the EIAR acknowledge moderate and significant adverse effects on landscape character and visual amenity. A site selection chapter that asserts impacts are avoided, where the EIAR as a whole identifies significant residual effects, does not provide a reliable basis for the alternatives assessment.

An alternatives assessment must accurately reflect what the chosen option involves. Where significant adverse effects are identified in other chapters, the alternatives assessment cannot be framed as if those effects have been resolved at design stage. The discrepancy between Chapter 3's characterisation and the EIAR's findings elsewhere is a matter the Commission is entitled to weigh in assessing the reliability of the site selection case.

5.2 Landscape Character — An Open Peatland Setting

The landscape character of Lemanaghan is defined by its openness, flatness, and long-range intervisibility. These are not incidental features — they are the direct result of the bog environment and are precisely the conditions that make the setting of the monastic landscape significant.

In an open bog landscape, turbines of 220 metres would dominate the skyline, interrupt long-distance views, and fundamentally alter the experience of approaching the site from all directions. The absence of natural screening — which might mitigate visual impact in a wooded or hilly landscape — means that the receiving environment is maximally exposed to the proposed development. Chapter 3 does not adequately address this. It does not assess how the scale of the proposed turbines interacts with the specific landscape character of an open, flat, visually connected bog — a character that is itself a heritage asset and part of the significance of the site.

5.3 Physical Impact on Peatland

Wind farm construction on peatland involves a scale of physical intervention that is qualitatively different from development on mineral soils. Independent commentary on wind farm construction in peatland environments has described the impact in stark terms:

> *"enormous destruction and disruption"*

Source: Offaly History Blog, October 2023 — https://offalyhistoryblog.com/2023/10/25/bogs-turbines-and-toghers-what-will-be-the-fate-of-lemanaghan-is-it-next-by-a-special-correspondent/

The proposed development includes: turbine foundations penetrating deep peat; construction of internal access roads requiring excavation and peat displacement; borrow pits for construction material; drainage alteration and water management infrastructure; and a 220kV substation compound with permanent hardstanding. These are not reversible interventions. They represent a permanent physical transformation of the peatland that cannot be undone if the development proves environmentally unacceptable in practice.

Chapter 3 does not provide a meaningful comparative assessment of the physical impact implications of the chosen option against the alternatives. The distinction between a development involving extensive peat excavation and a restoration scenario involving drain-blocking and rewetting is the most significant physical difference between the options — and it is not addressed.

6.0 Core Concern 4 — The Zoning Designation: Concerns as to Evidential Weight

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6.1 The EIAR's Reliance on Zoning

Chapter 3 relies in part on the designation of lands at Lemanaghan as 'Open to Consideration for Wind Energy' in the Offaly County Development Plan 2021–2027. It is not submitted that this zoning is legally invalid. However, it is submitted that the Commission should attach limited weight to this designation, having regard to the concerns set out below regarding the process by which it was adopted and the evidential basis on which it rests.

> **It is a fundamental principle that the evidential basis for a planning designation is relevant to the weight to be attached to it in assessing individual applications. A designation unsupported by specialist environmental assessment does not carry the same weight as one that is.**

6.2 Participation Concerns in the Development Plan Process

Documentary evidence contained at Appendix 2 to this submission demonstrates that members of the local community experienced material difficulty in identifying that Lemanaghan was included within the 'Open to Consideration' designation during the early stages of the Development Plan consultation process. Specific evidence demonstrates that:

- the area was not clearly identified or communicated during the initial consultation rounds
- members of the public were unaware of the inclusion of their local environment within the designation
- formal submissions, requests for meetings, and FOI requests were made by the community in an attempt to understand the basis and implications of the zoning

Public participation in any planning process must be effective in practice, not merely available in theory. It is submitted that a consultation process in which affected residents are not aware that their local landscape has been designated as 'Open to Consideration for Wind Energy' raises serious concerns regarding whether participation was effective in practice — regardless of whether the process was technically compliant with the statutory requirements governing the Development Plan process. The principles of meaningful participation under the Aarhus Convention require that affected communities have a genuine opportunity to engage, which presupposes that they are made aware of what is being proposed.

6.3 Volume of Submissions Once Awareness Increased

The documentary evidence demonstrates that once awareness of the designation increased within the community, in excess of 2,300 submissions were made in response. This figure is significant for two reasons.

First, it demonstrates the scale of community concern regarding the inclusion of this landscape within the wind energy designation — a level of concern that was not adequately captured in the earlier stages of the process. Second, it demonstrates that the earlier low level of engagement was a consequence of inadequate communication of the implications of the designation, not an absence of community concern. The volume of subsequent submissions, when the proposal was better understood, shows what effective public participation would have generated from the outset.

6.4 FOI Evidence — No Specialist Studies to Support the Designation

Significantly, Freedom of Information requests made by the community establish that no specialist environmental, archaeological, or heritage studies were commissioned by Offaly County Council to underpin the designation of Lemanaghan as 'Open to Consideration for Wind Energy.'

> **A zoning designation applied to a landscape described in the Offaly County Development Plan itself as 'highly sensitive to new developments', without the support of specialist environmental or heritage assessment, cannot be treated as a robust indicator of environmental acceptability.**

This FOI finding is directly material to the weight the Commission should attach to the zoning in its assessment. A designation that was not evidenced by specialist assessment at the time of its adoption cannot retrospectively provide the environmental justification for a major industrial development in a landscape of recognised heritage, archaeological, and ecological significance.

6.5 Internal Development Plan Inconsistency

A further concern arises from an internal inconsistency within the Offaly County Development Plan itself. The same Plan that designates the area 'Open to Consideration for Wind Energy' also identifies it as 'highly sensitive to new developments.' This inconsistency has not been resolved within the Development Plan, and it is not addressed in Chapter 3 of the EIAR.

Where a development plan contains an internal policy conflict of this kind, it is not appropriate for the EIAR simply to rely on the permissive designation without engaging with the restrictive one. The Commission is required to carry out its own assessment. It cannot defer to a zoning designation that is internally contradicted by the development plan in which it appears.

6.6 Overall Position on Zoning Weight

It is not submitted that the zoning designation invalidates this application or that it should be treated as legally void. The position advanced is more specific: having regard to the concerns regarding effective public participation in the designation process, the absence of specialist environmental or heritage studies underpinning the designation, the volume of community submissions once awareness increased, and the internal inconsistency within the Development Plan, the 'Open to Consideration' zoning designation should not be treated as a determinative or weighty indicator of the environmental acceptability of the proposed development at this location.

7.0 Core Concern 5 — Peat Fire Risk: A Documented Environmental Hazard Not Assessed

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This section is supported by the evidence summary at Appendix 3 to this submission, which contains documented evidence of peat fire events at Lemanaghan Bog and the wider Midlands peatlands. It is submitted that peat fire risk constitutes a material environmental consideration that has not been adequately assessed in Chapter 3 or elsewhere in the EIAR.

7.1 Peat Fire as a Known and Recurring Risk

Peat fire risk is not hypothetical at Lemanaghan. It is a documented and recurring environmental event supported by multiple independent sources:

- RTÉ News (2 May 2011) reported extensive peat fires across the Midlands, including Lemanaghan, with widespread smoke emissions and impacts across multiple counties
- Dáil Éireann debates (17 May 2011) confirm peat fire activity in County Offaly, the deployment of Bord na Móna personnel, and the scale of emergency response required — constituting official State acknowledgement of the risk
- The Tullamore Tribune (May 2011) confirms that residents were required to leave their homes due to heavy smoke, with up to 450 Bord na Móna staff and Offaly Fire Service personnel deployed
- Clarke, D. (2008), Brown Gold: A History of Bord na Móna, confirms that 'fires were inevitable in peat' and that prolonged firefighting operations were common in peat extraction environments
- A peat fire at Lemanaghan Bog in June 2023 demonstrates that fire risk persists under current post-extraction site conditions — it is not a risk confined to the industrial extraction era
- The Offaly Climate Change Adaptation Strategy 2019–2024 identifies peat and grassland fires as a recurring environmental risk within the region, constituting further official recognition

Peat fires are characterised by prolonged smouldering combustion, difficulty of extinguishment, and sustained release of fine particulate matter (PM2.5 and PM10), carbon emissions (CO_2), and organic material into drainage systems. These are not minor environmental disturbances — they are significant events with documented consequences for air quality, water quality, human health, and climate.

7.2 Relevance to the EIAR and Site Selection

The relevance of peat fire risk to Chapter 3 is direct. An alternatives assessment that does not acknowledge the environmental risks associated with the chosen option — including the interaction between construction activity, drainage alteration, peat drying, and fire risk — cannot provide a complete comparative basis for the site selection decision.

The proposed development involves extensive drainage works, peat excavation, and alteration of hydrological conditions across a large peatland area. These interventions may materially increase the vulnerability of the remaining peatland to fire by drying exposed peat, increasing access for machinery, and altering the hydrological conditions that provide natural fire suppression in intact bog environments. The EIAR does not assess this interaction.

The failure to assess peat fire risk has consequences for multiple chapters of the EIAR — air quality (Chapter 10), hydrology and water quality (Chapter 9), and human health (Chapter 5) — as well as for the alternatives assessment in Chapter 3. A site that has experienced documented, large-scale, life-disrupting peat fires within the last fifteen years, and where a fire occurred as recently as 2023, requires a specific and precautionary assessment of how the proposed construction and drainage works may affect fire risk. That assessment has not been carried out.

8.0 Summary of Key Deficiencies — EIAR Chapter 3

Core Concern	Deficiency in Chapter 3	Legal / Planning Consequence
Alternatives assessment — developer-led	Alternatives filtered to those compatible with developer's land ownership and commercial	Article 5(1)(d) EIA Directive — alternatives must be genuine, objective, and environmentally assessed

Core Concern	Deficiency in Chapter 3	Legal / Planning Consequence
	programme; not assessed by reference to environmental effects	
'Do-Nothing' / restoration — misframed	Peatland restoration presented as a negative baseline rather than a positive environmental outcome with carbon, biodiversity, hydrological, and heritage benefits	Article 5(1)(d); EU Nature Restoration Law 2024; National Peatlands Strategy — restoration is a climate measure in its own right
Alternative technologies — not environmentally assessed	Solar and other technologies dismissed on commercial/engineering grounds without comparative environmental assessment of heritage, landscape, or peat disturbance implications	Article 5(1)(d) — reasons for chosen option must reference environmental effects, not commercial preference
Carbon alternatives — gap at centre of climate case	No comparative assessment of net carbon balance across options, including peat disturbance costs, lost sequestration, and restoration alternative	Climate Action and Low Carbon Development (Amendment) Act 2021; EIA Directive — climate justification requires complete carbon accounting
Environmental sensitivity mischaracterised	Site classified as low sensitivity despite Conservation Plan, Slí Mór pilgrim causeway connecting Lemanaghan to Clonmacnoise, active pilgrimage use, ongoing archaeological discovery, and national heritage recognition	Article 5 EIA Directive; Holohan — assessment must be based on complete and reliable information; Wells
Archaeological baseline — materially incomplete at time of submission	Formal State rescue excavation (Licence 25E0558, NMS-funded) at Mella's Cell revealed a completely unknown early Christian burial ground: minimum 13 individuals, 4 articulated burials, carbon-dated 662–939 cal AD. Final report dated 4 April 2026 — 8 days after application submitted 27 March 2026. EIAR baseline cannot reflect this.	Holohan — complete, precise and definitive information required; Wells — assessment must be based on reliable information prior to consent; Mella's Cell is the only unaltered early medieval oratory in County Offaly
Landscape impact — internal inconsistency	Chapter 3 asserts impacts avoided; other EIAR chapters acknowledge moderate and significant adverse landscape and visual effects	Article 5 EIA Directive — consistent and reliable information required throughout
Zoning designation — limited evidential weight	FOI evidence shows no specialist environmental or heritage studies supported the 'Open to Consideration' designation; 2,300+	Planning and Development Act 2000 — weight of designation depends on quality of its evidential basis; Aarhus

Core Concern	Deficiency in Chapter 3	Legal / Planning Consequence
	submissions made once community understood the implications	Convention — effective participation
Peat fire risk — not assessed	Documented and recurring peat fire events at Lemanaghan (2011, 2023), State-acknowledged risk, interaction with proposed drainage and construction works not evaluated	Article 3 EIA Directive — major accident and natural disaster risk; Annex IV; Chapter 10 (air quality) and Chapter 9 (hydrology) assessment consequences

Fig. 1: Summary of principal deficiencies in EIAR Chapter 3 — Site Selection and Alternatives

9.0 Grounds for Refusal Arising from EIAR Chapter 3

The following grounds for refusal arise from the deficiencies identified in Chapter 3, whether considered individually or cumulatively with the grounds advanced in the principal Planning Observation and in the Chapter 1, 2, and 5 reviews:

Ground 1 — Failure to Provide a Lawful Assessment of Reasonable Alternatives

Chapter 3 does not comply with Article 5(1)(d) of Directive 2011/92/EU. The alternatives assessment is constrained by the developer's land ownership, commercial programme, and predetermined development concept. Alternatives have been filtered by commercial feasibility before being submitted to environmental comparison. The reasons given for rejecting alternatives are expressed in engineering and economic terms, not environmental terms. In these circumstances, the Commission cannot be satisfied that the chosen development option is the least environmentally harmful way of meeting the stated objectives, and may not lawfully rely on Chapter 3 as a satisfactory alternatives assessment.

Ground 2 — Failure to Assess Peatland Restoration as a Positive Environmental Alternative

The EIAR does not carry out a comparative assessment of peatland restoration as an alternative to the proposed development. Restoration — including rewetting, carbon recovery, biodiversity gain, and hydrological stabilisation — is not a 'do-nothing' scenario on this site. It is a positive environmental outcome that would deliver measurable benefits against the same climate, biodiversity, and heritage objectives that the proposed development claims to advance. The failure to assess it on those terms is a material deficiency under Article 5(1)(d) and in the context of the Climate Action and Low Carbon Development (Amendment) Act 2021.

Ground 3 — Mischaracterisation of Environmental Sensitivity and Materially Incomplete Archaeological Baseline

Chapter 3 mischaracterises the environmental sensitivity of the receiving environment. The site is not of low significance — it is a landscape of outstanding significance, as the Heritage Council's Conservation Plan states. Critically, the archaeological baseline relied upon in Chapter 3 was materially incomplete at the time this application was submitted. A formal State rescue excavation under Archaeological Licence 25E0558, commissioned and funded by the National Monuments Service, was conducted at Mella's Cell from October 2025. It revealed a completely unknown early Christian burial ground containing a minimum of 13 individuals, with four articulated burials carbon-dated to 662–817 cal AD and 707–939 cal AD. There was no prior historical evidence or local knowledge of this burial ground. The final archaeological report was dated 4 April 2026 — eight days after this application was submitted on 27 March 2026. Mella's Cell is confirmed as the only largely unaltered early medieval oratory in County Offaly and

part of one of only a handful of female monastic sites in Ireland with extant built heritage. The EIAR cannot have incorporated any of this. In circumstances where the State's own archaeological institutions conducted a rescue excavation revealing a nationally significant and completely unknown early Christian burial ground within the planning process timeline, the Commission cannot be satisfied that the alternatives assessment provides the complete and reliable information required by Holohan before a reasoned conclusion can lawfully be reached.

Ground 4 — Failure to Engage with the Lemanaghan Conservation Plan

The Lemanaghan Conservation Plan is the established, authoritative framework for the future use of this site. It requires that post-industrial uses be sympathetic to the significance of the landscape. Chapter 3 does not assess the proposed development or the alternatives against this standard. A development of this scale and permanence cannot be found to be sympathetic to a landscape of outstanding cultural, archaeological, and spiritual significance without that question being directly and substantively addressed. It has not been.

Ground 5 — Zoning Designation Should Carry Limited Weight

The 'Open to Consideration for Wind Energy' designation in the Offaly County Development Plan should not be relied upon as a determinative indicator of environmental acceptability. It was adopted without the support of specialist environmental or heritage studies. It is internally contradicted by the Development Plan's own characterisation of the area as 'highly sensitive to new developments.' And it was adopted through a participation process in which, as the evidence demonstrates, significant numbers of directly affected residents were unaware of the designation until after its adoption. The Commission's obligation is to carry out its own assessment — it cannot adopt a zoning designation as a substitute for that assessment.

Ground 6 — Peat Fire Risk: Material Assessment Omission

Peat fire risk at Lemanaghan is not theoretical. It is a documented, recurring, and officially acknowledged environmental hazard with demonstrated consequences for air quality, human health, water quality, and climate. The EIAR does not assess the interaction between the proposed construction and drainage works and peat fire risk, and does not evaluate this risk pathway in Chapter 3 or in the air quality and hydrology chapters. In circumstances where residents have been required to leave their homes due to peat fires within the last fifteen years, and where a fire occurred at this site as recently as 2023, this omission is not a minor gap — it is a failure to assess a foreseeable and material environmental risk.

10.0 Conclusion

Lemanaghan Heritage & Conservation CLG supports renewable energy and acknowledges Ireland's climate obligations. The submissions above are not made in opposition to those objectives. They are made in support of a lawful, complete, and transparent assessment process that genuinely tests whether the proposed development is the right response to those objectives at this location.

Chapter 3 of the EIAR does not provide that assessment. It presents a predetermined development concept, filters alternatives through a commercial lens, mischaracterises the significance of the receiving environment, and relies upon a zoning designation that was adopted without specialist support and was unknown to most of the affected community until after its adoption. It does not engage with the Lemanaghan Conservation Plan as the governing heritage framework for this site. It does not assess peatland restoration as a positive environmental alternative. And it does not provide the comparative carbon analysis that the climate justification for this development requires.

The community's position is clear. Lemanaghan is a landscape of exceptional and nationally recognised significance — archaeological, cultural, ecological, and spiritual. It deserves an assessment that takes that significance seriously. Chapter 3 does not provide one. Permission should be refused or, at minimum, the Commission should require a complete, independent, and genuinely comparative alternatives assessment before any positive decision is contemplated.

11.0 Key References

Legislation and EU Law

- Directive 2011/92/EU (EIA Directive, as amended by Directive 2014/52/EU), Article 5(1)(d)
  - https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0092
- Climate Action and Low Carbon Development (Amendment) Act 2021
- EU Nature Restoration Law 2024
- National Peatlands Strategy — https://www.gov.ie/en/publication/9a9e2-national-peatlands-strategy/
- Offaly County Development Plan 2021–2027 and County Wind Energy Strategy

Case Law

- Case C-50/09 Commission v Ireland — https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62009CJ0050
- Case C-461/17 Holohan and Others v An Bord Pleanála — https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62017CJ0461
- Case C-243/15 Lesoochranárske zoskupenie — https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62015CJ0243

Heritage and Policy

- Lemanaghan Conservation Plan, Heritage Council, 2007
  - https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf
- Offaly Climate Change Adaptation Strategy 2019–2024

Cultural, Archaeological and Landscape Sources

- Shine, D. and Diana, A. (2026), Excavations at 'Mella's Cell' Lemanaghan, County Offaly, Archaeological Licence 25E0558, Irish Heritage School Ltd, April 2026 (prepared for National Monuments Service and Offaly County Council)
- Tubridy, M. and Associates (1999), Slí Mhór Baseline Study: The Heritage Council Pilgrim Path Project, Dublin, June 1999
- Tóchar Wetlands Project — https://www.tocharwetlands.ie/community-stories/how-lemanaghan-bog-is-revealing-our-shared-past-today/
- Community Wetlands Forum — https://communitywetlandsforum.ie/lemanaghan-bog-the-road-is-rising-to-meet-us/
- Community Wetlands Forum — Peatland People (2025) — https://communitywetlandsforum.ie/wp-content/uploads/2025/04/peatland_people.pdf
- UCD Just Transition Research Group — https://jtrg.ucd.ie/meaning-making-and-embracing-change-in-the-midlands/
- Offaly History Blog, October 2023 — https://offalyhistoryblog.com/2023/10/25/bogs-turbines-and-toghers-what-will-be-the-fate-of-lemanaghan-is-it-next-by-a-special-correspondent/
- Discover Ireland — Lemanaghan Monastic Site — https://www.discoverireland.ie/offaly/lemanaghan-monastic-site
- Saint Manchan's Shrine — http://www.saint-manchans-shrine.com/lemanaghan.html

Peat Fire Evidence

- RTÉ News, 2 May 2011 — Bog fires across the Midlands

- Dáil Éireann Debates, 17 May 2011 — Peat fires, County Offaly
- Tullamore Tribune, May 2011 — Regional fire reporting
- Clarke, D. (2008), Brown Gold: A History of Bord na Móna, Gill & Macmillan, Dublin — pp. 303–304
- Lemanaghan Bog peat fire, 6 June 2023 — local incident records
- Offaly County Council — Bord na Móna fire caution, Offaly Independent, 19 April 2014

Section 3 ATTACHMENT

EIAR Chapter 3 Review

Chapter 3 ATTACHMENT 1

Zoning of Lemanaghan Bog — Community Participation, FOI Evidence and Correspondence

Purpose

This ATTACHMENT is submitted in support of Section 6 of this observation (Core Concern 4 — Zoning Designation: Concerns as to Evidential Weight). It provides documentary evidence relating to the inclusion of lands at Lemanaghan within the 'Open to Consideration for Wind Energy' designation in the Offaly County Development Plan 2021–2027, and raises concerns regarding the participation process by which that designation was adopted and the evidential basis upon which it rests.

It is not asserted that the zoning is legally invalid. The material is submitted for the purpose of demonstrating that the designation should not be treated as a determinative indicator of environmental acceptability, and that limited weight should be attached to it in the Commission's assessment of this application.

Contents of ATTACHMENT 1

- Correspondence submitted by members of the local community to Offaly County Council during the Development Plan preparation process, demonstrating difficulty in identifying that Lemanaghan was included within the wind energy designation at early stages
- Correspondence submitted to the Office of the Planning Regulator raising concerns about the designation process
- Freedom of Information request and response demonstrating that no specialist environmental, archaeological, or heritage studies were commissioned by Offaly County Council to underpin the designation of Lemanaghan as 'Open to Consideration for Wind Energy'
- ATTACHMENT relating to public consultation, submissions made, and awareness of the designation within the affected community

Key Points Demonstrated by this Material

The documentary evidence in this ATTACHMENT establishes the following:

- During the early stages of the Development Plan consultation, the inclusion of Lemanaghan within the 'Open to Consideration' designation was not clearly identified or communicated to members of the directly affected community
- Members of the public were unaware of the designation until relatively late in the Development Plan process; formal submissions, meeting requests, and FOI requests were made by the community in an attempt to understand the basis and implications of the zoning
- Once awareness of the designation increased within the community, in excess of 2,300 submissions were made — demonstrating that the earlier low level of engagement reflected inadequate communication of the implications of the designation, not an absence of community concern
- Freedom of Information responses confirm that no specialist environmental or heritage studies were commissioned by Offaly County Council to support the designation — a significant finding given that the same Development Plan identifies the area as 'highly sensitive to new developments'
- The designation is therefore internally inconsistent within the Development Plan and is unsupported by the specialist assessment that its application to a landscape of this recognised sensitivity would require

Relevance to Commission Assessment

This material is relevant to the Commission's assessment of Chapter 3 of the EIAR insofar as the Applicant relies on the 'Open to Consideration' designation as a material consideration in support of the site selection. It is submitted that this reliance is misplaced. A planning designation that was not evidenced by specialist environmental or heritage assessment at the time of its adoption, was unknown to a significant portion of the directly affected community during the early consultation process, and is internally contradicted by the Development Plan's own characterisation of the area as 'highly sensitive,' cannot serve as a reliable or weighty indicator of environmental acceptability for a development of this scale and permanence.

Chapter 3 ATTACHEMENT 2

Peat Fire Evidence Summary — Lemanaghan Bog, County Offaly

Purpose

This ATTACHMENT provides a summary of documented peat fire events at Lemanaghan Bog and the wider Midlands peatlands. It is submitted in support of Core Concern 5 (Section 7.0) and is directly relevant to the assessment of air quality impacts (EIAR Chapter 10), hydrological and water quality impacts (EIAR Chapter 9), and the alternatives assessment in Chapter 3.

It is submitted that peat fire risk at Lemanaghan is not a theoretical or speculative concern. It is a documented, recurring, and officially acknowledged environmental event with demonstrated consequences for air quality, human health, water quality, and climate. The EIAR does not adequately assess the interaction between the proposed construction and drainage works and this known risk.

Context — Peat Fires as an Environmental Risk

Peatlands are environments where fire risk is inherent, particularly under drained conditions. Ignition may arise from machinery, human activity, or spontaneous combustion in dry peat. Peat fires are characterised by prolonged smouldering combustion, extreme difficulty of extinguishment, and the sustained release of:

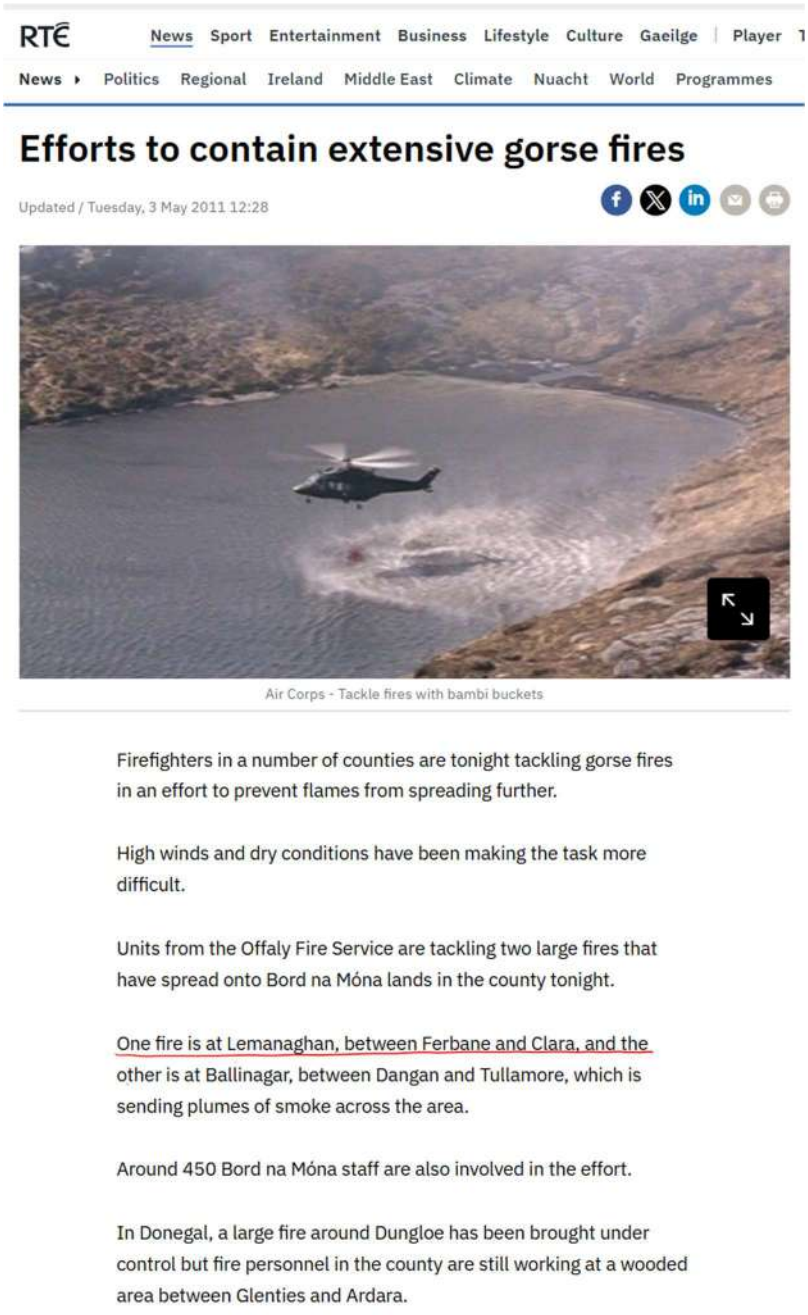
- fine particulate matter (PM2.5 and PM10) — a recognised human health risk
- carbon emissions (CO_2 and other greenhouse gases) — releasing stored peat carbon
- ash and organic material into drainage systems — affecting water quality in receiving waters

These characteristics mean that even a single peat fire event can have wide-ranging and prolonged environmental consequences, extending well beyond the immediate fire zone.

Documented Evidence of Peat Fires at Lemanaghan and the Midlands

Evidence 1 — RTÉ News (3 May 2011)

RTÉ News reported extensive fires across the Midlands on 3 May 2011. The report specifically names Lemanaghan: 'One fire is at Lemanaghan, between Ferbane and Clara.' Units from the Offaly Fire Service tackled the fires alongside approximately 450 Bord na Móna staff. This is national media documentation of a fire event at this specific location.



RTÉ News Sport Entertainment Business Lifestyle Culture Gaeilge | Player

News ▸ Politics Regional Ireland Middle East Climate Nuacht World Programmes

Efforts to contain extensive gorse fires

Updated / Tuesday, 3 May 2011 12:28

Air Corps - Tackle fires with bambi buckets

Firefighters in a number of counties are tonight tackling gorse fires in an effort to prevent flames from spreading further.

High winds and dry conditions have been making the task more difficult.

Units from the Offaly Fire Service are tackling two large fires that have spread onto Bord na Móna lands in the county tonight.

One fire is at Lemanaghan, between Ferbane and Clara, and the other is at Ballinagar, between Dangan and Tullamore, which is sending plumes of smoke across the area.

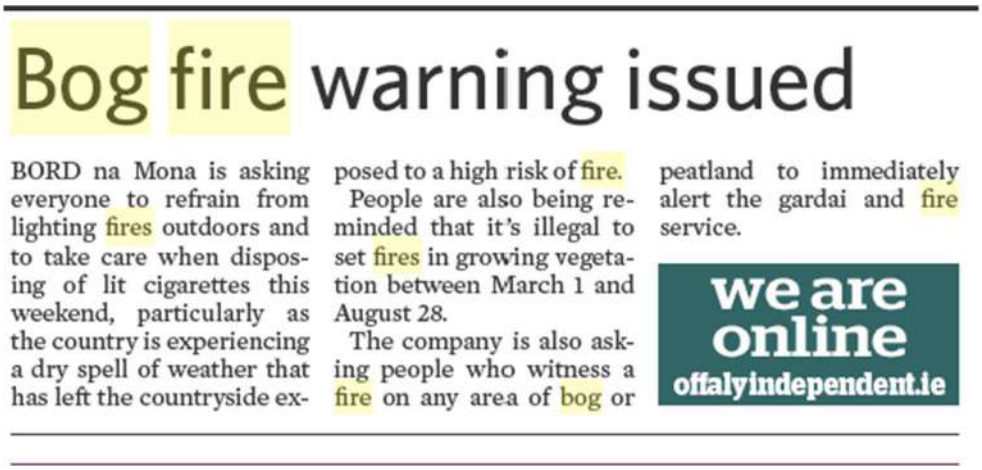
Around 450 Bord na Móna staff are also involved in the effort.

In Donegal, a large fire around Dungloe has been brought under control but fire personnel in the county are still working at a wooded area between Glenties and Ardara.

Evidence 1: RTÉ News, 3 May 2011 — 'Efforts to contain extensive gorse fires.' The report specifically identifies Lemanaghan, between Ferbane and Clara, as one of the fire locations.

Evidence 2 — Bord na Móna Bog Fire Warning, Offaly Independent (April 2014)

Bord na Móna issued a formal public caution regarding bog fires, as reported in the Offaly Independent. The notice warns the public not to light fires outdoors and instructs anyone who witnesses a fire on any area of bog or peatland to immediately alert the gardaí and fire service. This constitutes an official acknowledgement by the operator of the relevant peatlands of the persistent fire risk.



Bog fire warning issued

BORD na Mona is asking everyone to refrain from lighting fires outdoors and to take care when disposing of lit cigarettes this weekend, particularly as the country is experiencing a dry spell of weather that has left the countryside exposed to a high risk of fire.

People are also being reminded that it's illegal to set fires in growing vegetation between March 1 and August 28.

The company is also asking people who witness a fire on any area of bog or peatland to immediately alert the gardai and fire service.

we are online
offalyindependent.ie

Evidence 2: Offaly Independent — Bord na Móna bog fire warning notice, April 2014.

Evidence 3 — Tullamore Tribune: 'Bog Fires Rage Across Offaly' (May 2011)

The Tullamore Tribune reported that fires at Ballinagar and Ferbane were still active, that residents had to be evacuated due to smoke, and that up to 450 Bord na Móna staff and six units of the Offaly Fire Service were deployed. The fires had spread quickly due to dry weather and high winds and continued for multiple days. This is direct evidence of the human health and residential amenity consequences of peat fire events in this region.



Bog Fires Rage Across Offaly

By Camilla McLoughlin

EFFORTS were still underway this morning (Wednesday) to bring bog fires at Ballinagar, and Ferbane under control.

The fires broke out on Monday morning and due to the dry weather and windy conditions on Monday and Tuesday they quickly spread across vast areas.

A number of householders also had to be evacuated because of the smoke yesterday [(Tuesday).

Up to 450 Bord na Mona staff were deployed to help Offaly Fire service to extinguish the flames. Brian Purcell of Bord na Mona said the staff are expertly trained and qualified to help in the effort.

'We have big bulldozers and are putting in fire breakers to stop the fire spreading into public areas. We are also using the drainage system in the bog and pulling out wet muck which when thrown onto the flames puts them out straight away.'

Mr Purcell said he believed the fires spread from people burning gorse, but that in small instances it looked like they were started maliciously. Fire also spread to some private bog lands and set fire to turf piles.

Speaking to the Tullamore Tribune yesterday afternoon Brian Purcell said the next 24 to 48 hours would make a difference. He appealed to the public to be vigilant and to report all fires no matter how small.

Meanwhile Offaly Fire Service continued to deal with the bog fire in Ferbane. Up to six units battled the blaze from 10am on Monday morning until 2am on Tuesday morning and were back again later on Tuesday and are still there today.

A spokesperson for the fire service said the weather has been so dry that a cigarette butt or a glass bottle with the sun shining onto it could have started the fires.

As the bog fires raged Ballinagar and Tullamore were under a haze of smoke on Monday and Tuesday and the smell of fires burning could be detected all over.

The Irish Chief Fire Officers Association has described the outbreak of gorse, bog and forest fires throughout the country as 'unprecedented'.

They said 'many of the fires that broke out over the weekend have been controlled at this stage but efforts are continuing to contain other fires.

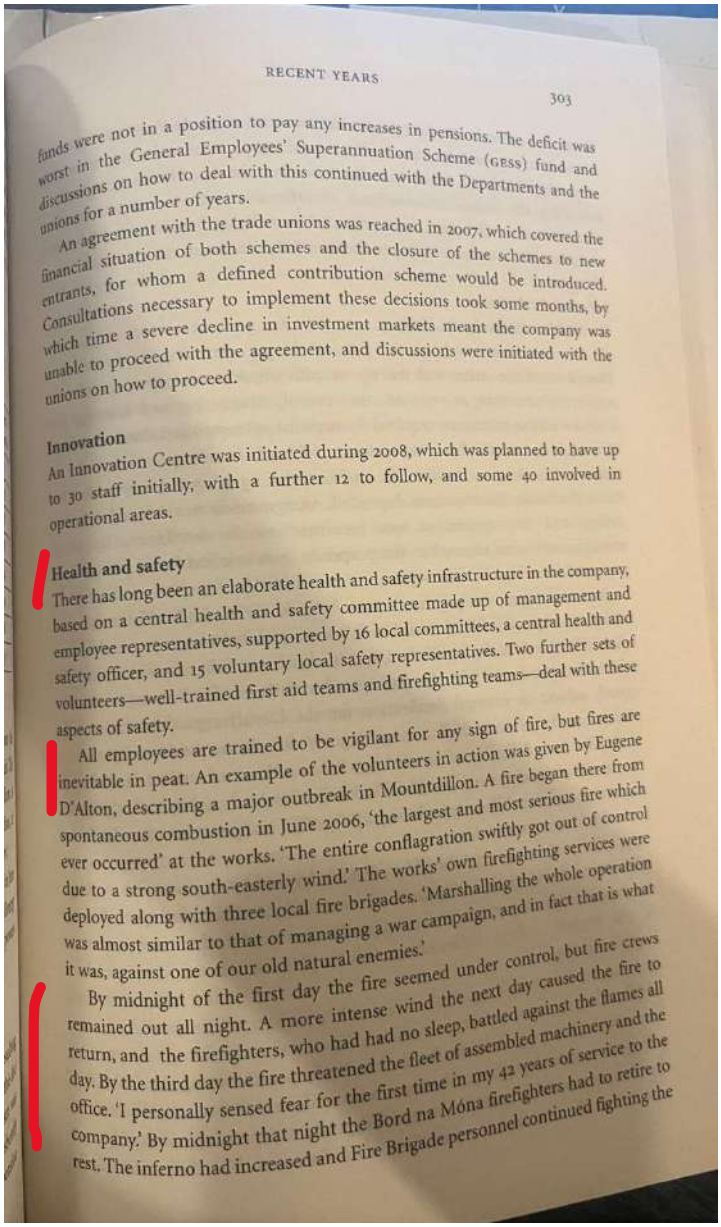
A combination of strong winds and the continuing dry conditions exacerbated the situation by causing fires to spread, particularly across Donegal.

The arrival of rain in affected areas over the next 48 hours will provide a significant boost to emergency services in tackling the continuing threat of fires.'

Evidence 3: Tullamore Tribune, May 2011 — 'Bog Fires Rage Across Offaly.' Residents evacuated; 450 Bord na Móna staff and Offaly Fire Service deployed.

Evidence 4 and 5 — Clarke (2008), Brown Gold: A History of Bord na Móna, pp. 303–304

Clarke, D. (2008), Brown Gold: A History of Bord na Móna and the Irish Peat Industry (Gill & Macmillan, Dublin), documents at pages 303–304 the fire risk inherent in peat environments. The text confirms that 'fires are inevitable in peat' and describes a major spontaneous combustion event at Mountdillon in June 2006 — described as 'the largest and most serious fire which ever occurred at the works.' The account confirms that the fire threatened the Corlea Heritage and Interpretative Centre and houses outside the bog, and that it 'took another week before all the fires were extinguished.' This historical evidence establishes that peat fire risk at midlands bog sites is not a rare or unexpected event but a known and recurring feature of the peat landscape.



RECENT YEARS

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funds were not in a position to pay any increases in pensions. The deficit was worst in the General Employees' Superannuation Scheme (GESS) fund and discussions on how to deal with this continued with the Departments and the unions for a number of years.

An agreement with the trade unions was reached in 2007, which covered the financial situation of both schemes and the closure of the schemes to new entrants, for whom a defined contribution scheme would be introduced. Consultations necessary to implement these decisions took some months, by which time a severe decline in investment markets meant the company was unable to proceed with the agreement, and discussions were initiated with the unions on how to proceed.

Innovation

An Innovation Centre was initiated during 2008, which was planned to have up to 30 staff initially, with a further 12 to follow, and some 40 involved in operational areas.

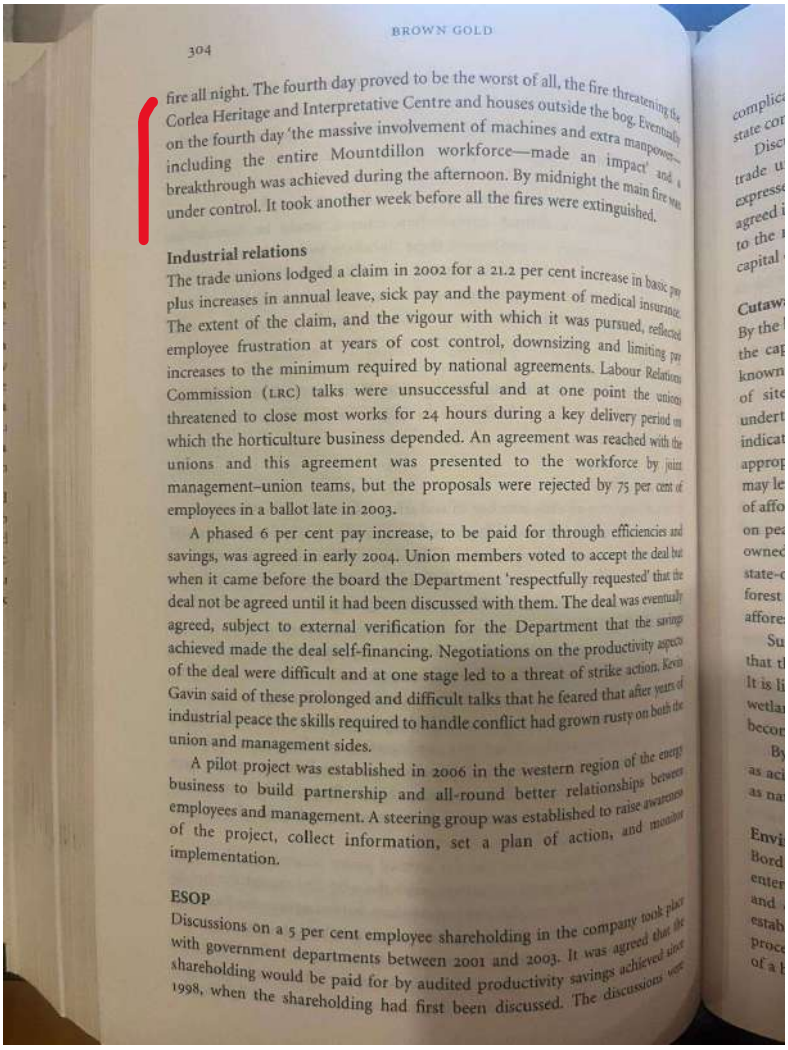
Health and safety

There has long been an elaborate health and safety infrastructure in the company, based on a central health and safety committee made up of management and employee representatives, supported by 16 local committees, a central health and safety officer, and 15 voluntary local safety representatives. Two further sets of volunteers—well-trained first aid teams and firefighting teams—deal with these aspects of safety.

All employees are trained to be vigilant for any sign of fire, but fires are inevitable in peat. An example of the volunteers in action was given by Eugene D'Alton, describing a major outbreak in Mountdillon. A fire began there from spontaneous combustion in June 2006, 'the largest and most serious fire which ever occurred' at the works. 'The entire conflagration swiftly got out of control due to a strong south-easterly wind.' The works' own firefighting services were deployed along with three local fire brigades. 'Marshalling the whole operation was almost similar to that of managing a war campaign, and in fact that is what it was, against one of our old natural enemies.'

By midnight of the first day the fire seemed under control, but fire crews remained out all night. A more intense wind the next day caused the fire to return, and the firefighters, who had had no sleep, battled against the flames all day. By the third day the fire threatened the fleet of assembled machinery and the office. 'I personally sensed fear for the first time in my 42 years of service to the company.' By midnight that night the Bord na Móna firefighters had to retire to rest. The inferno had increased and Fire Brigade personnel continued fighting the

Evidence 4: Clarke, D. (2008), Brown Gold: A History of Bord na Móna and the Irish Peat Industry, Gill & Macmillan, Dublin, p. 303. Health and Safety chapter confirming 'fires are inevitable in peat.'



BROWN GOLD

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fire all night. The fourth day proved to be the worst of all, the fire threatening the Corlea Heritage and Interpretative Centre and houses outside the bog. Eventually on the fourth day 'the massive involvement of machines and extra manpower—including the entire Mountdillon workforce—made an impact' and a breakthrough was achieved during the afternoon. By midnight the main fire was under control. It took another week before all the fires were extinguished.

Industrial relations

The trade unions lodged a claim in 2002 for a 21.2 per cent increase in basic pay plus increases in annual leave, sick pay and the payment of medical insurance. The extent of the claim, and the vigour with which it was pursued, reflected employee frustration at years of cost control, downsizing and limiting pay increases to the minimum required by national agreements. Labour Relations Commission (LRC) talks were unsuccessful and at one point the unions threatened to close most works for 24 hours during a key delivery period on which the horticulture business depended. An agreement was reached with the unions and this agreement was presented to the workforce by joint management–union teams, but the proposals were rejected by 75 per cent of employees in a ballot late in 2003.

A phased 6 per cent pay increase, to be paid for through efficiencies and savings, was agreed in early 2004. Union members voted to accept the deal but when it came before the board the Department 'respectfully requested' that the deal not be agreed until it had been discussed with them. The deal was eventually agreed, subject to external verification for the Department that the savings achieved made the deal self-financing. Negotiations on the productivity aspects of the deal were difficult and at one stage led to a threat of strike action. Kevin Gavin said of these prolonged and difficult talks that he feared that after years of industrial peace the skills required to handle conflict had grown rusty on both the union and management sides.

A pilot project was established in 2006 in the western region of the energy business to build partnership and all-round better relationships between employees and management. A steering group was established to raise awareness of the project, collect information, set a plan of action, and monitor implementation.

ESOP

Discussions on a 5 per cent employee shareholding in the company took place with government departments between 2001 and 2003. It was agreed that the shareholding would be paid for by audited productivity savings achieved since 1998, when the shareholding had first been discussed. The discussions were

Evidence 5: Clarke (2008), Brown Gold, p. 304. Continuation of fire account: fire threatened the Corlea Heritage Centre and houses, required a week to extinguish.

Evidence 6 — Lemanaghan Bog Fire, June 2023

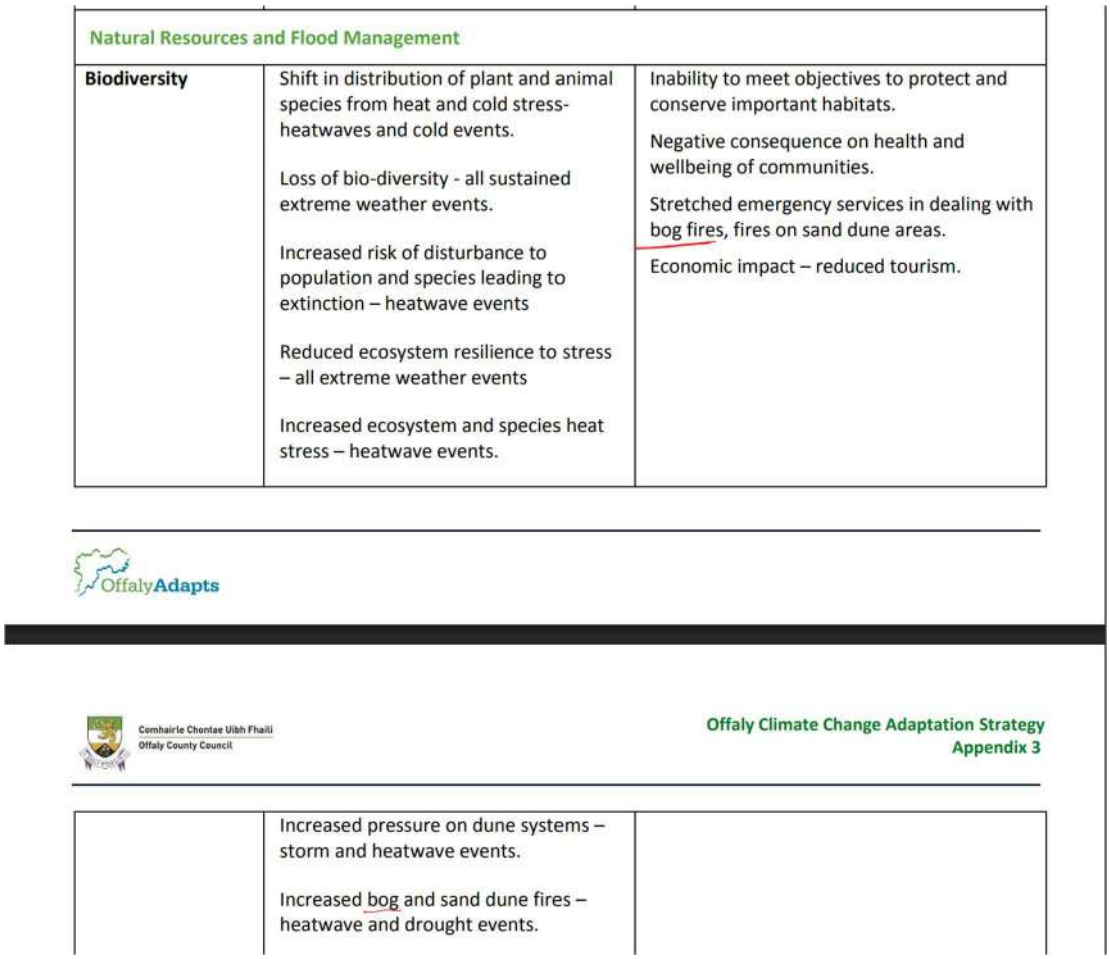
A peat fire at Lemanaghan Bog was recorded on 6 June 2023. The photograph below shows active flames and smoke on the bog. This evidence is of particular significance because it demonstrates that fire risk persists at this specific site under current post-extraction conditions — it is not a risk confined to the period of active industrial peat harvesting. The site was already in a transitional rehabilitation phase when this fire occurred. The proposed development would involve extensive further disturbance of peat and drainage alteration, which may increase rather than reduce the vulnerability of the remaining peatland to fire.



Evidence 6: Photograph of peat fire at Lemanaghan Bog, 6 June 2023. Active flames and smoke visible on the cutaway bog. Fire risk persists post-extraction under current site conditions.

Evidence 7 — Offaly Climate Change Adaptation Strategy 2019–2024

The Offaly Climate Change Adaptation Strategy 2019–2024, prepared by Offaly County Council, identifies 'increased bog and sand dune fires' and 'stretched emergency services in dealing with bog fires' as specific risks under the Natural Resources and Flood Management section. This constitutes formal, official recognition by Offaly County Council of peat and bog fire as a recurring environmental risk within the county. It reinforces that the EIAR's failure to assess fire risk as an interaction between the proposed development and the peatland environment is a deficiency in relation to a risk that the Council itself has formally identified.



Natural Resources and Flood Management		
Biodiversity	Shift in distribution of plant and animal species from heat and cold stress-heatwaves and cold events. Loss of bio-diversity - all sustained extreme weather events. Increased risk of disturbance to population and species leading to extinction – heatwave events Reduced ecosystem resilience to stress – all extreme weather events Increased ecosystem and species heat stress – heatwave events.	Inability to meet objectives to protect and conserve important habitats. Negative consequence on health and wellbeing of communities. Stretched emergency services in dealing with bog fires, fires on sand dune areas. Economic impact – reduced tourism.

Evidence 7: Extract from Offaly Climate Change Adaptation Strategy 2019–2024, Appendix 3. Identifies bog fires as a recurring environmental risk and notes 'stretched emergency services in dealing with bog fires' as a consequence.

Environmental Significance

The evidence above establishes that peat fires at Lemanaghan are not hypothetical, are not isolated events, and are a known and recurring environmental risk. These events give rise to:

Air Quality Impacts

- release of fine particulate matter (PM2.5) capable of causing respiratory health impacts at significant distances from the fire
- prolonged smoke exposure affecting residential amenity and human health across a wide area
- documented instances of residents being required to leave their homes

Climate and Carbon Impacts

- release of stored peat carbon accumulated over thousands of years
- contribution to greenhouse gas emissions contrary to climate mitigation objectives
- loss of peatland carbon sink function

Water Quality Impacts

- mobilisation of ash and organic material
- potential for sediment and pollutant transfer into drainage systems
- downstream impacts on receiving waters including the River Brosna catchment

Relevance to the Proposed Development and Chapter 3

It is submitted that the proposed development materially interacts with the peat fire risk identified above. The development involves extensive drainage works, peat excavation, and hydrological alteration across a large peatland area. These interventions may increase the vulnerability of the remaining peatland to fire by drying exposed peat surfaces, increasing machinery access across the bog, and altering the hydrological conditions that provide natural suppression in wetter bog environments.

An alternatives assessment that does not acknowledge this interaction — and does not assess whether less invasive alternatives would carry a lower fire risk profile — is incomplete. Chapter 3 does not address peat fire risk as a factor in the site selection or alternatives assessment. That is a material deficiency which is not remedied elsewhere in the EIAR.

This ATTACHMENT should be read in conjunction with the EIAR assessment of air quality (Chapter 10) and hydrology and water quality (Chapter 9), as it demonstrates an interaction between peatland condition, construction disturbance, fire risk, air emissions, and hydrological change that those chapters should but do not adequately address.

Key References for ATTACHMENT 2

- RTÉ News, 2 May 2011 — Bog fires across the Midlands
- Dáil Éireann Debates, 17 May 2011 — Peat fires, County Offaly
- Tullamore Tribune, May 2011 — Regional fire reporting, residents displaced
- Clarke, D. (2008), Brown Gold: A History of Bord na Móna and the Irish Peat Industry, Gill & Macmillan, Dublin, pp. 303–304
- Offaly Independent, 19 April 2014 — Bord na Móna fire caution
- Local incident records — Lemanaghan Bog peat fire, 6 June 2023
- Offaly Climate Change Adaptation Strategy 2019–2024 — peat and grassland fire risk, p. 78

Section 4: EIAR CHAPTER 4 REVIEW

Description of the Proposed Development

Third Party Planning Observation

1.0 Introduction

This submission addresses Chapter 4 (Description of the Proposed Development) of the Environmental Impact Assessment Report submitted in support of the proposed Lemanaghan Wind Farm (An Coimisiún Pleanála, Case Reference PAX19.324161).

Chapter 4 is not a technical background document. It is the foundational chapter upon which the entire EIAR assessment rests. Under the EIA Directive and its implementing jurisprudence, the description of the proposed development must be sufficiently complete, precise, and definitive to enable the competent authority to understand what is proposed and to assess its likely significant effects. Where key elements of the project remain undefined, the assessment built upon that description is correspondingly unreliable.

It is submitted that Chapter 4 raises material concerns in six respects: the completeness of the project description; the characterisation of the scale and nature of the development; the failure to assess cumulative landscape saturation arising from the concentration of wind energy infrastructure in County Offaly; the material escalation in turbine height relative to existing approved developments; the inadequate treatment of peatland disturbance, carbon impact, and hydrological intervention; and the failure to adequately address the archaeological and heritage sensitivity of the receiving environment.

These concerns arise not from disputed evidence but from the Applicant's own Chapter 4 description. They go directly to the reliability of the EIAR as a whole.

2.0 Legal Framework

The legal obligations engaged by Chapter 4 are as follows:

- Article 5 and Annex IV of Directive 2011/92/EU (as amended) — the EIAR must include a description of the project comprising information on its location, design, size, and other relevant features; where key design elements remain undefined, the description does not meet this standard
- Abraham and Others v Région Wallonne (Case C-2/07) — the information provided by the developer must be such as to enable the competent authority to reach a reasoned conclusion on the significant effects of the project; where the project description is incomplete, this standard is not met
- Holohan and Others v An Bord Pleanála (Case C-461/17) — the EIAR must be complete, precise, and definitive; the competent authority must be in a position to reach a reasoned conclusion before consent is granted
- Wells v Secretary of State for Transport, Local Government and the Regions (Case C-201/02) — likely environmental effects must be assessed prior to the grant of consent; assessment cannot be deferred to post-consent design determination
- Directive 2000/60/EC (Water Framework Directive) — projects must not cause deterioration in water body status or compromise achievement of environmental objectives; extensive drainage and peat disturbance in a hydrologically sensitive peatland engages these obligations directly
- Directive 92/43/EEC (Habitats Directive), Article 6(3) — where the project may indirectly affect European sites, the competent authority must carry out an appropriate assessment; an incomplete project description limits the ability to exclude indirect pathways of impact with certainty
- Climate Action and Low Carbon Development (Amendment) Act 2021 — protection of carbon sinks is a legal obligation alongside emissions reduction; the development description must provide sufficient information on peat disturbance to enable the carbon balance to be assessed
- Offaly County Development Plan 2021–2027 and County Wind Energy Strategy — development plan policy is a material consideration; the description must be assessed against plan policies on landscape, heritage, and wind energy suitability

- National Planning Framework (First Revision, 2025) — balanced spatial development and equitable distribution of infrastructure are national planning objectives relevant to the cumulative concentration of wind energy in County Offaly

3.0 Executive Summary — Principal Concerns Arising from Chapter 4

Core Concern	Deficiency in Chapter 4	Legal / Planning Consequence
Incomplete project description	Foundation design, turbine model, cabling, lighting, and drainage details remain undefined. Worst-case scenario not fully established for all infrastructure elements.	Article 5 & Annex IV EIA Directive; Abraham v Région Wallonne (C-2/07); Wells (C-201/02) — assessment must be complete prior to consent
Industrial scale not adequately characterised	Chapter 4 describes 15 turbines at 220m plus 17.1km of roads, 4 borrow pits, 5 compounds, 220kV substation, and OHL. The industrial character of the whole is not adequately reflected in the framing of the assessment.	EIA Directive Annex IV — all aspects of project must be described; proper planning and sustainable development
Cumulative landscape saturation — 288 turbines	Chapter 4 does not adequately assess this development against the existing, approved, and proposed concentration of approximately 288 turbines in the Offaly/Midlands region. No landscape capacity assessment undertaken.	Article 3 EIA Directive — cumulative effects must be assessed; National Planning Framework — balanced regional development
Turbine scale escalation — 220m versus 150–185m existing	The proposed turbines represent a material upward step change from existing Offaly wind farms. The cumulative visual and landscape consequences of this escalation are not assessed.	EIA Directive — all likely significant effects must be assessed; 2006 Wind Energy Guidelines; 2019 Draft Guidelines
Peatland disturbance, carbon impact, hydrological intervention	Chapter 4 describes extensive peat excavation, drainage, borrow pits, and road construction but the EIAR does not quantify carbon loss, operational curtailment effects on climate benefit, or WFD compliance.	Climate Action Act 2021; Water Framework Directive; precautionary principle (Article 191 TFEU)
Archaeological and heritage impact	Chapter 4 confirms infrastructure crossing known toghers. The new Mella's Cell excavation findings (State rescue excavation, October 2025, Licence 25E0558) are not	EIA Directive Article 3 & Annex IV; Holohan — complete and reliable baseline required; National Monuments Acts 1930–2014

Core Concern	Deficiency in Chapter 4	Legal / Planning Consequence
	reflected in the project description or assessment.	

Fig. 1: Principal concerns arising from EIAR Chapter 4 — Description of the Proposed Development

4.0 Core Concern 1 — Incomplete and Insufficiently Defined Project Description

4.1 The Legal Standard for a Project Description

Article 5 and Annex IV of Directive 2011/92/EU require that the EIAR include information on the location, design, size, and other relevant features of the project. The Court of Justice in Abraham v Région Wallonne (Case C-2/07) confirmed that the information provided by the developer must be such as to enable the competent authority to reach a reasoned conclusion on the significant effects of the project on the environment. Holohan (Case C-461/17) requires that information be complete, precise, and definitive.

These standards are not aspirational. They are legal prerequisites for a lawful decision. Where key design elements remain undefined — and where the EIAR addresses the project in its absence using worst-case modelling assumptions that are not themselves fully defined — the Commission cannot be satisfied that it has sufficient information to reach a reasoned conclusion on the likely significant effects of the development as a whole.

4.2 Undefined Elements Identified in Chapter 4

Chapter 4 of the EIAR acknowledges that the following key project elements remain subject to later determination:

- turbine model selection — the specific turbine type to be installed has not been confirmed, meaning rotor diameter, noise characteristics, shadow flicker geometry, blade design, and aviation lighting specifications remain variable
- foundation design — the type and depth of turbine foundations have not been finalised, meaning the extent of peat excavation, structural loading, and drainage consequences at each turbine location cannot be fully assessed
- cabling configuration — the routing, depth, and trench dimensions of underground electrical infrastructure remain undefined
- aviation lighting — the type, frequency, and intensity of turbine lighting required for aviation safety has not been specified, with direct consequences for residents, landscape character, and heritage setting
- drainage design — the specific drainage infrastructure at each location has not been finalised

> **Each of these undefined elements directly affects the environmental assessment of noise, shadow flicker, peat disturbance, hydrological impact, visual impact, and heritage setting. An assessment of an undefined project is an assessment of assumptions, not of the development as proposed.**

The Applicant's response to this is typically to rely on a worst-case scenario framework — modelling the most adverse credible combination of parameters. That approach is legally permissible only where the worst-case scenario has itself been clearly defined, applied consistently across all assessment chapters, and used as the basis for significance conclusions. Where the worst-case parameters have not been fully established across all assessment topics, the reliance on worst-case modelling does not cure the incomplete description.

It is submitted that the Commission should require a complete and definitive project description — including confirmed turbine model, confirmed foundation design approach, confirmed cabling routes, and confirmed aviation

lighting specification — before granting consent. Wells (Case C-201/02) confirms that likely environmental effects must be assessed prior to consent and may not be deferred to post-consent design determination or condition compliance.

4.3 The Implications for Individual Assessment Chapters

The incompleteness of the project description in Chapter 4 propagates through the entire EIAR. The noise assessment in Chapter 12 depends on the turbine model's noise characteristics. The shadow flicker assessment in Chapter 5 depends on rotor diameter and hub height. The peat stability assessment depends on foundation design. The visual impact assessment depends on the confirmed rotor diameter and blade design. The heritage setting assessment depends on the confirmed aviation lighting specification.

Where these parameters remain undefined, each of those assessments carries a corresponding degree of uncertainty. That uncertainty is not a minor technical matter. It goes to whether the Commission has the information it needs to understand the likely significant effects of the development as a whole.

5.0 Core Concern 2 — Industrial Scale Not Adequately Characterised

5.1 What Chapter 4 Describes

Chapter 4 of the EIAR confirms the following infrastructure components of the proposed development:

Infrastructure Component	Scale / Extent
Wind turbines	15 no., tip height approximately 220 metres, hub height 145 metres, rotor diameter 150 metres
Telecommunications tower	36 metres
On-site substation compound	220kV permanent substation
Overhead line	Loop-in to Shannonbridge–Maynooth 220kV line
New internal access roads	Approximately 17.1 km
Upgraded roads	Approximately 1.14 km
New amenity tracks	Approximately 3.9 km
Upgraded tracks	Approximately 1.8 km
Permanent car parks	3 no., including bus parking
Borrow pits	4 no.
Construction compounds	5 no.
Application site area	Approximately 1,111 hectares
Cable infrastructure	Extensive underground cabling and collector systems

Infrastructure Component	Scale / Extent
Drainage infrastructure	Extensive drainage and water management systems

Fig. 2: Infrastructure components of the proposed development as described in Chapter 4 of the EIAR

This is not a modest rural renewable energy project. It is a major industrial energy installation covering over 1,100 hectares of sensitive peatland, requiring 17 kilometres of new roads, four borrow pits, five construction compounds, and a permanent 220kV substation of regional transmission significance. Chapter 4's description of this infrastructure does not disguise its scale. What it does not do is frame that scale correctly in the context of the receiving environment.

5.2 The Receiving Environment — Not a Blank Industrial Landscape

The framing of the Chapter 4 description rests implicitly on the characterisation of Lemanaghan as a post-industrial peatland whose landscape has already been significantly altered by commercial peat extraction. It is submitted that this framing is not adequate.

The receiving environment for this development is:

- a recovering peatland landscape subject to active rehabilitation obligations under EPA licence and the National Peatlands Strategy
- a landscape of outstanding heritage, archaeological, and cultural significance, identified as such by the Heritage Council's Lemanaghan Conservation Plan (2007) and confirmed by the State rescue excavation of a previously unknown early Christian burial ground at Mella's Cell in October 2025
- a landscape within which the Slí Mhór pilgrim causeway — a Heritage Council documented route connecting Lemanaghan to Clonmacnoise — physically crosses the proposed development site
- a rural residential community whose members are already living within the zone of influence of multiple operational wind farms and whose cumulative exposure to wind energy infrastructure is substantially greater than that of any other county in Ireland

The industrial scale of the development as described in Chapter 4 must be assessed against this receiving environment, not against the condition of the site as a former peat extraction landscape. The Conservation Plan itself requires that post-industrial uses be sympathetic to the significance of the site. Chapter 4 does not assess whether a development of this scale and nature satisfies that requirement.

6.0 Core Concern 3 — Cumulative Landscape Saturation and Community Burden: 288 Turbines

6.1 The Cumulative Picture

Chapter 4 acknowledges the existence of other wind energy developments in the surrounding area. It does not, however, provide a complete or properly contextualised picture of the cumulative concentration of wind energy infrastructure within County Offaly and the wider Midlands region.

Based on publicly available planning information, the operational, approved, and proposed wind energy turbines in County Offaly and immediately adjacent areas amount to approximately 288 turbines across the following developments:

Development	Status	Turbines in Offaly	Tip Height
Mountlucas	Operational	28	150m
Cloncreen	Operational	21	170m
Yellow River	Operational	29	~156–166m
Cushaling	Operational	8	185m
Meenwaun	Operational	4	169m
Leabeg	Operational	2	149m
Derrinlough	Operational	21	185m
Cloghan	Operational	9	150m
Moanvane	Operational	12	169m
Cush Wind Farm	Approved	8	185m
Lemanaghan	Planning submitted	15	220m
Ballinla	Planning submitted	7	185m
Ballydermot	Proposed	18 (of 47)	~200–220m
Garryhinch	Proposed	10 (of 12)	~200m
Ballincor / Sharavogue	Planning submitted	9 (of 11)	~180m
Derrygreenagh	Proposed	8 (of 25)	200m
Cushina	Proposed	11	220m
Cush Phase 2	Proposed	3	200m

Fig. 3: Operational, approved, and proposed wind energy developments in County Offaly and the wider Midlands region. Figures are approximate and based on publicly available planning information. Some developments straddle county boundaries.

> **Approximately 288 turbines are operational, approved, or proposed within County Offaly and the wider Midlands peatland region. Chapter 4 does not assess the cumulative landscape, visual, or community consequences of this concentration.**

6.2 The Legal Obligation to Assess Cumulative Effects

The EIA Directive (Article 3, as amended by Directive 2014/52/EU) requires that projects be assessed not only individually but in terms of their cumulative effects with existing, permitted, and reasonably foreseeable future developments. The Habitats Directive (Article 6(3)) similarly requires assessment of projects individually or in combination with other plans or projects.

Chapter 4's description of the proposed development as a standalone project does not satisfy this requirement. The concentration of approximately 288 turbines within County Offaly and the Midlands peatland region is not a background condition to be noted and set aside. It is the cumulative receiving environment within which this development must be assessed. A project description that does not acknowledge the scale of that cumulative context does not provide the Commission with the information it needs to assess cumulative effects.

6.3 National Planning Framework — Balanced Regional Development

The National Planning Framework (First Revision, 2025) requires balanced spatial development, equitable distribution of infrastructure, and protection of rural character and heritage. The concentration of approximately 288 turbines within a single county — while other counties and regions carry a materially lower burden of renewable energy infrastructure — raises a direct question of regional fairness that the National Planning Framework is designed to address.

Chapter 4 does not engage with this dimension of national policy. It does not address whether the further concentration of wind energy infrastructure in County Offaly is consistent with the principle of balanced regional development, or whether the cumulative community burden arising from the existing, approved, and proposed concentration has been adequately assessed. That is a material omission in a chapter that is required to describe the project within its broader planning and environmental context.

6.4 Disproportionate Community Burden

The communities of County Offaly are already living within, or within the zone of influence of, a substantial concentration of operational wind farms. They are now asked to accommodate further large-scale developments in the pipeline while the rest of the country continues to develop its renewable energy infrastructure at a lower intensity. The Just Transition framework — which was specifically designed to support the Midlands' transition from peat extraction in a fair and community-centred manner — is not served by a process that replaces one form of industrial landscape concentration with another without strategic assessment of cumulative impact.

7.0 Core Concern 4 — Turbine Scale Escalation: 220 Metres in Context

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7.1 The Step Change in Scale

Chapter 4 confirms that the proposed turbines have a tip height of approximately 220 metres and a rotor diameter of 150 metres. This represents a material upward step change from the turbine heights in all existing operational wind farms in County Offaly, which range from approximately 149 metres to 185 metres at tip height.

The significance of this escalation is not merely numerical. A turbine of 220 metres in a flat, open, cutaway bog landscape — with no natural screening and long-range intervisibility in all directions — occupies a fundamentally different visual relationship with the landscape than a 150-metre turbine in the same setting. The visual dominance, the zone of theoretical visibility, the shadow flicker radius, the noise propagation distance, and the impact on heritage setting all increase with turbine height. Chapter 4 does not adequately address how this step change in scale interacts with the existing concentration of wind energy infrastructure in the region.

7.2 Cumulative Scale Escalation and Emerging Policy

The proposed 220-metre turbines represent the upper end of the current generation of commercial wind turbines in Ireland. The Draft Revised Wind Energy Development Guidelines (2019) have not yet been adopted, and the applicable national standard remains the 2006 Guidelines. However, the direction of emerging policy — including the Government's own indication that updated guidelines may reduce the number of onshore wind farms — is directly relevant to whether this scale of turbine in this landscape represents appropriate development.

In a Dáil debate on 25 March 2026, Taoiseach Micheál Martin stated that updated Wind Energy Development Guidelines would 'probably lead to a reduction in the number of wind farms.' In the context of a planning application for turbines at the maximum current commercial scale, in a county already carrying the highest concentration of wind energy infrastructure in Ireland, the Commission is entitled to consider whether the escalation in turbine scale compounds an already disproportionate cumulative burden.

8.0 Core Concern 5 — Peatland Disturbance, Carbon Impact and Hydrological Intervention

8.1 The Scale of Peat Disturbance Described in Chapter 4

Chapter 4 describes a development involving: turbine foundations requiring deep excavation into peat; approximately 17.1 kilometres of new access roads requiring peat displacement and ground stabilisation; four borrow pits for construction material; five construction compounds; extensive drainage infrastructure; and underground cable trenching across peatland. These are not incidental interventions. They represent a permanent physical transformation of the peatland that cannot be reversed.

The description in Chapter 4 provides the physical data for these interventions. What it does not provide — and what the EIAR as a whole does not clearly demonstrate — is the carbon cost of these interventions, the hydrological consequences for the wider peatland system, or the interaction between the proposed drainage works and the fire risk that has been documented at this site as recently as June 2023.

8.2 The Carbon Balance — A Gap at the Centre of the Climate Justification

The proposed development is presented as a climate mitigation measure. That framing requires an honest assessment of the full carbon balance of the development, not merely the emissions displaced by renewable generation.

The EIAR does not quantify:

- total peat carbon loss arising from excavation, exposure, drainage, and oxidation across the development footprint
- embedded carbon in turbine foundations, roads, substation infrastructure, and overhead line structures
- the opportunity cost of peatland restoration — the carbon that would have been sequestered had the site been rewetted and rehabilitated rather than further disturbed
- the interaction between drainage alteration and long-term peat oxidation rates

These are not peripheral concerns. They go to the heart of whether the proposed development delivers a net climate benefit when the full carbon cycle of the site is considered. The Climate Action and Low Carbon Development (Amendment) Act 2021 requires the protection of carbon sinks alongside emissions reduction. A development that depletes a carbon sink while generating renewable energy may not deliver the net climate benefit that its planning justification asserts.

8.3 Operational Curtailment and the Climate Justification

The climate justification for the proposed development depends not merely on installed capacity but on electricity actually generated, exported, and displacing carbon-intensive alternatives under realistic operational conditions. Chapter 4's description of the projected energy output is not cross-referenced to a realistic assessment of curtailment risk.

EirGrid and SONI's Annual Renewable Constraint and Curtailment Report (2024) confirms that approximately 2,181 GWh of available wind energy was dispatched down in 2024 — approximately 14% of total available wind generation. The Applicant's own assessment identifies shadow flicker impacts requiring operational turbine shutdown at multiple receptors. Noise mitigation and ecological protection measures may impose further operational constraints.

In a region already carrying the highest concentration of wind energy infrastructure in Ireland, cumulative curtailment risk is a material planning consideration.

In circumstances where peat disturbance and carbon loss would occur immediately and permanently, while projected climate benefits depend on operational assumptions that may not be realised, the precautionary principle under Article 191 TFEU requires that this uncertainty be given significant weight. The EIAR does not demonstrate that the claimed climate benefits remain robust under realistic curtailment conditions. That failure begins in Chapter 4's description of projected generation and is not remedied elsewhere in the assessment.

8.4 Water Framework Directive — Hydrological Sensitivity

The Water Framework Directive (Directive 2000/60/EC) requires that projects do not cause deterioration in water body status or compromise achievement of environmental objectives. Lemanaghan Bog is a hydrologically sensitive peatland landscape with an artificially modified drainage system arising from its history of commercial peat extraction. The proposed development involves extensive further drainage modification, road construction, and peat disturbance across this already altered system.

Chapter 4's description of the drainage infrastructure does not clearly demonstrate WFD compliance. Where the development involves progressive alteration of an already disturbed and sensitive hydrological system — in which baseline conditions are themselves transitional and subject to EPA rehabilitation obligations — the Commission cannot be satisfied that WFD objectives will be achieved without a detailed, pathway-specific hydrological assessment. That assessment is not provided.

9.0 Core Concern 6 — Archaeological and Heritage Impact

9.1 Infrastructure Crossing Known Toghers

Chapter 4 confirms that the proposed development includes infrastructure crossing known toghers — the ancient stone-lined causeways that form the archaeological and cultural spine of the Lemanaghan heritage landscape. The toghers are documented in the archaeological record as extending over centuries, connecting the monastic complex at Lemanaghan to the wider landscape, and including the Slí Mhór pilgrim route connecting Lemanaghan to Clonmacnoise.

The Slí Mhór is documented in the Heritage Council commissioned Baseline Study (Tubridy, M. and Associates, 1999) as a designated heritage route of national significance. Its physical presence as a stone-lined causeway is visible from the air through the bog, crossing the R436 and continuing through the proposed development site. Any infrastructure that crosses or disturbs the route of these causeways raises immediate concerns under the National Monuments Acts 1930–2014 and requires a complete and reliable archaeological assessment prior to consent.

9.2 The Mella's Cell Discovery — An Incomplete Archaeological Baseline

Chapter 4's description of the proposed development is founded on an archaeological baseline that was materially incomplete at the time of submission. A State rescue excavation at Mella's Cell, Lemanaghan monastery, carried out under Archaeological Licence 25E0558 and funded by the National Monuments Service, was completed in October 2025 — five months before this application was submitted in March 2026.

The excavation, directed by Dr Denis Shine of the Irish Heritage School and commissioned by both the National Monuments Service and Offaly County Council, revealed a completely unknown early Christian burial ground. Four articulated burials were fully excavated, with a minimum of 13 individuals identified. Radiocarbon dating places the burials between 662–817 cal AD and 707–939 cal AD — directly contemporaneous with the foundation of St Manchán's monastery. There was, in the words of the formal report, 'no existing historical evidence or local knowledge of a burial ground at Mella's Cell' before Storm Éowyn exposed it in January 2025.

The final archaeological report (Shine and Diana, 2026) is dated 4 April 2026 — eight days after this application was submitted. The excavation findings were nationally reported in January 2025, in local and national media throughout 2025, and extensively covered on the first anniversary in January 2026. The EIAR does not reflect this discovery.

Chapter 4's description of the project does not incorporate the most significant new archaeological finding at this site in the planning process timeline.

A project description that does not incorporate the findings of a State-funded rescue excavation — completed five months before submission, nationally reported, and confirming the existence of a previously unknown early Christian burial ground directly associated with the protected monastic complex — does not provide the Commission with the complete archaeological baseline required under Holohan and Article 5 of the EIA Directive. The Commission should require an updated archaeological assessment before any positive decision is contemplated.

9.3 Conflict with the Lemanaghan Conservation Plan

The Lemanaghan Conservation Plan (Heritage Council, 2007) identifies the site as:

> *"a landscape of outstanding significance, combining archaeological, historical, ecological and spiritual values."*

It requires that:

> *"the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."*

Source: Lemanaghan Conservation Plan, Heritage Council, 2007 — https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

Chapter 4 does not assess the proposed development against this standard. It does not demonstrate that a development of this scale and permanence — 15 turbines of 220 metres, 17 kilometres of roads, four borrow pits, a permanent 220kV substation, and associated transmission infrastructure — is sympathetic to the outstanding significance of the site. That question is not addressed in the project description or in the EIAR as a whole.

10.0 Summary of Key Deficiencies — EIAR Chapter 4

Core Concern	Specific Deficiency	Legal Basis
Incomplete project description	Turbine model, foundation design, cabling, lighting, and drainage undefined. Assessment rests on unconfirmed worst-case parameters.	Article 5 & Annex IV EIA Directive; Abraham (C-2/07); Holohan (C-461/17); Wells (C-201/02)
Industrial scale mischaracterised	17.1km roads, 4 borrow pits, 5 compounds, 220kV substation framed as wind farm rather than major industrial installation across 1,111 ha sensitive peatland	EIA Directive Annex IV; proper planning and sustainable development
Cumulative assessment absent — 288 turbines	Chapter 4 does not assess development against ~288-turbine regional concentration or conduct landscape capacity assessment	Article 3 EIA Directive (cumulative effects); National Planning Framework; Habitats Directive Article 6(3)

Core Concern	Specific Deficiency	Legal Basis
Scale escalation not assessed	220m turbines represent step change from 149–185m existing Offaly fleet; cumulative visual and landscape consequences not assessed	EIA Directive; 2006 Wind Energy Guidelines; 2019 Draft Guidelines; Taoiseach's Dáil statement 25 March 2026
Carbon balance unquantified	Peat carbon loss, embedded carbon, sequestration opportunity cost, and curtailment effects on climate benefit not quantified	Climate Action Act 2021; Article 191 TFEU precautionary principle; EIA Directive Article 3
WFD compliance not demonstrated	Extensive drainage modification of already-disturbed hydrological system; WFD compliance pathway not clearly established	Water Framework Directive 2000/60/EC; EIA Directive Article 3
Archaeological baseline incomplete	Mella's Cell State rescue excavation (Licence 25E0558, Oct 2025) not reflected; infrastructure crosses known toghers including Slí Mhór	Holohan (C-461/17); National Monuments Acts 1930–2014; Article 5 EIA Directive
Conservation Plan not engaged	Chapter 4 does not assess development against Heritage Council requirement that post-industrial use be sympathetic to site significance	Lemanaghan Conservation Plan (2007); EIA Directive Annex IV; proper planning and sustainable development

Fig. 4: Summary of key deficiencies in EIAR Chapter 4 — Description of the Proposed Development

11.0 Grounds for Refusal Arising from EIAR Chapter 4

The following grounds for refusal arise from the deficiencies identified in Chapter 4, whether considered individually or cumulatively with the grounds advanced in the principal Planning Observation and in the Chapter 1, 2, 3, and 5 reviews:

Ground 1 — Incomplete Project Description: Consent Cannot Lawfully Be Granted

Chapter 4 of the EIAR does not provide a complete, precise, and definitive description of the proposed development within the meaning of Article 5 and Annex IV of the EIA Directive, as confirmed by Abraham v Région Wallonne (C-2/07) and Holohan (C-461/17). Key design elements — including turbine model, foundation design, cabling configuration, and aviation lighting specification — remain undefined. Each of these elements directly affects the assessment of noise, shadow flicker, peat disturbance, visual impact, and heritage setting. In circumstances where the project description is incomplete, the Commission cannot be satisfied that it has the information required to reach a lawful reasoned conclusion on the likely significant effects of the development under Article 8a of the EIA Directive.

Ground 2 — Failure to Assess Cumulative Landscape Saturation

Chapter 4 does not assess the proposed development against the existing, approved, and proposed concentration of approximately 288 turbines in the County Offaly and Midlands region. The EIA Directive (Article 3, as amended) requires that cumulative effects be assessed. The National Planning Framework requires balanced regional development and equitable distribution of infrastructure. A chapter that describes a development of this scale without contextualising it within the 288-turbine cumulative picture does not provide the Commission with the information it requires to assess cumulative landscape, visual, and community effects.

Ground 3 — Turbine Scale Escalation and Emerging Policy

The proposed turbines at 220 metres represent a material step change in scale from all existing operational wind farms in County Offaly. The cumulative visual, landscape, and community consequences of this escalation — in a region already carrying the highest concentration of wind energy infrastructure in the country — are not assessed in Chapter 4. In circumstances where national policy on onshore wind energy is in acknowledged transition and where the Government has publicly indicated that updated guidelines may reduce the number of onshore wind farms, the Commission should be satisfied that this escalation in scale has been fully justified before consent is granted.

Ground 4 — Failure to Demonstrate Net Climate Benefit: Carbon Balance Unquantified

The proposed development is justified primarily on climate grounds but Chapter 4 does not provide sufficient information to assess the full carbon balance of a development involving permanent disturbance of a carbon-rich peatland. The EIAR does not quantify peat carbon loss, embedded carbon, or the opportunity cost of foregone restoration and sequestration. It does not demonstrate that projected climate benefits remain robust under realistic curtailment conditions. In circumstances where the environmental costs are permanent and immediate and the climate benefits are dependent on uncertain operational assumptions, the Commission cannot be satisfied that the proposed development is consistent with Ireland's climate obligations when considered as a whole.

Ground 5 — Materially Incomplete Archaeological Baseline

Chapter 4 is founded on an archaeological baseline that does not reflect the findings of the State rescue excavation at Mella's Cell, Lemanaghan (Archaeological Licence 25E0558, October 2025), which revealed a completely unknown early Christian burial ground with radiocarbon-dated remains from 662–939 cal AD. This discovery was nationally reported, State-funded, and formally documented before this application was submitted. The Commission cannot be satisfied that the description of the proposed development in Chapter 4, or the archaeological and heritage assessment built upon it, provides the complete and reliable information required by Holohan before a lawful reasoned conclusion can be reached.

12.0 Conclusion

Lemanaghan Heritage & Conservation CLG supports renewable energy and acknowledges the importance of climate action. The submissions in this chapter review are not made in opposition to those objectives. They are made in support of a planning process that accurately describes what is proposed, honestly assesses its consequences, and takes seriously the significance of the landscape and community within which it is proposed.

Chapter 4 of the EIAR is the foundation of the entire environmental assessment. Where the project description is incomplete, the assessment built upon it is correspondingly unreliable. Where the cumulative picture of 288 turbines is not contextualised, the Commission cannot assess cumulative effects. Where the carbon balance of peat disturbance is not quantified, the climate justification is not demonstrated. Where the Mella's Cell discovery is not reflected, the archaeological baseline is incomplete in a materially significant respect.

For these reasons — and cumulatively with the grounds advanced across all chapter reviews and the principal Planning Observation — it is respectfully submitted that the Commission should refuse permission for the proposed development. At minimum, it should require a complete updated project description, a full carbon balance

assessment, a complete updated archaeological assessment incorporating the Mella's Cell findings, and an independent cumulative landscape capacity assessment before any positive decision is contemplated.

13.0 Key References

Legislation and EU Law

- Directive 2011/92/EU (EIA Directive, as amended by Directive 2014/52/EU)
- Directive 92/43/EEC (Habitats Directive) — https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043
- Directive 2000/60/EC (Water Framework Directive) — https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060
- Climate Action and Low Carbon Development (Amendment) Act 2021
- Article 191 TFEU (Precautionary Principle)
- National Monuments Acts 1930–2014

Case Law

- Abraham and Others v Région Wallonne (Case C-2/07) — complete information enabling reasoned conclusion
- Holohan and Others v An Bord Pleanála (Case C-461/17) — complete, precise and definitive EIAR
- Wells v Secretary of State for Transport, Local Government and the Regions (Case C-201/02) — assessment prior to consent

Policy and Planning

- Wind Energy Development Guidelines (2006) — https://www.gov.ie/en/publication/776e0-wind-energy-development-guidelines-2006/
- Draft Revised Wind Energy Development Guidelines (2019) — https://www.gov.ie/en/publication/1e6d6-draft-revised-wind-energy-development-guidelines/
- National Planning Framework (First Revision, 2025) — https://www.gov.ie/en/publication/daa55-national-planning-framework/
- National Peatlands Strategy — https://www.gov.ie/en/publication/9a9e2-national-peatlands-strategy/
- Offaly County Development Plan 2021–2027 and County Wind Energy Strategy
- Lemanaghan Conservation Plan, Heritage Council, 2007 — https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

Archaeological and Heritage

- Shine, D. and Diana, A. (2026), Excavations at 'Mella's Cell' Lemanaghan, County Offaly, Archaeological Licence 25E0558, Irish Heritage School Ltd, April 2026 (prepared for National Monuments Service and Offaly County Council)
- Tubridy, M. and Associates (1999), Slí Mhór Baseline Study: The Heritage Council Pilgrim Path Project, Dublin, June 1999

Grid and Curtailment Evidence

- EirGrid and SONI, Annual Renewable Constraint and Curtailment Report 2024
  - https://cms.eirgrid.ie/sites/default/files/publications/Annual-Renewable-Constraint-and-Curtailment-Report-2024-V1.0.pdf
- Dáil Éireann Debate, 25 March 2026 — Taoiseach on Wind Energy Guidelines
  - https://www.oireachtas.ie/en/debates/debate/dail/2026-03-25/13/

Section 5: EIAR CHAPTER 5 REVIEW – Population and Human Health

Third Party Observer — An Coimisiún Pleanála RED III Application

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Planning Observation Report

This Planning Observation Report (Chapter 5 – Population and Human Health) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd.

This document has been prepared solely for submission to An Coimisiún Pleanála in respect of Case Reference PAX19.324161. It is submitted as a third party planning observation in accordance with the applicable statutory provisions. All references to the Applicant's documents are to documents published on the planning register and publicly available at www.lemanaghanwindfarmplanning.ie.

1.0 Introduction

This Chapter 5 Planning Observation Report is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of the Environmental Impact Assessment Report (EIAR), Chapter 5, Population and Human Health, prepared in support of the proposed Lemanaghan Wind Farm development at Lemanaghan and surrounding townlands, Co. Offaly.

The proposed development comprises 15 no. wind turbines of up to 220 metres tip height, a permanent 220kV on-site substation, internal access roads, turbine hardstands, borrow pits, peat deposition areas, grid connection infrastructure and associated works. This is not a modest rural renewable energy project. It is a major industrial energy development proposed within a sensitive peatland, archaeological, cultural and residential landscape.

The community expressly recognises the importance of climate action and renewable energy. The issue is not whether Ireland requires renewable energy. The issue is whether this particular development, of this scale, in this particular peatland, monastic, archaeological, rural and residential landscape, has been demonstrated to be acceptable having regard to proper planning and sustainable development, the EIA Directive, Irish planning law, the Offaly County Development Plan, national wind-energy guidance, public-health considerations, and the rights and wellbeing of the receiving community.

It is respectfully submitted that Chapter 5 of the EIAR does not provide a sufficiently complete, precise, reliable or integrated basis upon which An Coimisiún Pleanála can safely reach a reasoned conclusion on the likely significant effects of the proposed development on population and human health.

> The Applicant states in the opening of Chapter 5 that individuals or communities should experience no significant diminution in their quality of life from the direct or indirect effects arising from the construction, operation and decommissioning of a development.

It is respectfully submitted that Chapter 5 does not demonstrate compliance with that standard. The deficiencies identified in this submission arise directly from the Applicant's own data, methodology and conclusions. They are not isolated, minor or technical. They are systemic, cumulative and central to the acceptability of the proposed development.

2.0 Executive Planning Case and Core Request

It is respectfully submitted that permission should be refused. In the alternative, the Commission should require significant further information, independent technical review and a revised, receptor-specific and integrated assessment before any positive decision could lawfully be contemplated.

The central objection is that Chapter 5 does not demonstrate that the proposed development is acceptable for the receiving population in real-world terms. The EIAR identifies substantial shadow flicker exceedances, acknowledges schools within the receiving environment, adopts a broad definition of human health, identifies noise and shadow flicker as relevant pathways, and acknowledges that vulnerable groups should be considered. However, it does not translate those matters into a complete, receptor-specific and integrated assessment of how the proposed development would affect people, homes, schools, farms, children, vulnerable residents and rural communities in practice.

The Applicant's own shadow flicker modelling identifies 58 dwellings exceeding the daily shadow flicker threshold, with worst-case annual exposure approaching 80 hours. The Applicant's own material also identifies a significant issue in respect of Turbine T05 and the amended wind-energy zoning introduced to protect the Lemanaghan Monastic Site.

Appendix 13-5, Section 1.5.2 of the EIAR acknowledges that all proposed turbines are within an area designated 'Open for Consideration' for wind energy development, with the exception of T05, which is located at the boundary with an area designated 'Not Deemed Suitable for Wind Energy Developments'. It further confirms that the hardstand and infrastructure of T05 are located approximately 1.9 metres outside the 'Open to Consideration' zoning. In planning terms, the line matters because the Development Plan made it matter.

2.1 Summary of Principal Chapter 5 Concerns

Issue	Planning Significance
Shadow flicker	The Applicant's own modelling identifies 58 dwellings exceeding the 30-minute daily threshold. These are design-generated impacts, not speculative objections.
Turbine T05 and Monastic Site buffer	Appendix 13-5 confirms that the area was excluded from 'Open for Consideration' wind zoning specifically to protect the character of the Lemanaghan Monastic Site, and that the hardstand and infrastructure of T05 are approximately 1.9m outside the 'Open to Consideration' zoning.
Schools and children	Multiple schools are identified within the receiving environment but no school-specific assessment is provided for noise, shadow flicker, visual movement or cumulative school-day exposure.
Vulnerable groups	The EIAR acknowledges that vulnerable groups are relevant but does not assess children, autism units, sensory sensitivities or special educational needs in any project-specific way.
Human health	The EIAR adopts the WHO definition of health but performs a narrow, derivative and fragmented assessment. It does not assess real-world effects on sleep, stress, annoyance, wellbeing or the enjoyment of the home.
Noise	Chapter 5 cross-refers to Chapter 12 but does not translate predicted noise levels into population and human health outcomes.
Corbeg baseline	The EIAR describes Corbeg as a serviced village, which is inconsistent with its apparent status as a rural townland outside the settlement hierarchy.
FOI complaint evidence	Real-world complaint evidence from existing Offaly wind farms involving smaller turbines is not meaningfully engaged with.
Agricultural and equine receptors	Farms, grazing lands, livestock and equine receptors are not mapped or assessed in a structured way.
Property and material assets	The EIAR does not provide a site-specific Irish assessment of property, material assets and residential amenity impacts.
Peatland risk	Chapter 5 does not properly integrate peat instability, flooding, fire, emergency access or Chapter 16 major-accident risks into the human health assessment.
Cumulative assessment	Noise, shadow flicker, visual change, rural amenity, peatland risk, schools and vulnerable receptors are assessed in fragmented compartments rather than as a real-world cumulative effect on the receiving population.

3.0 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. That obligation arises under section 171A and Part XA of the Planning and Development Act 2000 (as

amended), which transpose the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU into domestic Irish law. The Commission must be satisfied that the EIAR identifies, describes and assesses the direct, indirect and cumulative significant effects of the project, including interactions between population, human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape.

3.1 EIA Directive

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires the likely significant effects of the project on population and human health to be identified, described and assessed. Article 5 and Annex IV require the EIAR to contain complete, precise, project-specific and reliable information. Article 8a requires the competent authority to reach a reasoned conclusion on the significant environmental effects of the project. That obligation is not satisfied by generalised literature, technical cross-reference, post-consent mitigation or unsupported conclusions of "not significant".

3.2 Holohan and Others v An Bord Pleanála (C-461/17)

The principles in Holohan are directly relevant. The EIAR must contain complete, precise and definitive information sufficient to enable the competent authority to carry out its assessment. The assessment must also address interactions between environmental factors. In this case, the interaction between noise, shadow flicker, visual movement, schools, vulnerable residents, rural amenity, property, peatland risk and human wellbeing is not adequately assessed.

3.3 Wells v Secretary of State for Transport (C-201/02)

Wells establishes that where a project requires EIA, the assessment of its significant effects must be completed before consent is granted and cannot be deferred or substituted by post-consent processes. This is directly relevant to the Applicant's reliance on SCADA-based turbine shutdown to address shadow flicker exceedances that are established on the Applicant's own pre-consent modelling. Environmental effects that are identified at application stage must be fully assessed before the grant of consent. They cannot be managed through post-consent operational controls where the assessment has not demonstrated that such controls will be effective, enforceable and sufficient.

3.4 Sweetman v An Bord Pleanála (C-258/11) and People Over Wind (C-323/17)

Sweetman confirms that where scientific uncertainty remains regarding the significance of environmental effects, the competent authority must apply a precautionary approach. While Sweetman arose in the Appropriate Assessment context, the precautionary principle it reflects is equally embedded in the EIA Directive framework through the requirement for complete and reliable information under Article 5 and Annex IV. People Over Wind established that the effectiveness of mitigation must be demonstrated through proper prior assessment and cannot be assumed or relied upon to avoid the obligation of a complete assessment. That principle applies with equal force where post-consent operational mitigation is advanced as a substitute for demonstrating design-stage compliance in the EIA context.

3.5 Meadows v Minister for Justice — Constitutional Proportionality and Residential Rights

Meadows v Minister for Justice [2010] IESC 3 confirms that where a decision of a public authority may affect constitutional rights, the decision-maker must assess the proportionality of that interference. The constitutional right to bodily integrity under Article 40.3, the right to property under Article 43, and the right to privacy in the home are all potentially engaged where a development gives rise to persistent and repeated environmental disturbance at residential receptors over a long operational lifetime. The European Court of Human Rights in López Ostra v Spain (Application No. 16798/90) recognised that persistent environmental nuisance in the vicinity of the home can constitute a violation of the right to respect for private and family life under Article 8 ECHR.

3.6 EU Charter of Fundamental Rights and TFEU

Article 24 of the EU Charter of Fundamental Rights requires that the best interests of the child be a primary consideration in all actions relating to children, including by public authorities implementing EU law. The EIA Directive is an instrument of EU law and its application by An Coimisiún Pleanála engages the Charter. Article 191 TFEU establishes the precautionary principle as a foundational principle of EU environmental policy. Where credible uncertainty exists regarding the significance of effects on children, schools and vulnerable receptors, the precautionary principle as embedded in the EIA Directive framework requires the competent authority to be satisfied by complete and reliable information before reaching a positive conclusion.

3.7 Wind Energy Development Guidelines and Development Plan

The Wind Energy Development Guidelines 2006 remain the applicable national guidance. They provide that shadow flicker should not exceed 30 hours per year or 30 minutes per day at affected dwellings. The Draft Revised Wind Energy Development Guidelines 2019, while not formally adopted, indicate a policy direction that no existing dwelling or other affected property should experience shadow flicker. Schools fall within the ordinary meaning of "other affected property" as permanent occupied buildings used daily by children and staff.

The Offaly County Development Plan 2021–2027 contains policies relevant to residential amenity, human health, shadow flicker, cultural heritage, landscape sensitivity and wind-energy siting. The Applicant's own Appendix 13-5 records that the relevant zoning alteration was introduced specifically to protect the character of the Lemanaghan Monastic Site, and that the hardstand and infrastructure of T05 are located approximately 1.9 metres outside the 'Open to Consideration' zoning. That creates a direct and serious Development Plan compliance issue.

3.8 Summary of Relevant Case Law — Chapter 5 Application

The following table sets out the principal authorities relied upon in this submission. Each authority is cited for the specific proposition it supports in the context of population and human health assessment. This is intended to assist the Commission in understanding the legal basis for each ground of objection.

Case	Citation	Court / Year	Relevance to Chapter 5	Grounds Supported
Holohan and Others v An Bord Pleanála	C-461/17	CJEU 2018	EIAR must contain complete, precise and definitive information. Assessment must address interactions between environmental factors. Chapter 5 fails both: it does not assess interactions between noise, shadow flicker, schools, vulnerable receptors and peatland risk as a cumulative picture.	All Chapter 5 grounds.
Wells v Secretary of State for Transport	C-201/02	CJEU 2004	Effects identified at application stage must be fully assessed before consent. Post-consent processes cannot substitute. Directly relevant to SCADA shutdown reliance for shadow flicker exceedances already established on the Applicant's own modelling.	Shadow flicker (Section 4). Post-consent mitigation. Peatland risk deferral.
Sweetman v An Bord Pleanála	C-258/11	CJEU 2013	Where scientific uncertainty remains, a precautionary approach is required. Consent cannot be granted where reasonable scientific doubt remains. Applies where uncertainty exists	Shadow flicker mitigation uncertainty. Schools and vulnerable receptors. Peatland risk integration.

			about mitigation effectiveness or receptor identification.	
People Over Wind and Sweetman v Coillte Teoranta	C-323/17	CJEU 2018	Effectiveness of mitigation must be demonstrated, not assumed. An applicant cannot design a non-compliant layout and then rely on post-consent curtailment. Applies directly to the SCADA shutdown approach proposed here.	Shadow flicker SCADA mitigation reliance (Section 4.4). Design-stage compliance failure.
Meadows v Minister for Justice	[2010] IESC 3	Irish Supreme Court 2010	Decision-maker must consider proportionality where constitutional rights — including bodily integrity (Art 40.3), property (Art 43) and privacy in the home — may be affected by persistent environmental disturbance over the operational lifetime.	Residential amenity (all sections). Shadow flicker at dwellings. Human health as a rights matter.
López Ostra v Spain	App. No. 16798/90	ECtHR 1994	Persistent environmental nuisance in the vicinity of the home can constitute a violation of Article 8 ECHR. Provides international human rights authority that persistent residential environmental disturbance is a rights-engaged matter.	Residential amenity. Shadow flicker at dwellings. Contextual support for constitutional rights arguments.
Kelly v An Bord Pleanála	[2014] IEHC 400	Irish High Court 2014	Board must carry out its own independent assessment and cannot simply adopt the Applicant's EIAR conclusions. Where EIAR contains identified gaps, the Commission is not entitled to fill those gaps by assumption.	Core Commission obligation. Applies to all Chapter 5 grounds where EIAR is incomplete.
Commission v Ireland	C-50/09	CJEU 2011	Reasoned conclusion must be a genuine, substantive and independent assessment. A conclusion of "not significant" merely imported from a technical chapter does not satisfy the Directive.	Human health assessment (Section 6). Cumulative assessment failure (Section 12).
Connelly v An Bord Pleanála	[2018] IESC 31	Irish Supreme Court 2018	Information must be adequate to allow the competent authority and the public to understand the likely significant effects. Where information is inadequate or mischaracterises the receiving environment, the EIA is not lawfully complete.	Baseline mischaracterisation (Section 7). Receptor identification failure. Adequacy of information across Chapter 5.
Coolglass Wind Farm Ltd v An Coimisiún Pleanála	[2026] IESC 5	Irish Supreme Court 2026	Section 15 of the Climate Action Act creates a binding obligation, but the Court confirmed that climate need does not equal site-specific suitability and does not override EIA obligations,	Directly relevant to the Applicant's climate justification arguments. Confirms renewable energy need does not override EIA obligations.

			Development Plan policy or residential amenity.	
Boland v An Bord Pleanála	[1996] 3 IR 435	Irish Supreme Court 1996	Board must have regard to material considerations including national guidelines. Wind Energy Development Guidelines 2006 are such a material consideration and cannot be ignored without specific justification.	Shadow flicker guideline status (Section 4.1). Confirms the 2006 Guidelines are material considerations.
Derrybrien Wind Farm — Commission v Ireland	C-215/06	CJEU 2008	Ireland breached the EIA Directive by failing to carry out adequate EIA for a peatland wind farm, which suffered a major landslide. Establishes the serious consequences of inadequate EIA on peatland.	Peatland risk and Chapter 16 integration (Section 11). Supports the argument that peatland development requires especially rigorous EIA.

4.0 Core Planning Theme 1 — Shadow Flicker, Guideline Breach and Residential Amenity

Shadow flicker is the strongest and most immediately demonstrable planning objection in this case. It is not a matter of expert disagreement, contested modelling methodology or speculative future risk. It is a matter of arithmetic drawn directly from the Applicant's own submitted data. The proposed layout, as designed and as submitted, produces shadow flicker exposures at residential receptors that breach the applicable national guideline thresholds before any mitigation is applied.

4.1 The Applicable Guideline Standard

The Wind Energy Development Guidelines 2006 remain the applicable national policy guidance. They establish the following thresholds as the applicable national planning guidance standard:

- **Shadow flicker at any affected dwelling must not exceed 30 hours per year; and**
- **Shadow flicker at any affected dwelling must not exceed 30 minutes on any single day.**

These thresholds are material considerations which the Commission is required to take into account under section 143 of the Planning and Development Act 2000 (as amended). The Draft Revised Wind Energy Development Guidelines 2019, while not yet formally adopted, indicate the direction of travel of national policy: no existing dwelling or other affected property should experience shadow flicker at all. That draft direction reinforces rather than relaxes the 2006 thresholds and must be treated as a material consideration pointing toward greater, not lesser, protection for residential receptors.

4.2 The Applicant's Own Data: Scale of Breach

Table 5-9 of the EIAR sets out pre-mitigation shadow flicker modelling results at residential receptors within the study area. The following figures are taken directly from the Applicant's own submitted assessment. They are not this observer's modelling. They are the Applicant's own predictions for the development as designed.

Receptor	Predicted Annual Exposure (Pre-Mitigation)	Exceedance Above 30-Hour Guideline	Daily Threshold Status
House 7	80 hrs 29 mins	+50 hrs 29 mins above guideline	Daily threshold also exceeded

House 2	78 hrs 49 mins	+48 hrs 49 mins above guideline	Daily threshold also exceeded
House 15	73 hrs 49 mins	+43 hrs 49 mins above guideline	Daily threshold also exceeded
House 31	72 hrs 08 mins	+42 hrs 08 mins above guideline	Daily threshold also exceeded
House 11	64 hrs 05 mins	+34 hrs 05 mins above guideline	Daily threshold also exceeded
House 19	62 hrs 45 mins	+32 hrs 45 mins above guideline	Daily threshold also exceeded

These are not marginal exceedances at isolated receptors. At House 7, the predicted pre-mitigation exposure of 80 hours 29 minutes is equivalent to over 4,800 minutes of shadow flicker per year — at a single dwelling. The guideline permits 1,800 minutes. The exceedance at that one receptor alone is itself greater than the entire permitted annual exposure. The EIAR further records that 58 dwellings exceed the daily 30-minute threshold. These represent a substantial proportion of the residential population within the receiving environment.

KEY FINDING

The Applicant's own assessment confirms that 58 dwellings exceed the daily shadow flicker threshold of 30 minutes per day. Worst-case pre-mitigation annual figures in Table 5-9 reach 80 hours 29 minutes at a single receptor — nearly 2.7 times the 30-hour annual guideline. The Applicant applies a 26.5% regional sunshine correction factor to bring annual figures below the 30-hour threshold. That methodology is not expressly required by the 2006 Guidelines and must be scrutinised by the Commission. Whether assessed on the confirmed daily exceedances alone, or on the raw worst-case annual figures before sunshine correction, the scale of shadow flicker impact is substantial and widespread. A development that produces these outcomes and relies solely on post-consent SCADA curtailment as the safeguard has not demonstrated acceptability at design stage. That is a fundamental EIA and planning failure.

4.3 This Is a Design-Generated Breach, Not a Residual Risk

The shadow flicker exceedances identified in Table 5-9 are not worst-case risk scenarios, not precautionary estimates and not the product of pessimistic assumptions. They are the predicted outcomes of the proposed development as designed and submitted. The layout, as presented to the Commission, produces these results. The Applicant has designed a wind farm that, on its own modelling, fails the applicable national guideline standard at 58 dwellings on a daily basis.

A development is not made acceptable by the existence of a proposed mitigation system if the underlying design is non-compliant. The EIA Directive and the principles in Wells require that the likely significant effects of the development are understood and addressed before consent is granted — not managed after the fact. The Applicant's approach inverts that principle. It proposes a non-compliant layout and then relies on post-consent operational systems to cure a breach that should never have been designed in.

4.4 The Mitigation Reliance Cannot Cure the Design Failure

The Applicant's proposed mitigation is a SCADA-based turbine shutdown system. The Commission is respectfully requested to consider the following specific and unresolved deficiencies in the mitigation case:

- Residual exposure not demonstrated receptor by receptor. The EIAR does not provide a clear post-mitigation shadow flicker modelling output for each of the 58 dwellings that exceed the daily threshold.

- Enforceability not established. The EIAR does not set out, with sufficient precision, the legal mechanism by which SCADA shutdown obligations will be enforced post-consent.
- Monitoring and complaint response not specified. The EIAR does not clearly set out what monitoring will be carried out, how non-compliance will be detected, how affected residents will report and verify exceedances, or what remedial action will follow a confirmed breach.
- The 26.5% sunshine correction factor does not remove the guideline breach at design stage. The applicable 2006 guideline thresholds are not corrected for sunshine probability. The Commission should require the Applicant to identify the basis in the 2006 Guidelines for applying this correction factor.
- Curtailment affects the climate and public-interest justification. If turbines must be shut down for material periods to protect residential amenity, the EIAR must clearly quantify the resulting reduction in projected energy output.
- Why was the layout not amended? If the submitted layout produces pre-mitigation exceedances at 58 dwellings daily, the Applicant should have modified the layout at design stage.

4.5 Shadow Flicker as a Human Health and Amenity Matter

Shadow flicker is not merely a technical modelling concern. It is an environmental effect experienced by real people in their homes, gardens and places of daily life. Repeated light variation and moving shadow within a residential property can interfere with comfort and the use of rooms, rest and sleep, concentration and cognitive function, the enjoyment of outdoor amenity space, and the overall experience of the home as a place of refuge and wellbeing. At the scale and frequency implied by pre-mitigation exposures of up to 80 hours annually — equivalent to approximately 4,800 minutes of flicker within the home each year — these represent a persistent and repeated interference with the enjoyment of private residential space.

4.6 Turbine T05 — A Compounding and Unresolved Planning Defect

The shadow flicker issue is materially aggravated by the position of Turbine T05. T05 is directly associated with some of the most severe residential shadow flicker exposures identified in the EIAR. It is also the turbine that gives rise to a direct and admitted conflict with the Offaly County Development Plan wind energy zoning.

> "Only 1 no. proposed turbine (T05), is located at the boundary of this area between 'Open to Consideration' and 'Area not Deemed Suitable'. The hardstand and infrastructure of turbine T05 is located approximately 1.9m outside of the 'Open to Consideration' zoning."
>
> **Source: Appendix 13-5, Section 1.5.2.**

The same Appendix records that the area was excluded from the 'Open for Consideration' designation specifically to protect the character of the Lemanaghan Monastic Site. This was not an accidental or arbitrary zoning line. It was a deliberate policy decision, made through the County Development Plan process for a defined protective purpose. The Applicant's response — that the landscape appears visually similar on both sides of the zoning line — is not an adequate answer to a Development Plan compliance issue. The zoning line is not a physical landscape boundary. It is a policy boundary.

Defect	Evidence
Development Plan non-compliance	The hardstand and infrastructure of T05 are located approximately 1.9m outside the area designated 'Open to Consideration' for wind energy development. This is admitted by the Applicant.
Protective purpose undermined	The zoning boundary was introduced specifically to protect the character of the Lemanaghan Monastic Site. Placement of T05 infrastructure at that boundary directly undermines the policy purpose of the exclusion zone.

Severe residential shadow flicker contribution	T05 is associated with some of the most severe pre-mitigation shadow flicker exposures identified in the EIAR, including those at receptors experiencing annual exposure approaching or exceeding 80 hours — more than 2.5 times the applicable guideline.

4.7 Why the Commission Should Refuse Permission on This Ground

The shadow flicker issue, taken alone, provides a clear, self-contained and legally robust basis for the refusal of permission. The reasons are as follows:

- The applicable national guideline standard is clear, published and longstanding.
- The Applicant's own modelling demonstrates that the proposed layout breaches those thresholds at 58 dwellings on a daily basis before any mitigation is applied.
- The daily exceedances are not marginal. 58 dwellings are confirmed to exceed the 30-minute daily threshold. The worst-case pre-mitigation annual figures reach nearly 2.7 times the annual guideline threshold before sunshine correction.
- The Applicant has not demonstrated that the layout was optimised at design stage to avoid or reduce these exceedances.
- The proposed post-consent SCADA-based turbine shutdown is not a substitute for design-stage compliance.
- The principles in Wells (C-201/02) and Holohan (C-461/17) require that likely significant effects be identified, described and assessed before consent is granted.
- T05 adds a Development Plan compliance dimension to an already serious residential amenity concern.

5.0 Core Planning Theme 2 — Schools, Children and Vulnerable Receptors

Chapter 5 expressly identifies multiple schools within the receiving environment. Their identification creates an assessment obligation. These schools are fixed, occupied, predictable and sensitive population receptors. Schools are not equivalent to ordinary background receptors. They are structured educational environments in which children are required to concentrate, communicate, learn, interact, regulate behaviour and remain present throughout the school day.

This submission places particular emphasis on St Ciarán's & St Manchan's National School / Boher NS, which has a special needs unit attached. That fact materially increases the need for a careful, child-specific, school-specific and vulnerability-sensitive assessment.

5.1 Schools Identified in Chapter 5

School	Approximate Distance Stated	Reference Turbine
St Cailin's National School, Rashina	Approx. 2.2 km from nearest turbine	T01
St Ciarán's & St Manchan's National School, Ballycumber	Approx. 2.2 km	T11, northeast of T11
St Mary's National School, Pollagh	Approx. 2.4 km	T14, south of T14
St Cynoc's National School, Ferbane	Approx. 3.9 km	T02, southwest of T02
Gallen Community School	Approx. 4.0 km	T03, southwest of T03
Boher National School	Within wider receiving environment	Not clearly specified

5.2 Material Concern Regarding the Nearest Turbine

The EIAR states that St Ciarán's & St Manchan's National School, Ballycumber is located approximately 2.2 km northeast of turbine T11. However, a coordinate-based review of the Applicant's own turbine locations raises a material concern regarding the accuracy and completeness of that statement.

Receptor	Applicant's Stated Nearest Turbine / Distance	Coordinate-Based Turbine Distance
St Ciarán's & St Manchan's NS / Boher NS	Approx. 2.2 km from T11	T11: approx. 2.23 km
St Ciarán's & St Manchan's NS / Boher NS	T15 not identified as nearest turbine in EIAR wording reviewed	T15: approx. 1.78 km

Key Finding

The coordinate-based review suggests T15 may be closer to the school than T11. This is not a minor mapping issue. It goes directly to the accuracy of the EIAR baseline and the adequacy of the assessment of a sensitive school receptor with a special needs unit attached. The nearest turbine is directly relevant to operational turbine noise, shadow flicker, visual movement, blade movement, classroom disturbance, playground use, child safety and the day-to-day functioning of the school.

5.3 St Ciarán's & St Manchan's NS / Boher NS as a Sensitive School Receptor

The school has a special needs class attached. This means the school should have been assessed as a sensitive receptor in its own right, including the school building, classrooms, the special needs unit, sensory or quieter learning areas, playgrounds and outdoor play areas, school entrances and set-down areas, outdoor learning and recreation spaces, and the relationship between the school and each relevant turbine.

Children are not equivalent to adult residential receptors. They do not choose whether to be present during the school day. Children with autism, sensory processing differences, communication needs, anxiety, developmental conditions or other special educational needs may be more vulnerable to repetitive visual movement, moving shadow, blade rotation, amplitude-modulated noise, low-frequency sound, construction noise, traffic disruption or sudden changes in the surrounding environment. The EIAR does not appear to assess these matters in any project-specific way.

5.4 Schools Were Excluded from Shadow Flicker Modelling

The EIAR defines the shadow flicker study area as properties within approximately 2 km of the turbines. All schools identified within the receiving environment are located beyond that distance and were therefore excluded from shadow flicker modelling entirely. This is a critical omission. A school is not a less sensitive receptor than a dwelling for the purposes of shadow flicker assessment. It is occupied by children during daylight hours when shadow flicker may occur.

That concern is heightened where a coordinate-based review indicates that St Ciarán's & St Manchan's NS / Boher NS may be approximately 1.78 km from T15. If that distance is confirmed, then the school may fall within or very close to the type of distance band that should have triggered closer school-specific consideration, rather than exclusion based on a generalised turbine-distance statement.

5.5 Failure to Provide a School-Specific Assessment

The EIAR does not appear to treat schools as sensitive receptors in a meaningful or receptor-specific manner. The specific omissions include: no verified school receptor coordinate, no turbine-to-school distance table, no school-

specific mapping of buildings relative to turbines, no shadow flicker modelling at school locations, no school-specific operational turbine-noise assessment, no assessment of visual movement during school hours, no assessment of children with special educational needs, autism or sensory sensitivities, and no cumulative assessment of school-day exposure across noise, shadow flicker, visual movement, construction traffic, landscape change and general environmental disturbance.

5.8 Correspondence from St Cynoc's National School

The concern regarding school-specific assessment is further supported by correspondence received from St Cynoc's National School, Ferbane, one of the schools expressly identified in Chapter 5 of the EIAR as being within the receiving environment. That correspondence is included at Appendix 5-C. It is relied upon as direct evidence that at least one school identified in the EIAR has raised concern regarding the absence of clear, school-specific information and assessment. The St Cynoc's NS correspondence should be treated as corroborative evidence of a broader defect in Chapter 5: schools have been identified, but they have not been assessed in a complete, precise, child-specific or receptor-specific way.

5.12 Specific Information Required Before Any Positive Decision

Before any positive decision could lawfully be contemplated, the Applicant should be required to provide:

- verified coordinates for St Ciarán's & St Manchan's NS / Boher NS and confirmation of the exact school receptor point used;
- a turbine-to-school distance table showing the distance from the school building, boundary, special needs unit, classrooms, playgrounds and outdoor areas to each turbine;
- confirmation as to whether T15 or T11 is the nearest turbine to the school;
- school-specific mapping showing the school buildings, playgrounds, outdoor spaces and turbine locations;
- a school-specific shadow flicker assessment and a school-specific operational noise assessment;
- assessment of the special needs unit and children with sensory sensitivities or other vulnerabilities;
- assessment of school bus routes, drop-off points, collection times and child safety during construction; and
- a cumulative school-day assessment addressing noise, visual movement, flicker, construction traffic, outdoor play and vulnerable pupils together.

6.0 Core Planning Theme 3 — Human Health Assessment

Chapter 5 recognises noise as a pathway through which population and human health effects may arise. The HSE scoping response sought identification of noise-sensitive locations, baseline noise monitoring, predicted construction and operational noise impacts, shadow flicker, air quality and drinking water assessment. Despite this, Chapter 5 does not provide a clear account of what predicted noise means for sleep, indoor audibility, annoyance, vulnerable residents, children, schools, rural amenity or cumulative wellbeing.

6.2 Literature and WHO Guidance

The Applicant's own literature supports a stronger assessment than that provided. The EIAR relies on material referring to the absence of consistent evidence of direct pathological effects. However, the same literature acknowledges associations between wind turbine noise and annoyance, sleep disturbance, poorer sleep quality and reduced quality of life. Planning law does not require proof of disease before amenity and wellbeing impacts become relevant.

The treatment of WHO guidance is also problematic. If WHO guidance is invoked as relevant, it cannot simply be sidelined without replacing it with a stronger site-specific health assessment. An applicant cannot selectively invoke international guidance standards — accepting those that support the assessment conclusions and qualifying those that do not. Having invoked WHO, the Applicant is required either to demonstrate compliance with the WHO recommendation or to explain, with clear and specific reasoning, why a different standard is appropriate and nonetheless protective of health. Neither has been done.

6.3 The Flawed Conclusion

Chapter 5 states that a wind farm is not a recognised source of pollution. That may be correct in a narrow licensing sense, but it risks narrowing the human health inquiry too far. Wind farms can give rise to ongoing environmental pathways relevant to human health and amenity, including noise, low-frequency sound, amplitude modulation, shadow flicker, visual movement, sleep disturbance, stress, annoyance and interference with the enjoyment of the home.

A further specific omission is the absence of any assessment of amplitude modulation — the periodic variation in noise level caused by blade rotation, perceived as a rhythmic swishing or thumping. Amplitude modulation is recognised in UK Institute of Acoustics guidance as a distinct noise characteristic not adequately captured by standard A-weighted noise metrics. At 220 metres, the proposed turbines are among the largest ever proposed in Ireland. The potential for amplitude modulation at this scale has not been assessed in Chapter 5. This is a specific and material assessment gap.

6.4 Construction Phase Impacts on Population and Human Health

Chapter 5 does not provide a clear, receptor-specific assessment of construction phase impacts. The construction phase would involve heavy plant operation, significant HGV movements, excavation of peat, turbine foundation works, road building, substation construction and cable installation. These have the potential to give rise to construction noise at nearby dwellings and schools, HGV traffic on rural roads used by local residents and school buses, dust and particulate generation, potential peat-laden runoff, disruption to farm access and agricultural operations, and visual and sensory disturbance during what may be a multi-year construction period. This is a material gap contrary to Holohan and Article 5 and Annex IV of the EIA Directive.

7.0 Core Planning Theme 4 — Baseline and Receptor Identification

The EIAR's baseline description gives rise to serious concerns. Chapter 5 describes Corbeg as the nearest village and suggests that it provides a range of services including educational, recreational, spiritual and retail facilities. It is submitted that this is inconsistent with the actual receiving environment. Corbeg appears to be a rural townland characterised by dispersed dwellings, not a designated or serviced village within the county settlement hierarchy. This matters because baseline description is the foundation of EIA. If the receiving environment is mischaracterised, receptor sensitivity may be understated and subsequent assessments of population and human health may be weakened.

The EIAR also does not clearly identify all relevant receptors. It focuses heavily on individual dwellings within defined radii but does not provide a complete receptor-based assessment of wider community receptors, schools, agricultural holdings, equine receptors, vulnerable groups, rural roads, community facilities and material assets. The Commission must understand who is affected, how they are affected, and whether the effects are acceptable.

8.0 Core Planning Theme 5 — Real-World Offaly Evidence and Post-Consent Enforcement

The EIAR relies heavily on modelling, thresholds and future operational controls. The complaint records obtained under the Freedom of Information Act 2014 and exhibited at Appendix 5-A are directly relevant. They relate to operational wind farms within County Offaly involving turbines approximately 150 metres in height — materially smaller than the proposed 220 metre turbines. The complaints include reports of persistent night-time noise, low-frequency humming, vibration within homes, sleep disturbance, sleep deprivation, impacts on children, mental-health strain, shadow flicker disturbance and unresolved complaint processes.

These are precisely the type of lived impacts that Chapter 5 should assess. The FOI complaint records constitute contemporaneous documented evidence of reported community experience in the same county, arising from operational wind farm developments involving turbines materially smaller than those proposed. They are relevant not as proof of the same effects at Lemanaghan, but as evidence going directly to the reliability of the Applicant's assertion that post-consent complaint-handling systems will be effective safeguards.

9.0 Core Planning Theme 6 — Agricultural, Equine and Rural Receptors

The receiving environment is an actively farmed rural landscape. Chapter 5 does not clearly identify, map or assess agricultural and equine receptors in a structured manner. It does not identify farms or agricultural holdings within defined radii of turbines. It does not assess grazing lands, livestock presence, equine operations, farm access, water supply concerns, construction disturbance, operational turbine noise, shadow flicker, blade movement or cumulative multi-turbine effects on farm management.

This omission is material. Agricultural operations and livestock are relevant to material assets and rural livelihoods. They are also relevant to population and human health because farming is part of daily life, household wellbeing, economic security and rural community structure. The absence of a clear agricultural and equine receptor assessment means the Commission cannot understand the real-world consequences of the proposed development for rural land use and farm households.

10.0 Core Planning Theme 7 — Property, Material Assets and Residential Amenity

Property and material assets are relevant under the EIA Directive. The EIAR does not provide a sufficient Irish, local, site-specific or receptor-specific assessment of property and material asset impacts. It appears to rely on generalised and non-local evidence, including older studies concerning smaller turbines in different markets and landscapes. A proper assessment should have considered Irish market context, local property evidence, receptor-specific exposure, severe shadow flicker receptors, visual dominance, rural amenity, market perception, local estate-agent evidence, and cumulative impacts from noise, flicker, visual change and community concern.

11.0 Core Planning Theme 8 — Peatland Risk, Chapter 16 and Human Health Integration

Chapter 5 cannot be assessed in isolation from Chapter 16 and the wider peatland context. Chapter 16 identifies risks associated with major accidents and natural disasters, including peat instability, flooding, fire and extreme weather. Those risks are not adequately integrated into the population and human health assessment. Potential risk pathways include peat instability and movement, altered drainage, flooding, blocked flow paths, silt-laden runoff, water-quality effects, bog fire, smoke, emergency access limitations, and impacts on residents, roads, farms and schools.

If Chapter 16 identifies peat instability, flooding or fire as relevant risk pathways, Chapter 5 should assess what those risks mean for residential safety, emergency response, vulnerable residents, schools, water quality, smoke exposure, livestock, local roads and community wellbeing. A flat bog is not automatically a risk-free bog. The absence of integration between Chapter 5 and Chapter 16 is contrary to Holohan and Article 3 of the EIA Directive, which require consideration of interactions between environmental factors. The consequences of inadequate EIA on peatland are demonstrated by Commission v Ireland (C-215/06) (Derrybrien).

12.0 Overarching Failure — Cumulative and Integrated Assessment

The deficiencies identified above are cumulative and mutually reinforcing. The mischaracterisation of Corbeg undermines the baseline. The failure to identify all receptors undermines the noise, shadow flicker and human health assessments. The failure to assess schools and vulnerable children renders the human health assessment incomplete. The reliance on post-consent mitigation introduces uncertainty. The failure to engage with Offaly complaint evidence weakens the real-world reliability of the assessment. The omission of agricultural and equine receptors leaves a key rural land-use category unassessed. The property and material assets assessment is not sufficiently local or receptor-specific. The failure to integrate peatland risk means Chapter 5 does not address the full human health context. The T05 issue compounds all of this because the only turbine arrangement admitted to cross outside the 'Open to Consideration' zoning is also associated with significant shadow flicker impacts.

The result is a Chapter 5 that adopts a broad legal definition of health but performs a narrow technical exercise. It does not clearly identify who is most affected, how they are affected, whether impacts interact, or why the impacts are acceptable. It does not provide a sufficiently complete, precise or reliable basis for a lawful reasoned conclusion.

13.0 Recommended Reasons for Refusal — Chapter 5

It is respectfully submitted that permission should be refused for the following reasons, each of which is relied upon individually and cumulatively.

13.1 Shadow Flicker and Residential Amenity

The proposed development would, on the basis of the Applicant's own modelling, give rise to widespread shadow flicker exceedances at residential receptors, including 58 dwellings exceeding the daily shadow flicker threshold. The EIAR relies on post-consent turbine shutdown and operational mitigation without demonstrating, at assessment stage, that the impacts have been avoided at design stage or that residual effects will be acceptable, enforceable and certain. The proposed development would therefore give rise to unacceptable uncertainty regarding residential amenity and population and human health, contrary to the proper planning and sustainable development of the area, the 2006 Wind Energy Development Guidelines, Articles 3, 5 and 8a of the EIA Directive, and the principles in Holohan (C-461/17), Wells (C-201/02) and People Over Wind (C-323/17).

13.2 Turbine T05, Monastic Site Buffer and Development Plan Zoning

The proposed development would materially conflict with the plan-led approach to wind energy development under the Offaly County Development Plan by reason of the siting of Turbine T05 and its associated infrastructure at the boundary of an area designated 'Not Deemed Suitable for Wind Energy Developments'. The Applicant's own Appendix 13-5 confirms that the zoning alteration was introduced specifically to protect the character of the monastic site and further confirms that the hardstand and infrastructure of T05 are located approximately 1.9m outside the 'Open to Consideration' zoning. The Applicant has not demonstrated that T05 is necessary, unavoidable or acceptable, nor has it assessed whether omission, relocation or micrositing of T05 would better comply with the Development Plan and the protection of the Monastic Site.

13.3 Schools, Children and Vulnerable Groups

The EIAR identifies multiple schools within the receiving environment but does not provide a receptor-specific assessment of noise, shadow flicker, visual movement, cumulative school-day exposure, children, autism units, sensory sensitivities or special educational needs. This means that one of the most sensitive receptor groups within the study area has not been properly identified, described or assessed, contrary to Article 3 and Annex IV of the EIA Directive, Article 24 of the EU Charter of Fundamental Rights, the precautionary principle under Article 191 TFEU, and the principles in Holohan (C-461/17), Connelly v An Bord Pleanála [2018] IESC 31 and Klohn v An Bord Pleanála (C-167/17).

13.4 Inadequate Human Health Assessment

Chapter 5 adopts the WHO definition of health but does not apply it in a substantive, project-specific manner. It fails to assess real-world impacts on sleep, annoyance, stress, wellbeing, vulnerable residents, schools and the enjoyment of the home. It cross-refers to Chapter 12 without translating predicted noise into human health outcomes. It invokes WHO guidance but does not meaningfully apply it. It therefore fails to provide a coherent and integrated human health assessment sufficient to support a lawful reasoned conclusion under Article 8a of the EIA Directive, as confirmed in Commission v Ireland (C-50/09) and Kelly v An Bord Pleanála [2014] IEHC 400.

13.5 Mischaracterisation of the Receiving Environment

The EIAR mischaracterises Corbeg as a serviced village, contrary to its apparent status as a dispersed rural townland outside the settlement hierarchy. This undermines the baseline description of the receiving environment and may understate rural receptor sensitivity. Where the baseline is inaccurate or incomplete, the subsequent assessment cannot be relied upon as complete or reliable for EIA purposes.

13.6 Failure to Engage with Real-World Local Evidence

The EIAR does not meaningfully engage with FOI complaint evidence from existing wind farms in County Offaly involving materially smaller turbines. That evidence records reported impacts including night-time noise, sleep disturbance, low-frequency humming, impacts on children and unresolved complaint processes. In

circumstances where the Applicant relies on modelling, thresholds and post-consent controls, failure to engage with local real-world evidence renders the assessment incomplete and unreliable.

13.7 Agricultural, Equine and Rural Receptors

The EIAR fails to identify, map and assess agricultural holdings, livestock, grazing lands and equine receptors within the receiving environment. In an actively farmed rural landscape, this is a material omission. The proposed development has not been adequately assessed in terms of material assets, rural livelihoods, agricultural land use or population and human health.

13.8 Property, Material Assets and Residential Amenity

The EIAR does not provide a site-specific Irish assessment of property, material assets and residential amenity impacts. It relies on generalised and non-comparable material without adequately assessing the particular effects of 220 metre turbines, open bog views, widespread shadow flicker, local complaint evidence, rural tranquillity and market perception.

13.9 Peatland Risk and Human Health Integration

Chapter 5 does not adequately integrate peat instability, flooding, bog fire, smoke, emergency access, water quality and Chapter 16 major-accident risks into the population and human health assessment. This creates internal inconsistency and fails to assess interactions between environmental factors, contrary to Article 3 of the EIA Directive and Holohan (C-461/17). The consequences of inadequate EIA on peatland are demonstrated by Commission v Ireland (C-215/06) (Derrybrien).

13.10 Cumulative and Systemic Deficiencies

The deficiencies in Chapter 5 are cumulative and systemic. They affect baseline description, receptor identification, shadow flicker, noise, schools, vulnerable groups, agriculture, property, peatland risk and human health integration. Taken together, they mean that Chapter 5 does not provide a complete, precise or reliable basis for An Coimisiún Pleanála to reach a lawful reasoned conclusion on likely significant effects on population and human health. Permission should therefore be refused.

14.0 Conclusion and Core Request

For the reasons set out above, it is respectfully submitted that Chapter 5 of the EIAR is materially deficient. The Applicant's own data identifies widespread shadow flicker exceedances. The Applicant's own Appendix 13-5 confirms that the wind-energy zoning alteration around the Lemanaghan Monastic Site was introduced specifically to protect the character of that site and that the hardstand and infrastructure of T05 are approximately 1.9m outside the 'Open to Consideration' zoning. Schools and vulnerable children are identified but not assessed. The receiving environment is mischaracterised. Human health is defined broadly but assessed narrowly. Real-world local complaint evidence is not meaningfully engaged with. Agricultural, equine and property receptors are inadequately assessed. Peatland-related risks are not integrated into the human health assessment.

This is not a case where minor clarification or standard planning conditions would be sufficient. The deficiencies go to the core of the EIA process. They affect the ability of the Commission to understand who is affected, how they are affected, whether effects interact, whether mitigation is certain and enforceable, and whether the proposed development is acceptable in real planning terms.

Core Submission

It is respectfully submitted that An Coimisiún Pleanála should refuse permission. In the alternative, no positive decision should be contemplated unless and until the Applicant provides complete, precise, receptor-specific, independently reviewable and legally robust further information addressing all of the deficiencies identified in this submission.

SECTION 5 ATTACHMENT Schedule

ATTACHMENT	Title	Purpose
ATTACHMENT 5-A	FOI Complaint Records — Existing Wind Farms in County Offaly	Evidence of reported noise, shadow flicker, sleep disturbance, impacts on children and unresolved complaint processes at operational Offaly wind farms involving turbines materially smaller than those proposed.
ATTACHMENT 5-B	Corbeg Baseline and Settlement Hierarchy Review	Demonstrates that Corbeg is not a serviced village and supports the baseline mischaracterisation objection.
ATTACHMENT 5-C	Correspondence from St. Cynoc's National School, Ferbane	Supports the objection that schools are identified within the receiving environment but not assessed as sensitive receptors.

ATTACHMENT 5A – SUMMARY OF EVIDENTIAL BASIS

The evidence presented is neither anecdotal nor isolated. It establishes a consistent, documented and long-standing pattern of disturbance arising from operational wind turbines in County Offaly, which has been acknowledged but remains unresolved at local authority level.

This evidence therefore constitutes material and credible proof of **foreseeable impacts on human health and residential amenity**, including noise disturbance, sleep disruption, shadow flicker, impacts on children, and loss of quality of life within the home.

A chronological bundle of redacted complaints and correspondence is provided at **Appendix 5-A (A1–A19)**. These documents demonstrate a sustained pattern of:

Persistent and intrusive turbine noise, including low-frequency humming and "jet-like" roar;

Chronic sleep disturbance and deprivation;

Adverse impacts on children's wellbeing, including fatigue and effects on daily functioning;

Ongoing residential amenity loss; and

The absence of effective enforcement, investigation or resolution over a prolonged period.

The purpose of this evidence is not to determine the merits of other wind farm developments, but to demonstrate that such impacts are **real-world, recurring and foreseeable**, and must therefore be fully and properly assessed prior to the grant of consent in accordance with the requirements of the EIA Directive.

ATTACHMENT 5-A

Documented Noise, Shadow Flicker, Human Health and Amenity Complaints

Meenwaun / Cloghan / Stonestown Wind Farms (2018–2025)

This appendix contains redacted complaint records and related correspondence evidencing actual impacts experienced by residents living in proximity to operational wind turbines in County Offaly.

The documents are relied upon as **primary evidence of human health and residential amenity impacts**, including noise disturbance, sleep deprivation, shadow flicker concerns and unresolved enforcement issues. They demonstrate that such impacts arise in practice and persist over time despite regulatory oversight.

Chapter 5 appendix

Appendix Schedule

Appendix Ref.	Date	Document	Key Issue
A1	09.01.2018	Offaly County Council Complaint Log	Establishes initial complaint record and long-term pattern
A2	01.05.2018	Formal Complaint Letter	Significant noise concerns and monitoring issues
A3	11.08.2018	Escalation Letter	Night-time disturbance and lack of resolution
A4	04.12.2018	Follow-Up Complaint Letter	Persistent intrusive noise (grinding/tearing)
A5	14.10.2019	Continued Complaint Letter	Ongoing "jet-like" turbine noise over extended period
A6	26.08.2020	Noise Report Letter	Continued high-level noise exposure
A7	03.11.2020	Escalation Letter	Prolonged turbine noise with no respite
A8	01.01.2022	Complaint Letter	Continuous day and night noise over extended period
A9	13.07.2023	Updated Noise Complaint Letter	Fluctuating noise, including tonal and low-frequency elements
A10	08.07.2024	Complaint	Sleep deprivation and mental health impacts
A11	21.07.2024	Follow-Up Complaint	Ongoing unresolved noise and shadow flicker concerns
A12	21.08.2024	Complaint	Documented impacts on children and exhaustion
A13	21.11.2024	Complaint	Deterioration in living conditions due to persistent noise
A14	06.12.2024	Complaint Email	Continued disturbance without resolution

A15	18.12.2024	Complaint	No improvement despite repeated reporting
A16	30.12.2024	Complaint	Family disruption and loss of amenity
A17	30.12.2024	Additional Complaint	Combined noise and shadow flicker impacts
A18	29.01.2025	Complaint	Severe sleep deprivation over multiple nights
A19	18.07.2024	CEPA Letter to CEO, Offaly County Council	Formal escalation highlighting technical, legal and public health concerns

These documents collectively demonstrate that noise and shadow flicker impacts are not theoretical risks but established and recurring human health issues within the receiving environment.

A1

Log No: 10161 (Environment)
File No: NP-18-1237
Complaint Date: 09/01/2018
Complainant:
Alleged Polluter: MEENWAUN WIND FARM

Pollution Address: UNKNOWN UNKNOWN UNKNOWN

Complaint Details:
Middle Meenwaun Wind Farm being commissioned and suffering severe noise pollution from this.Last Sunday night was the first night that caused serious noise. The ESB have generised the turbines and there is no noise monitoring on them. Its like an aeroplane at her head. Can now hear the noise in the bedroom and they have double glazing. The company has never really communicated with them. Company GE Electric are doing sojme noise testing and a german company Element Powere are managing the project. . Foreman on site is They are the highest turbines in Irl. Distance from the curtilage of her house to a turbine is 502 m. Windfarm operations controller is . She is wondering where do they go with this if we cannot help? Landlords of the land are all absentee.

Complaint History:

Type	Date	Action	Comments
Complaint Closed	01/10/2024 11:03	Closed By: Maria Treacy	Comments: Issue with Planning Enforcement, awaiting outcome of planning enforcement process
Attachment	14/06/2022	Added By: Helena Bracken	
Attachment	05/05/2022	Added By: Helena Bracken	
Attachment	11/02/2022	Added By: Helena Bracken	
Referral	05/01/2022 09:12	Referred By: Helena Bracken to Maria Treacy	Comments: Please see letter received today attached. I will email same to Mary Hussey.
Attachment		Added By: Helena Bracken	

Comment	06/08/2019 16:34	Comment By: Martina Cripps	Comments: Call received from re: Meenwaun Windfarm. 1: said the noise is unbearable. 2: Noise is worst at the back of the house and is not bad at the front of the house. 3: said the noise affects her grandson a lot. 4: I said the independent consultants would begin monitoring over the coming weeks and we would be in touch.
Comment	05/06/2019 09:48	Comment By: Martina Cripps	Comments: Return call to from Martina Cripps: 1: John lives in Cuba Avenue. 2: He said the noise was bad over the past few days. He said his neighbours can hear it too and it is like a humming noise. 3: He said it doesn't wake him up but he can hear it. He drove out there one night and identified that it was Meenwaun Windfarm.
Referral	04/06/2019 12:07	Referred By: Niamh Lawless to Martina Cripps	Comments: Hi Martin, I had looking to log another complaint in relation to the noise pollution in this area. His number is .
Comment	23/04/2019 11:15	Comment By: Martina Cripps	Comments: Return call to re: Meenwaun windfarm: 1: said the noise over Easter Saturday and Sunday was very bad 2: said that the turbines were turned off for 10.5 days and during that time the aviation lights were also off. 3: commented that the noise at her nephew's house ( ) is extremely bad, the noise is similar to an echo. 4: asked when the OCC survey would be done - I said we hope that it will commence in approx. 6 weeks. Not 100% sure on dates but we plan to get it done a soon as possible and we would keep them updated.

Comment	19/03/2019 15:04	Comment By: Martina Cripps	Comments: Call received from re: Meewaun Wind Farm; 1: said that the wind turbines have been turned off for the past 6 days. 2: called her recently advising her that Element Power have installed a program/software to reduce noise from turbine 5 and requested to record/make note when noise is considered to be too loud. is not happy about this as she feels Element Power don't believe her. 3: I asked to keep in touch with us and let us and keep us updated.
Comment	15/01/2019 12:12	Comment By: Martina Cripps	Comments: Call received by Martina Cripps from re: Meenwaun wind farm. Olive said that it is very noisey out there at present. The noise is very loud outside but is ok inside the house. said that she wants to start work in the polytunnel soon but the noise is deafening in the tunnel so she won't be able to. said the noise is bad during the day but much worse at night time, particularly between 03:00 - 06:00 hrs. When the turbines change direction they make a very loud grinding noise. commented that the noise report that was undertaken in 2018 was useless as monitors were turned over for days at times, also disagreed with some of the noise monitoring locations. said that she was unhappy with Element Power using a photo of her house in their reports. suggested that the turbines are turned off from 23:00 hrs - 07:00 hrs - this would allow them to sleep. is concerned that the proposed 27 additional turbines (Bord na Mona and Cloghan projects) will add to the problem. I let know that we are awaiting a response from planning re: the report undertaken in 2018 and will keep her updated.
Attachment		Added By: Ray Kennedy	
Attachment		Added By: Ray Kennedy	

Letter	06/12/2018 08:50	Letter Sent: Letter Received (scanned)	
Comment	28/11/2018 12:06	Comment By: Kim OMeara	Comments: Phone call received from at 12.00 in relation to intolerable noise from the turbines for the last number of days. She is waiting on a report from OCC which she says was due two weeks ago. OCC are to update Olive on when she will hear something from us.
Letter	23/10/2018 11:37	Letter Sent: Letter Received (scanned)	Letter from Dated 03 October 2018
Referral	10/10/2018 12:41	Referred By: Catherine Magee to Vivian O'Brien	Comments: Referring to you in my absence Vivian. See emails sent to you and Mary on this.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	05/10/2018 12:24	Comment By: Catherine Magee	Comments: I spoke to again today. She was a little irate in relation to the confusion on the review of the reports. I advised that we had received the review of the operational report but has still been awaiting a review of other documentation required in conjunction with this and that is why there had been some confusion during out last conversation. I advised that we would come back to her when we had any substantial update on the matter.

Comment	27/09/2018 09:54	Comment By: Catherine Magee	Comments: I spoke to today on the issues. I advised her of the review of the operational monitoring report and that we want to ensure we have it done right and fully accurate information to base our proposed direction to take. She discussed the initial planning permission and how a full critique by was submitted in relation to a number of concerns raised by residents. This was acknowledged by the planning section. When noise monitoring undertaken at the time of submission of planning permission was undertaken Element Power did send a copy of the details to and asked for his opinion. What is trying to say is that they seemed to take on board some of the advice from r and disregard some other. She advised that outlined that he was meeting GE representatives on approx. 13 August however I have not received an update on this as yet despite emails sent. She will continue to log and submit the issues to environment.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Ray Kennedy	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	18/07/2018 12:09	Comment By: Catherine Magee	Comments: rang today and outlined that she noted the noise from the turbines was terrible last night from 10 pm till approx. 11.15 when she left her house and was not back so is not aware of what happened during the night. It was a grinding noise as they turned. Every time they change direction the noise changes. I have advised I have received the noise report and need to have a look at it before I can provide a response.

Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	27/06/2018 13:11	Comment By: Catherine Magee	Comments: I spoke to today and she advised the noise from the turbines is horrendous. Last night at 10 pm they had to close all their windows and in this heat it is unbearable but they had to due to the noise. She advised that she read in the Midland Tribune that the June meeting of the Birr Municiap District was told that the noise monitoring results would be submitted to the July meeting. I advised I had no information on that. I advised I had had no response from following my last email and I had also followed up with a phone call to him.
Comment	07/06/2018 12:23	Comment By: Catherine Magee	Comments: Further call from today. She advised for the last week or so the noise is liveable with. In saying that turbine 5 has been off a bit, and turbine 1 was off yesterday and also there is not much wind at present. She asked about an update on the noise monitoring. There were 7 weeks recorded at her premises. Asked can she have a daily result on this. I advised I could not guarantee this as there were regulations and guidelines being followed in relation to the monitoring. She asked was there any possibility of limiting the time they run, for example not running at night. I did not provide her with information on that at present.

Comment	23/05/2018 12:13	Comment By: Catherine Magee	Comments: I received a phone call from and returned her call. She advised that they had an horrendous weekend gone by in relation to noise from the windfarm. Friday the 18th May, the noise was terrible in their house from the noise of metal on metal from the turbine on every rotation. She advised that her husband said it sounded like a bearing was gone. On Saturday it was like an aeroplane was stuck over them. Not bad on Sunday and has not been bad since then.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	16/05/2018 09:07	Comment By: Catherine Magee	Comments: I spoke to today in relation to any update on the noise monitoring. He advised that he hoped to have a draft of data from the noise monitoring by then of this week, however a number of people will need to assess the data to ensure everything is fully accurate given the high attention given to this site. He advised that whenever he has any information he will update on it. He still has no further update on the proposal for the turbine reduction strategy.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	09/05/2018 13:12	Comment By: Catherine Magee	Comments: Phone call with n relation to her correspondence. I advised her of the communication received from in relation to prpvision indication of compliance with planning conditions but willingness to work to see if there are alterations that can be done to reduce the sound levels. I advised I would update if I have anything to report. I have emailed with the latest information received.

Comment	08/05/2018 12:47	Comment By: Catherine Magee	Comments: I spoke to as I had received a further call from her on the noise issues at Meenauan. She advised that last Friday the 4th May the noise was terrible. It sounded like Metal scraping off metal on every turn it took. Turbines were off Saturday and Sunday and back on yesterday evening. She asked could the Senior Executive Engineer give a ring to discuss further.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Comment	24/04/2018 11:12	Comment By: Catherine Magee	Comments: Phone call from outlining that the noise over the last few days has been terrible and the straw that broke the camels back was yesterday where it was consistent all day from about 10:00 am - 4:00 pm and then very bad again during the night. I have emailed on foot of this further information.
Attachment		Added By: Catherine Magee	
Comment	23/04/2018 11:17	Comment By: Catherine Magee	Comments: I spoke to on the latest communication received on the complaints of the noise and asked was there any data information also available on the latest monitor installed at . He advised it would most likely be Wednesday before he would have anything available. He was going to ring to follow up.
Comment	23/04/2018 11:15	Comment By: Catherine Magee	Comments: Phone call from on foot of the correspondence submitted. I advised I had emailed on Friday last looking for information on data relating to the noise monitoring and had not received any response as yet.
Investigation	17/04/2018 11:39	Investigated By: Catherine Magee	Recorded By: Catherine Magee

Investigation	13/04/2018 09:39	Investigated By: Catherine Magee	Recorded By: Catherine Magee
Comment	13/04/2018 09:38	Comment By: Catherine Magee	Comments: Message received from that a noise monitor has been installed at her property as requested.
Comment	10/04/2018 09:35	Comment By: Catherine Magee	Comments: Phone call from yesterday left as a voicemail outlining that the wind turbines appear to be on all the time now, however feels that they are also running at the pretty much the same speed all the time also. I called her back and advised her of any updates I had from in relation to the 5th turbine and also the noise monitoring update - if the 5th turbine was ever to be installed a noise monitoring programme would have to be repeated to include it.
Comment	30/03/2018 10:13	Comment By: Catherine Magee	Comments: Phone call from outlining that the turbines were all on last night, She woke up at 3.40 to a tearing sound as the blade went round.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	

Comment	15/03/2018 13:44	Comment By: Catherine Magee	Comments: I spoke to today and advised I had received further calls re concerns on the noise monitoring. He advised that any down time with the turbines would mean that the noise monitoring would be extended. Three areas may result in Turbines not on breakdown, maintenance or dispatch of electricity. We discussed the noise monitoring and I advised that NG3 guidelines are a good basis for monitoring. He advised me of the blade pitch is what causes the turbines to turn. At 14 m/s wind turbines are at full output, and at 8/9 m/s turbines would be at their loudest. He hopes to get a full spectrum of wind speeds during the monitoring and hopes some data may be available nect week.
Comment	15/03/2018 13:43	Comment By: Catherine Magee	Comments: Phone call from re concerns on the noise monitoring.
Comment	05/03/2018 12:16	Comment By: Catherine Magee	Comments: rang and outlined that the noise monitoring in relation to the turbines appears to be a joke. The information she provided is that turbine number 5 has been off nearly all the time. Turbine number 4 has been off since 1st March. The only ones working have been turbine 1 and 2. I advised I will look into it and hope to travel there tomorrow. I'll update following that.

Comment	25/02/2018 09:39	Comment By: Catherine Magee	Comments: Complaint received from by email on 25th February as follows: Hi Catherine, My name is and I currently live on Garbally Lane. I am approx 2.5km from Meenwaun Windfarm and can see them perfectly from my back garden. They have disrupted our lives from the minute they have started the construction of them. Our Lane here in Garbally was ripped up and resurfaced and to say the County Council since resurfacing have been out to repair it on a number of occasions would just be being kind. It's an absolute disgrace! Since the commencement of the turbines on January 5th it constantly sounds like there is a constant drone coming from them which is just awful when you are outside! For an area with beautiful views and lovely walks it really doesn't make you want to leave your house as soon as I open the back door I can hear it! Hopefully my experience along with others will bring in independent noise evaluators to help our lives at least return to normal! Kind Regards,
Comment	23/02/2018 13:15	Comment By: Catherine Magee	Comments: Further complaint received from who lives on Garbally Lane in relation to the noise issue. Same description as others in relation to sounding like a plane. I advised her of the situation in relation to the noise monitoring beginning next week and that I would be visiting the site. We would be receiving the information from the operations manager.

Comment	23/02/2018 09:37	Comment By: Catherine Magee	Comments: Complaint received by email from in relation to noise from the wind farms as follows: My Name is I am a resident on Galbally Lane close to Meenwaun Windfarm. I want to complain about noise levels coming from the turbines which on some nights prevent myself and my young family from sleeping . Hopefully you can us help because to everyone else we don't seem to count. Yours hopefully
Comment	22/02/2018 13:18	Comment By: Catherine Magee	Comments: Phone call with He advised that the noise monitoring is due to start on Monday and that all settings would be as submitted in planning submission. The first noise date would most likely be downloaded in 2/3 weeks and assessment can then begin on compliance. If the levels are shown to be non-compliant then it would be possible to put the turbines into Noise Reduction mode to address the issues. He has arranged to keep me updated.
Attachment		Added By: Catherine Magee	
Comment	20/02/2018 11:38	Comment By: Lorraine Watkins	Comments: rang and asked that her call be returned re ongoing issue with Meenwaun Wind Farm.
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	

Comment	12/02/2018 13:12	Comment By: Catherine Magee	Comments: I received a further call from advising that at 1 am Sat/ Sunday morning the noise was terrible - it was like a pumping sound - died down at around 2 am. At this time she has a tv and 2 radios on in the house! She advised that she heard that the turbines are going to be handed over to the grid this week and where is this going to leave them? I advised I would return to her on it. She provided information on the planning document in relation to Chapter 10 page 19 where it refers to Noise and Vibration and outlines that it is possible to run the turbines in Noise reduction mode of operation whereby noise levels are lower by reducing the rotation speed of the turbines resulting in loss of electrical energy. I advised I will look into this.

Comment	09/02/2018 13:01	Comment By: Catherine Magee	Comments: I spoke to in relation to the follow up he was undertaking with GE. See points made below: A 3rd party has assessed the turbine parameters and he has been advised that the turbines are at the optimum settings and little else can be done. He appreciates what the neighbours are saying however he has been advised that the turbines are doing exactly what they should be doing. The noise monitoring will go ahead probably at the end of the month most likely by He has been advised by Storm that 2 steps should go ahead: the noise monitoring. If the levels fall outside the limits then he has a technical document to go back with to GE and if this is not accepted then a 3rd party would have to be engaged for a sound warranty. It is the cumulative sound levels that are outlined in planning. I mentioned of the concern on it being independent and he highlighted that no company would put their reputation in jeopardy in relation to inaccurate results. I asked what was GE's response to the media file and he said they asked what were the conditions at the time, that they are conscious of meeting their planning conditions. I advised I will follow up on Wednesday to get a more concrete update on the noise monitoring dates.
Attachment		Added By: Catherine Magee	

Comment	05/02/2018 10:01	Comment By: Catherine Magee	Comments: Another complaint has been received on this issue from Deirdre Lally on behalf of her husband Declan Lally. She advised on Saturday the 3rd February all turbines were on and the sound was like a plane landing when she came out her door. It's felt like a plane engine above your head compressing down on her chest. They have heard the turbines since they started. She took measurements on her phone that day and the noise levels were over 56 to 60 dB. I advised her of the information that Alan Edwards had provided me. She has no faith in the noise monitoring that they are proposing to do as it will not be independent she feels. She asked is there any way that we can force an independent survey? I advised I will return to her on it.
Investigation	05/02/2018 09:31	Investigated By: Catherine Magee	Recorded By: Catherine Magee
Comment	01/02/2018 13:26	Comment By: Catherine Magee	Comments: I spoke to today and advised I am meeting on Monday morning. She advised no.5 was off today and they had peace!
Attachment		Added By: Catherine Magee	
Attachment		Added By: Catherine Magee	

Comment	24/01/2018 11:07	Comment By: Catherine Magee	Comments: Phone call received from , mother of who lives in the 3rd house down from turbines on the main road. She advised they are experiencing noise since the 5th January 24 / 7. I asdvised her of my visit out to the site on Friday last and advised that the noise levels appeared low on the meter on my mobile and that it is the cumulative noise that is included in the planning permission. She advised they have trees and a garage behind them but they still experience the sound from the turbines. She advised of issues in the earlier stages in relation to H& S where they base was swaying at one stage, a blad had come off another time. She advised that the German Technician assessing the sound said they were noisy. I advised I would follow up with on site to assess things further.
Comment	23/01/2018 11:03	Comment By: Catherine Magee	Comments: Phone call from , resident of the first house on the left out on the main road from the turbine. He advised that he is experiencing noise issues. He took a video of it one night at arounf 12:00 and asked that solicitor submit it to the Council on his behalf to give an indication as to what they are experiencing. I advised it does not seem to have come and I have asked him to email me directly if it can through, size wise. I advised him of my visit out to the site and that the noise levels were not excessive but that I would follow up with and meet him out on site.
Investigation	19/01/2018 12:36	Investigated By: Catherine Magee	Recorded By: Catherine Magee
Comment	17/01/2018 15:19	Comment By: Lorraine Watkins	Comments: rang this afternoon asking to speak with head of Environment to discuss this ongoing issue with Meenwaun Wind Farm, I emailed Philip Glover her mobile number as she asked that he return her call.

Comment	16/01/2018 08:55	Comment By: Catherine Magee	Comments: I spoke to of Element Power in relation to the noise complaint and he put me on to , email , who the Operations Manager with Element Power assest Management who are contracted by Storm to manage the project. He made the following points: It is the cumulative noise levels that are outlined for compliance in the planning conditions and at present only 2 turbines are up and running therefore they have not started the noise monitoring as yet. T4 and T5 are the most southern turbines. T1 and T2 will be the next to turn on. Envisage the next 2 to be commissioned for 10 days and all to be connected to the Grid by mid February at which time they can start the monitoring. He estimates a full 2 weeks of continuous monitoring however if it takes longer, they will do it. They want and need to get an accurate picture of the sound in order to tweek things for improvement. He advised that when any complaint comes through he logs them all and investigates them all. Has been involved with over 500 turbines in Irl but this is the first windfarm he has been involved in in Offaly. A technician was sent out last Saturday (11th Jan) and also went round to listen to trhe sound. At that stage he could hear blade noise and background noise. He is logging everything to build up a picture and will be able to make finer adjustments to the turbines to improve any issues. He made the point there will always be some sound from a turbine. There are times that residents will experience noise from turbines (Blade noise) but should not cause disturbance or constant noise. . He has provided me with his phone number, email and I have advised that I will call out at some point to assess the setup.
Referral	09/01/2018 13:28	Referred By: Catherine Magee to Catherine Magee	Comments: n/a

A2

May 1 2018

Ms Catherine Magee
Environment Section Offaly
County Council
Charleville Rd.
Tullamore

Re: Meenwaul Wind Farm Noise

Dear Catherine,

I am writing in reference to your letter of 28th March in regard to noise analysis at the Meenwaun Windfarm. You note thatus advised that only data that has been gathered during periods when all 4 turbines are operating without restriction will be used. I am concerned that all 4 turbines are not on for long enough periods to give a reading that fulfils that condition.

For example, on 19th and 20th APHI each turbine was off and on alternately.

on 21 st 22nd, 23rd April the noise was dreadful as all turbines were on with a high level of noise night and day outside and inside the house.

On April Representative from Fehily Timoney & Co came on 24 April and collected the data from the noise monitor at our home.

On 24th, 29, 26th, 27th April turbines were each on and off, particularly Turbine I, however, noise level still high for parts of those days.

On 28 th, 29 th, 30 th April turbines still in operation alternatively but it was very slowly and very quietly.

The worst day for a while was early this morning with a loud, tearing, jet sound from the turbines.

I am anxiously waiting for a response regarding the data collected at our home and finding out how the company are planning to alleviate this problem to which we are being exposed daily.

Thank you for your continuing feedback on the situatation.

Yours sincerely,

A3

11 August 2018

Ms Catherine Magee
Environment Section Offaly County Council
Charleville Rd. Tullamore



Re: Meenwaun Wind Farm Noise

Dear Catherine,

I now realise you are on annual leave. As there has been no progress in lowering the level of the noise from the turbines over the past eight months I am forwarding a synopsis of noise disturbance over the past 2 weeks since I last wrote on July 27. Perhaps you will be able to log the following information on your return.

The situation here seems to be deteriorating. The noise of the turbines is dreadful outside our house as I write at 6:00am and can even be heard inside. It seems to drone on for hours and hours. It is extraordinary that the company has been seeking a solution since we first reported it on January 6 and a solution has still not been found. Ihe noise continues to be present in the house waking me up in the early hours ofthe morning at which time it is difficult for me to get back to sleep.

Since Wednesday July 25 when I last wrote there have been very few periods when the turbines were quiet. I can give you a breakdovm of each day if you wish, however there is similar patiern over the last 2 weeks. I am waking up to the sound of turbines most nights. This could be at 2:00am, 1:45am, 5:00am, 12:30am, 3:15am . \Vhatever the time my sleep is interrupted and it is diffcult to get back to sleep. The sound is not always in the house at this time. If it is I cannot even read in comfort. There seems to be a pattern. By 7:00am the noise is at a lower level but gradually gets louder as the afternoon progresses and into the night. A period that was particularly bad was the later hours of Sunday July 29 to Wednesday August I .

As you were on leave I phoned on Thursday A%ust to enquire about the Data from the noise monitor installed at our house on April 10 and collected on May 21. He is sending a copy of the results to me which he says show that the company is compliant with planning permission. For me, solving the unacceptable noise at our property is a completely different issue. He is meeting with GE on Monday for feedback on their investigggipgs the past month.



I look forward to talking to you in September.

Yours sincerely,

A4

4 December 2018

Ms Kim O'Meara
Environmental Technician
Environmental and Water Services Offaly County Council Charleville Rd. Tullamore

CORPORATE SERVICES
6 DEC 2018
OMHAIRLE CHONTAE UIBH FHAILI

Re: Meenwaun Wind Farm Noise

Dear Ms O'Meara,

Thank you for your letter dated 13 '2018 noting that the decision on t November the Wind Farm compliance review will be made in the next few weeks.

In the meantime I am sending you a synopsis of the noise we have experienced for the past few weeks for your files. The pattern is similar to that which has now been on-going for almost a year. The period from Sunday November I I to Saturday November 17 was particularly difficult for us as all four turbines were turning continuously for the entire block of time. There was the same tearing, grinding sound all day and all night.

There was then a different pattern in the block ofdays from Sunday November 1 8 to 'Imursday November 22 as turbines were working alternately i.e. one off or 2 off, others rotating slowly. This pattern changed as the day progressed. During the day the noise was at a low level, however, most nights the grinding noise retumed. There is always a blast of noise from the turbines when we open the back door. The noise is always louder there and I wonder ifit is related to the position of our garage and hedge.

By Tuesday November 27 all turbines were working together again and producing the same rough grinding sound. Yesterday turbine 2 and turbine 5 were the only turbines rotating; however, there was still a grinding sound from the 2 turbines.

I spoke to i•orn Element Power on August 9. The company had already sent the results ot-the noise monitoring survey to Offaly County Council. In a separate issue from that survey GE installed acoustic recorders on the turbines in response to our noise concerns and they commenced working on July 9. was to attend a meeting with GE for feedback on Monday, August 13. We received no further information. Did your section receive results from these tests?

'fbaul; you for your continuing responsiveness to the matter. We await the decision from the Wind Ferm compliance review.

Yours sincerely,

A5

14 October 2019

Ms Martina Cripps
Environmental Technician
Environmental and Water Services
Offaly County Council
Charleville Rd. Tullamore



Re: Meenwaun Wind Farm Noise

Dear Martina,

I am to keep you informed of the turbine noise pollution situation at my residence for the days since 11 September when I last wrote to you.

Unfortunately, the situation with the turbines near our residence is not improving. For the first week it was quieter on several occasions at the house as turbines were off for long periods oftime:

- Turbines all off all day 1 1 September to 13 September
- Jet noise returned 14 and 15 September as all turbines on
- 16 September to 18 September low level noise as there was a pattern of alternate turbines turned off and on which continued all day

Unfortunately the 2 week period from 19 September to 2 October was very difficult for us. Most of the time, over this entire period, turbines emitted a roar, similar to ajet. At these times the noise posed a nuisance as we could not leave open our dining room, kitchen, bedroom windows and back door. There were very high winds 3 and 4 October during Stom Lorenzo and it was difficult to distinguish any noise from the turbines. The noise level was high from 5 October to I I October. Since 12 October the speed of the turbines has varied turning slowly for a period with a lower level of noise.

I understood that a consultant was appointed by Offaly County Council to undertake an assessment which would provide clarity regarding compliance of the Meenwaun Windfarm with agreed planning. However, I also believed that the consultant was to investigate a planned action on the noise complaints I have sent in. Subsequently, I believed a meeting would be arranged between the consultant and the residents to discuss the siting of noise monitors. I believed that I would have further information on the proposed plan of action after the Environment Section meeting with the consultant on 26 July. However, I have received no more information. This is particularly upsetting as it is more than 21 months since we first reported the noise pollution.

Please inform me of progress that has been made.

Yours sincerely,

A6

26 August 2020

Ms Olivia Hughes
Planning Section
Offaly County Council
Charleville Rd,
Tullamore

Re: Meenwaun Wind Farm Noise

Dear Olivia,

I am writing to update the Planning Section on the turbine noise pollution situation at my residence for the days since I wrote to Planning on 24 July 2020.

Regrettably, the simation has changed little since my last report. However, there was one major difference over this period as al! turbines were off alt day and night from 9 August to 13 August.

For the bulk of the last 32 days the turbines emitted a loud jet roar all day and into the night. This occurred on July 24, 25, 26, 275 28, 30, 31 plus August 5, 6, 7, 15. On August 18, 19, 20, 21, 22, 23 all the turbines were roaring all day, however, the nights were quiet. On August 18 the turbines were all off by 9:30pm. The loud roar on 5 August was made by only 2 turbines and only 3 turbines were on all day on 6, 7, 15 August with the same roæ.

I was not aware of the level of noise on 29 July during the day as I was not at home; however, there was a jet roar and whine from the turbines from 4:30 p.my and into the night. It was a similar situation on 8 August, 14 and 24 as turbines alternated being on during the day vith low level, however, the noise level slowly increased to a roar over the evening and continued into thc night.

There was a low level of noise on 16 and 17 August as T4 was off most of the day, On i 7 August all the turbines were off by 9:00prn.

I continue anxiously awaiting the report from the Planning and Environmental Section outlining its intentions on implementing a solution to this consistent noise pollution.

Thank you for your support.

Yours sincerely,

A7

Ms Mary Hussey
Environmental Technician
Envirmmentat and Water Services Offaly County Council
Charleville Rd.
Tullamore

CORPORATE SERVICES
- 5 NOV 2020
COMHAIRLE CHONTAE UÍBH FHAILÍ

3November 2020

rvices

Re: Meenwaun Wind Farm Noise

Dear Ms Hussey,

I am writing to update the Environment Section on turbine noise situation at my residence for the days since I wrote on 28 September 2020.

The only change since my last report is the increased number ofdays on which we experienced the jet roar ofthe firbines, Over the 36 day period we experienced a jet roar from the mrbines for 28 days. This occurred on:

- September28, 29, 30
- October 1,2, 6, 8, 9, 10, 12, 13, 14, 16, 17
- Virtually no respite from the noise frbm October 19 solidly through to October 29
- 31 October and 1 and 2 November

Over 3, 4, 5 October turbines were offall day, however, by 5:00pm all turbines were on and emitting the same mar we experienced all month.

During 30 October turbines were on and quiet all day, however the noige had increased by late afternoon and the roar of the turbines continued into the night.

On 115 15 October the turbines were alternately being turned off and on with a low noise level.

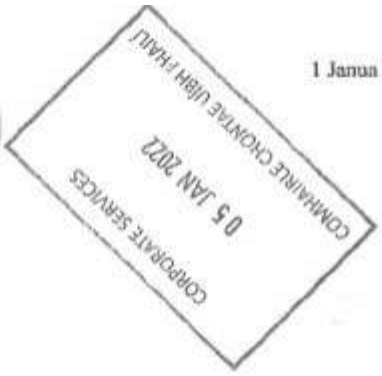
There was a relatively quiet day on 7 October with T5 off most of the day.

I continue to await a copy of the final ARUP Engineering report and a copy of the Offaly County Council report detailing the plans to put in place a resolution to this on-going problem that I have been reporting since 6 January , 2018.

ENVIRONMENT AND WATER SERVICES
- 5 NOV 2020

Yours sincerely,

A8



1 Janua

1 January 2022

Ms Mary Hussey
Environmental and Water Servicesomry County Council Charleville Rd. Tullamore

Re: Meenwaun Wind Farm Noise

Dear Ms Hussey,

Thank you for your note of I December 2021. Today I am writing to update the Environmental and Water Services on the turbine noise pollution position at my residence for the days since I last reported it on 23 November 2021.

For 30 specific days the turbines produced a roar all day and night including: November 24, 25, 26, 27, 29, 30, December 1, 2, 3, 4, 6, 9, 10, 11, 12, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

Al} turbines emitted low level noise all day on November 28, however, roar returns during the evening.

Turbines were turning slowly with low level noise all day and evening on November 23, December 5, 18, 19.

On December 7, 13, turbines on with roar early morning, by early aftemoon all turbines off for the rest of the day,

Turbines off all morning, all on for the afternoon with roar, continued into the night on December 8.

T have no record for December 20 as was away all day.

I have still not received details from Offaly County Council on the outline ofthe 'procedure/ steps moving forward' as noted in August 2020. As you can see from this letter the number of days that the turbines roar for 24 hours is increasing as with 30 consecutive days over a 39 day period. Please inform me of the outline of the procedure you are putting in place to remedy the situation in light of the contents of the ARUP report.

Yours sincerely,

A9

1569Y

July 13
2023



Ms Maria Tre8C.y
Acting Sentor Engineer Offaly
County Council
Charlcville Rd.
Tu!lamore

Re: Meenwaun Wind Favyn Noise

Dear Ms Treacy,

I am writing to update the Environment and Water Services on the turbine noise pollution position at my residence for the days since I hst repolted it on 31 May 2.023b

For 10 specific days the turbines produced a roar all day and night including: June 1,7, 9, 10, 11, 16, 17, 18, 23, 24.

I am very concerned about the number of days individual turbines were turned off all day, however, there was still a dreadful roar from the remaining turbines on 1 1 occasions:
June 27 as Tl and T5 were turned off
June 28 T2 off
June 29 Tl and off
June 30 n off
Jul Tl and off
July 2 Tl and T2 offin the morning and only T2 offthe rest ofthe day
July 3 T.4 alone dominated with a 'whine' accompanying the roar
July 4 T.4 with inta•mittent 'whine' sound later joined by Tl and T5
July 5, July 9 and July 12 offall day and a roar from T15 T4, T5 all day

On May 31, June 8) 14, 25, July I I the turbines were emitting low level noise all morning. By the afternoon there was a roar from all the turbines for the rest of the day.

On June 22 ali the turbines were off for the mottling and alternated on and Off in the afternoon with low level noise. By evening all the turbines were back on with a mat,

On June 2, 135 19, July 10 the turbines were alternating on and offall morning. By afternoon the turbines were all on with a low level noise which continued into the night.

On June 20 the noise level from all the turbines was high the entire morning. By early afternoon T. I was turned off. T.2, T.4 and TS were then moving slowly with low level noise the rest ofthe day.

On June $6, 26, there was a roar from turbines early morning. All turbines turned off briefly in the aftemoon. All back on in the evening producing a roar which continued into the night.

On July 6 Tl and T4 were turning slowly with low level noise all day.

On June 12, the turbines were all off in the moming, alternated and offfor the afternoon and all back turning slowly by early evening with low level noise.

On June 3, 4, 15, 219 Turbines were alternating on and off during day— all on by the evening and mar at night.

I was away from home all day on July 7 and July 8.

I an very disturbed by the high number of days that I have been exposed to the noise since May 31.

Yours sincerely,

A10

Ray Kennedy

From:
Sent: Monday 8 July 2024 14:56
To: Environment; environmental@offalycoco.ie
Cc: Operational Controller
Subject: Re: Noise vibration humming

FAO: Environmental Officer for Cloghan Wind Farm

Dear Sir / Madam,

We are aware of recent communications from n relation to the operation of Cloghan Wind Farm. We wish to clarify that Cloghan Wind Farm continues to engage with and we are trying to resolve any alleged issues that he or his family might have in relation to these operations. We continue to exchange phone calls / text messages as well as email and have issued a number of 'update letters' over the past months. We have requested Mr. Kearney provide records of times of when he and his family are disturbed by the Wind Farm so we can carry out an analysis of the data to try and identify if there is any potential issue with our operations, we have not received these to date to allow us complete such analysis. We have also on a number of occasions offered to meet with at his property over the past number of months but has yet to provide a suitable date and time to allow such a visit to take place.

Also, we wish to highlight that Cloghan Wind Farm has completed an operational noise compliance survey which demonstrates compliance with the planning conditions set forth for the project.

Kind Regards,

so while it suits me to email now, I do not expect a response or action outside of your own

---

From:
Sent: 28 June 2024 22:34
To: environment@offalycoco.ie <environment@offalycoco.ie>; Operational Controller <operational.controller@statkraft.com>
Subject: Noise vibration humming

To whom it may concern

As stated in the numerous emails already sent over the last 18 months thats basically just been ignored the noise vibrations and constant humming from windmills in cloghan windfarm on my house is ridculous and is causing serious sleep deprivation to everyone in the house. The all night humming is ridculos and is having a serious effect on mental health and energy levels as sleep deprivation has a knock on effect on peoples daily well-being.. this needs to be addressed ASAP as its basically a form of torture not being able to sleep in your own home.

A11

Margaret McManus

From:
Sent: Sunday 21 July 2024 14:10
To: Environment
Cc:

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Hi ,

Just following up with yet another complaint on the noise as usual, getting no sleep as has been reoccurring over the last 2no. Years to ZERO effort to solve it by ye. We are at our ends out here with this, curtains to fix the problem haven't even been explored after being suggested which is an obvious admission of the noise being outside the regs, also the data I've requested over and over again has not be furnished to us, we want the output energy production data and SCADA data from the monitors, pre and post the acoustic testing as we know once the report data was finished recording these beasts of turbines have been on full pelt and roaring us out of it.

Maybe now we have OCC on our emails, ye will do something to help our wrecked lives here.

Generally I would sign off my emails with thanks, but there's nothing to be thankful for here, only sleepless nights and shadow flicker days.

A12

Ray Kennedy

From:
Sent: Wednesday 21 August 2024 02:41
To: Environment
Subject: Cloghan windfarm vibration and humming noise

To whom it may concern

Another sleepless night in our house again, which has become the norm now. Constant humming and vibration going through the house. Its there every night but with noise cancelling ear plugs we try to get to sleep eventually but tonight it is excessively loud like a generator or a tumble dryer going full tilt outside.

Something has to be done about this noise and vibrating/humming which is a constant issue and as good as torture now at this stage not being able to sleep till all hours in our own home. Then when we do get to sleep and whether its 3 or 4 hours sleep or 6 hours sleep if lucky, everyone wakes up with blood shot eyes and completely depleted from sleep deprivation and unsettled sleep.

This is coming on two years of this now and its very concerning seeing this been allowed happen to families with young kids, where parents have to try get through a day of work on little to no sleep and kids to try get through their school days its ridculous and very unfair.

Regards

A13

Ray Kennedy

From:
Sent: Thursday 21 November 2024 11:24
To: Environment
Subject: Comstant noise, humming, vibration

Follow Up Flag: Follow up
Flag Status: Flagged

To whom it may concern

My house is situated 660m from.cloghan windfarm in a really bad position between two turbines. My house is has constant noise, humming, vibrations. All night long its like a big tumble dryer on outside.. its keeping us awake till all hours of the night which is having a knock on effect the next day of exhaustion due to sleep deprivation. Kids waking up wrecked and with bloodshot eyes. We have lived here in this house 13 years and in the last 2 years ots a living hell because of these turbines. Something has to be done about it its ridculous to expect people to have to try live like this.
I would appreciate a proper reply.

Regards

A14

Margaret McManus

From:
Sent: Friday 6 December 2024 11:36
To: Environment
Subject: Noise vibrations constant humming.

To whom it may concern

Noise off cloghan windfarm is ridculous cant sleep constant humming all night vibrations it never lets up. Can somebody please give me a Name and number of who the person that deals with noise complaints in the department is.. Two years now of been kept awake till all hours is just ridculous.

A15

Margaret McManus

From:
Sent: Wednesday 18 December 2024 00:09
To: Environment
Subject: Re: Noise vibrations constant humming.

To whom it may concern

The noise and constant humming is ridculous off Cloghan windfarm. Its so bad 2 days straight now no let up constant loud humming like a tumble dryer running outside. Its bad 24/7 but try ignore everytjing during the days but the last 36 hours it just seems nearly twice as bad.. Keeping kids and us awake till all hours and causing exhaustion during the day from little to no sleep during the nights.

Two years and 1 month this has ben going on now and its not getting any better. No efforts being properly made by widnfarm compny to come up with a solution.

This cant be just pushed under the carpet. Some has to be in position to deal with constant noise complaints...

Regards

On Fri, 6 Dec 2024, 15:33 Environment, <environment@offalycoco.ie> wrote:

Thank you for your email which has been forwarded to the relevant person dealing with this matter who will contact you if any more information is required.

Kind regards

Env/Water

Sent: Friday 6 December 2024 11:36
To: Environment <environment@offalycoco.ie>
Subject: Noise vibrations constant humming.

To whom it may concern

Noise off cloghan windfarm is ridculous cant sleep constant humming all night vibrations it never lets up. Can somebody please give me a Name and number of who the person that deals with noise complaints in the department is.. Two years now of been kept awake till all hours is just ridculous.

Offaly County Council: The information contained in this email and in any attachments is confidential and is designated solely for the attention and use of the intended recipient(s). This information may be subject to legal and professional privilege. If you are not an intended recipient of this email, you must not use, disclose, copy, distribute or retain this message or any part of it. If you have received this email in error, please notify the sender immediately and delete all copies of this email from your computer system(s) Unauthorised disclosure or communication or other use of the contents of this e-mail or any part thereof may be prohibited by law and may constitute a criminal offence. Comhairle Chontae Uibh Fhaili: Tá an t-eolais san ríomhphost seo, agus in aon ceangláin leis, faoi phribhléid agus faoi rún agus le h-aghaigh an seolaí amháin. D'fhéadfadh ábhar an seoladh seo bheith faoi phribhléid profisiúnta nó dlíthiúil. Mura tusa an seolaí a bhí beartaithe leis an ríomhphost seo a fháil, tá cosc air, nó aon chuid de, a úsáid, a chóipeál, nó a scaoileadh. Má tháinig sé chugat de bharr dearmad, téigh i dteagmháil leis an seoltóir agus scrios an t-ábhar ó do ríomhaire le do thoil.

A16

Sharon Tracey

From:
Sent: Monday 30 December 2024 08:48
To: Environment;
Cc:

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Categories: Yellow category

Hi,

Can we please request **again** a meeting with ye in relation to the noise levels we are living with from the wind farms within 700m from our houses in Stonestown, Cloghan, after another Christmas ruined for our families with the racket and nuisance, we are forced to live with here.

There was a suggestion we would hear back from ye well before now but as my address line suggests it's falling on deaf ears!

Thanks

Sent from Outlook for Android

Sent: Wednesday, November 20, 2024 8:19:59 AM
To: Environment <environment@offalycoco.ie>

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Hi, thanks for finally coming back to us, we would like to have a meeting with you in the Offaly council office please to discuss same.

Sent from Outlook for Android

From: Environment <environment@offalycoco.ie>
Sent: Monday, October 14, 2024 3:03:26 PM

Cc: Environment <environment@offalycoco.ie>
Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

We acknowledge receipt of your email. It has been forwarded for review to the Environment technical team.

In the meantime I would recommend that you visit our website www.offaly.ie

You can review our page on Noise Pollution Complaint Reporting - Noise Pollution Complaint Reporting - Offaly County CouncilOffaly County Council

Input the word 'noise' into the search box –



Search results for 'noise'

Noise Action Plan 2024-2028

Environmental noise is 'unwanted or harmful outdoor sound' arising from all areas of our everyday activity. In Irela biggest exposure to environmental noise comes from transport inc...

View this page >

Noise Pollution Complaint Reporting

Nuisance Noise Definition Noise becomes a nuisance when it is so loud, so continuous, so repeated, of such durati or occurring at such times as to give reasonable cause for annoyance. (R...

View this page >

I hope the aforementioned is helpful to you.

Kind Regards,

Environment Admin Team

Sent: Saturday 12 October 2024 11:11
To: Environment <environment@offalycoco.ie>

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Hi,

Just wondering if you can spare the 10 seconds or so it would take you to advise me on the person I need to speak to in relation to our issues, being purposely ignored is not good enough from Offaly County council? Waiting since mid-July still!!

Please reply to this email, not just the auto reply that is just frustrating to say the least.

Thank you.

Sent from Outlook for Android

Sent: Friday, July 26, 2024 3:57:20 pm
To: Environment <environment@offalycoco.ie>
Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Thank you! Whom is the relevant person if I might ask please.

Sent from Outlook for Android

From: Environment <environment@offalycoco.ie>
Sent: Friday, July 26, 2024 9:33:15 AM

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Good morning

I have acknowledged receipt of your email and sent it to the relevant person

Environment

Sent: Thursday, July 25, 2024 8:03 PM

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

My responce below in Blue text.

Sent: Wednesday, July 24, 2024 8:03 AM

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

et all,

Thank you for your email. By way of response to your concerns, please see below in red.

Just following up with yet another complaint on the noise as usual, getting no sleep as has been reoccurring over the last 2no. Years to ZERO effort to solve it by ye. *[Cloghan Wind Farm Ltd. (CWFL) conlinues to engage with you and the residents in the Stonestown area. We have met with Stonestown residents (including yourself) on a number of occasions, most recently on the 8th April at Cloghan GAA whereby we reaffirmed our commitment to working with the Stonestown Residents to resolve. We have issued a 'reporting table' for which you can all record times at which you feel disturbed by the Wind Farm and we can use this information to compare against the Wind Farms operational parameters and settings at those times. We have also requested your availability for a follow up meeting so we can schedule further discussions, however, we have been unable to agree a time and date that is agreeable. A representative of CWFL was available at the Cloghan GAA club on the evening of Monday 1st July, however, I understand that this was not a suitable time for anyone on the Stonestown Road to attend]*

Ok so the onus falls back on us the residence whom objected to this farm I might add with all the actual complaints we posed at the trime. now having them come to fruition, to now spend our evenings and waken nights recording data to in some way prove we are getting no sleep, can ye actually sit down and have a good think to yourselves as to how absurd that is! [Subjective abstract

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The offer was curtains as they were 'the cheapest option' Niall as said by Conor on the call we had, I put forward that we need a solution to our velux windows and havent heard a word since? Thats not working together, although as suggested ye suppying the curtains and advising us we would need to install them at our own expence would be working together aliright!

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Maybe now we have OCC on our emails, ye will do something to help our wrecked lives here. *[CWFL continues to engage with the Stonestown Residents as a group, we see no reason why having OCC cc'd on emails will make any difference to these communications]*

We do as the drain that blocked water all last winter, which was dug after all our lawns were water logged is now fully overgrown again and will cauyse the same issue again, Offaly County Council has always dug this drain every year but its now enclosed behind a pair of locked gates. Also our main issue is the noise pollution and nusiance to us the residence after living here for over 12 years noise free is driving us crazy along with sun flicker. Also there is additional debris from the bog [bog mould] being driven at our properties, have you ever sprinkled a handful of sawdust into a desktop fan and watch it, because thats what happening here now, more vandalism of our properties in my opinion. I have asked for this to be addressed to no avail also.

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Tuesday 20th August
Wednesday 21st August
Monday 26th August
Tuesday 27th August

We will meet ye once the weather turn for the autumn and ye can come stand in our properties and tell us the operation is within the acustic parameters then.

I look forward to hearing from you.

Kind Regards,

Sent: 21 July 2024 14:10

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

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A17

Sent: Monday 30 December 2024 08:48
To: Environment;

Subject:Re: Just another complaint for deaf ears- wind farm in Stonestown

Hi,

Can we please request again a meeting with ye in relation to the noise levels we are living with from the wind farms within 700m from our houses in Stonestown, Cloghan, after another Christmas ruined for our families with the racket and nuisance, we are forced to live with here.

There was a suggestion we would hear back from ye well before now but as my address line suggests it's falling on deaf ears!

Thanks

Sent from Outlook for Android

Sent: Wednesday, November 20, 2024 8:19:59 AM
To: Environment <environment@offalycoco.ie>

Subject: Re: Just another complaint for deaf ears-

Hi, thanks for finally coming back to us, we would like to have a meeting with you in the Offaly council office please to discuss same.

Sent from Outlook for Android

From: Environment <environment@offalycoco.ie>
Sent:

Cc: Environment <environment@offalycoco.ie>
Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Gerard,

We acknowledge receipt of your email. It has been forwarded for review to the Environment technical team.

In the meantime I would recommend that you visit our website www.offaly.ie

You can review our page on Noise Pollution Complaint Reporting - Noise Pollution Complaint Reporting - Offaly County CouncilOffaly County Council

Input the word 'noise' into the search box -

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Kind Regards,

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Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

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Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

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From: Environment <environment@offalycoco.ie>
Sent: July 26, 2024 [illegible]
Subject: Re: [illegible] · wind farm in Stonestown

Good morning

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Environment

Sent: Thursday, July 25, 2024 8:03 PM

Subject: Re: Just another complaint for deaf ears- wind farm in

My responce below in Blue text.

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We will meet ye once the weather turn for the autumn and ye can come stand in our properties and tell us the operation is within the acustic parameters then.

I look forward to hearing from you.

i

"At Statkraft we work flexibly and globally - so while it suits me to email now, I do not expect a response or action outside of your own working hours"

Sent: 21 July 2024 14:10

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Just following up with yet another complaint on the noise as usual, getting no sleep as has been reoccurring over the last 2no. Years to ZERO effort to solve it by ye. We are at our ends out here with this, curtains to fix the problem haven't even been explored after being suggested which is an obvious admission of the noise being outside the regs, also the data I've requested over and over again has not be furnished to us, we want the output energy production data and SCADA data from the monitors, pre and post the acoustic testing as we know once the report data was finished recording these beasts of turbines have been on full pelt and roaring us out of it.

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Generally I would sign off my emails with thanks, but there's nothing to be thankful for here, only sleepless nights and shadow flicker days.

A18

Sharon Tracey

From:
Sent: Wednesday 29 January 2025 15:30
To: Environment;
Cc:
Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Categories: Yellow category

Thank you for your confirmation. Any idea of a time frame on this as we are living through hell in the meantime

Sent from Outlook for Android

From: Environment <environment@offalycoco.ie>
Sent: Wednesday, January 29, 2025 9:38:38 AM

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Hi

We acknowledge receipt of your email. As previously stated, the complaints have been logged for investigation.

Regards
Environment & Rural Water Services

From:
Sent: Wednesday 29 January 2025 07:40
To: Environment <environment@offalycoco.ie>;
Cc:
Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Hi,

Can we please finally request a meeting or we will have to pursue another avenue to try get some help with our issues over the noise and vibrations in our homes in Stonestown. The noise/vibration is dreadful here, 4th night without sleeping it's just not fair as a human to be treated like this.

We need action from Offaly coco as has been requested multiple times now without any action.

@John please read all correspondence on this email and give me a call when your available.

Thanks

Sent from Outlook for Android

From:
Sent: Monday, December 30, 2024 8:48:09 am
To: Environment <environment@offalycoco.ie>;

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

Hi,

Can we please request **again** a meeting with ye in relation to the noise levels we are living with from the wind farms within 700m from our houses in Stonestown, Cloghan, after another Christmas ruined for our families with the racket and nuisance, we are forced to live with here.

There was a suggestion we would hear back from ye well before now but as my address line suggests it's falling on deaf ears!

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From:
Sent: Wednesday, November 20, 2024 8:19:59 AM
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Sent from Outlook for Android

From: Environment <environment@offalycoco.ie>
Sent: Monday, October 14, 2024 3:03:26 PM
To:
Cc: Environment <environment@offalycoco.ie>
Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

We acknowledge receipt of your email. It has been forwarded for review to the Environment technical team.

In the meantime I would recommend that you visit our website www.offaly.ie

You can review our page on Noise Pollution Complaint Reporting - Noise Pollution Complaint Reporting - Offaly County CouncilOffaly County Council

Input the word 'noise' into the search box –

Search results for 'noise'

Noise Action Plan 2024-2028

Environmental noise is 'unwanted or harmful outdoor sound' arising from all areas of our everyday activity. In Irelar biggest exposure to environmental noise comes from transport inc...

View this page >

Noise Pollution Complaint Reporting

Nuisance Noise Definition Noise becomes a nuisance when it is so loud, so continuous, so repeated, of such durati or occurring at such times as to give reasonable cause for annoyance. (R...

View this page >

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To:

Subject: Re: Just another complaint for deaf ears- wind farm in Stonestown

My responce below in Blue text.

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Generally I would sign off my emails with thanks, but there's nothing to be thankful for here, only sleepless nights and shadow flicker days.

Director of Operations & Asset Management
Statkraft Asset Management Ltd.

"At Statkraft we work flexibly and globally - so while it suits me to email now, I do not expect a response or action outside of your own working hours"

From:
Sent: 21 July 2024 14:10
To:
Environment <environment@offalycoco.ie>

Subject: RE: Just another complaint for deaf ears- wind farm in Stonestown

Hi

Just following up with yet another complaint on the noise as usual, getting no sleep as has been reoccurring over the last 2no. Years to ZERO effort to solve it by ye. We are at our ends out here with this, curtains to fix the problem haven't even been explored after being suggested which is an obvious admission of the noise being outside the regs, also the data I've requested over and over again has not be furnished to us, we want the output energy production data and SCADA data from the monitors, pre and post the acoustic testing as we know once the report data was finished recording these beasts of turbines have been on full pelt and roaring us out of it.

Maybe now we have OCC on our emails, ye will do something to help our wrecked lives here.

Generally I would sign off my emails with thanks, but there's nothing to be thankful for here, only sleepless nights and shadow flicker days.

A19

Note: Appendix A19 contains a third-party escalation letter which summarises and quotes from several of the resident complaints already exhibited at Appendices A10–A18. It is included not as duplicate complaint evidence, but to show that the complaints were formally escalated to Offaly County Council and that the Council was expressly placed on notice of the continuing noise, shadow flicker and health impacts.

Community & Environmental Protection Alliance

info@CEPA.IE

18 July 2024

To:

Anna Marie Delaney,

Chief Executive Offaly County Council

adelaney@offalycoco.ie communications@offalycoco.ie

Re: Ongoing Noise Complaints – Cloghan Wind Farm / Stonestown Community

Dear Chief Executive,

We are writing to express serious concern about the long-standing and unresolved noise complaints from residents of Stonestown regarding Cloghan Wind Farm. Despite repeated calls and emails since March 2023, the community's concerns have yet to be addressed, leaving residents unheard and without any effective means to resolve the issue.

To date, there appears to have been no formal investigation by Offaly County Council.
We respectfully request confirmation as to whether any investigation has taken place.

Key Concern: Cloghan Wind Farm Noise Compliance Report

Having reviewed the noise compliance report for Cloghan Wind Farm (dated 01 November 2023), we wish to highlight several serious issues (appendix One), including:

Compliance Report Is Incomplete The report did not test for "tonal" (whistling) or "impulsive" (sudden, banging) noises, even though the planning conditions clearly say these types of noise are not allowed.

Questionable Wind Speed Data Source

Missing Wind Speeds in Noise Report

Background Noise Levels Not Compared to Original Planning Data

Noise Data Set Not Compliant with Institutes Guidelines

Independent Review of Cloghan Wind Farm Noise Compliance Report

The highlighted flaws mirror the concerns raised by Diarmuid Kearney of ICAN (acoustics) in his independent review of the Meenwaun Wind Farm noise compliance report, carried out in September 2018.

It is concerning that, Offaly County Council (OCC) accepted the same flawed methodologies in the Cloghan compliance report, raising serious questions regarding due process and weakness in OCC's procedures.

In June 2024, Fehily Timoney issued a review of Cloghan Wind Farm noise compliance report, no declaration of independence[1] was provided. This is noted as Fehily Timoney authored the original (and flawed) Meenwaun noise report. Both wind farms are managed by the same asset operator – Statkraft – underscoring the need for a truly independent review.

We must ask why Offaly County Council engaged Fehily Timoney to review the Noise Compliance report and then state there were no records of noise complaints? Our information confirms complaints priort to the Fehily Timoney report (extract below).

The report suggests that impulsive noise is not a common characteristic associated with wind farms. We don't agree. However, the IOA explains when impulsive noise happens, it is most intrusive, and in 2013 issued a guidance note (SGN1) which must be applied to check compliance.

2.4.3.1 Tonal & Impulsive Noise

HMPL state no tonal analysis was undertaken, as they are not aware of any complaints being raised relating to tonal noise. Offaly County Council have confirmed to FT that there are no records of any noise complaints received regarding Cloghan Wind Farm (19/404). Therefore, this approach is considered reasonable. Tonal analysis for wind farm sites is generally only considered necessary if there are known issues or complaints associated with tonal noise emissions.

An assessment of impulsive noise has not been presented as part of the compliance report. However, impulsive noise is not a common characteristic associated with wind farms and there are no known complaints relating to impulsive noise associated with Cloghan Wind Farm.

Community Impact

Residents of Stonestown continue to report chronic noise and shadow flicker.
Increasing numbers cite negative health impacts, the first complaint log opened in March 2023 soon after the wind farm was commissioned. A sample of complaints can be found in appendix Two.

28.06.24	"… The all-night humming is ridiculous and is having a **serious effect on mental health** and energy levels as sleep deprivation has a knock on effect on peoples daily well-being.. this needs to be addressed ASAP"
21.08.24	"… It's there every night [constant humming and vibration] but with **noise cancelling ear plugs** we try to get to sleep eventually but tonight it is excessively loud like a generator.. …**as good as torture** now at this stage not being able to sleep till all hours in our own home. … its very concerning … to try get through a day of work on little to no sleep and **kids to try get through their school days** its ridiculous and very unfair."
21.11.24	"… exhaustion due to sleep deprivation. Kids waking up wrecked with bloodshot eyes. We have lived in this house xx years and the last two years it's a living hell because of these turbines. Something has to be done about it, it's ridiculous to expect people to have to try live like this. I would appreciate a proper reply."
18.12.24	"so bad two days straight… try to ignore everything during the days… keeping the kids and us awake till all hours and causing exhaustion during the day…

[1] ICAN provided a declaration of independence in 2018

Two years and a month this has been going on now and it's not getting any better. **No proper efforts being made by wind farm company to come up with a solution.**

This cannot be pushed under the carpet. Someone must be in a position to deal with constant noise complaints.

30.12.24 "… after **another Christmas ruined** for our families with the racket and nuisance, we are forced to live with here.

There was a suggestion we would hear back from ye well before now.."

29.01.25 "… **fourth night without sleeping** it's just not fair as a human to be treated like this.

We need action from Offaly CoCo as has been requested multiple times now without any action."

07.01.25 "…ridculous **all Christmas awake** all night. It's ruining our **mental health** as we are sleep deprived. We have had to move kids out of two bedrooms deemed unusable because noise and **EMF levels** are just unbearable for them. One of the kids is xx xxx xxxx and is complaining of xx xxxx and **he thinks he's going deaf** due to the constant vibration and humming. What are ye going to do about this? We are sick beyond words now at this stage with how our **home has been destroyed** and no accountability for it.

We just want our normal way of living back without physical and mental sickness and sleepless nights is that too much to want in life. I've to go to work at X:XXam and here I am again wife awake due to constant humming and vibration. What good am I going to be doing XXXXXX tomorrow. Listening to my kids wide awake and having to get school bus at X:XX. This is ruining a lot of families and **their abilities to perform in school** and **work** due to sleep deprivation. It's ridiculous.'

Despite these reports, responses from the Council have been limited to a standard acknowledgment;

> "We acknowledge receipt of your email. It has been forwarded for review to the Environment technical team."

Legal Duty of Care

Offaly County Council has a duty of care to the Stonestown community. Under the **Local Government Act**, the Council can enforce planning conditions. Under the **EPA Act**, it has the power to address noise nuisance.

The noise issues were **reasonably foreseeable** – having been clearly identified during the planning process by Dick Bowdler, Chair of the Global Wind Turbine Noise Conference. Given the volume of complaints, the known risks, and the Council's legal powers, it is **just and reasonable** to expect appropriate action to have been taken to protect the community.

There is legal precedent for recognising wind farm noise as a nuisance, including in **Webster & Anor v Meenacloghspar (Ballyduff)** [2024] IEHC 136 and **Byrne & Anor v ABO Wind Ireland Ltd & Ors**.

Notably, the **HSE National Environmental Health Services**, in commenting on Ballyduff, described the case as "predominantly a health-based assessment", the HSE formally recommends that turbine noise be assessed against **WHO 2018 guidelines** – levels well below what Stonestown residents currently experiencing.

Offaly County Council does not have an environmental health officer or any public health expertise, and to avoid further liability and ensure proper handling of the communities health concerns, we urge the Council to forward all complaints to the HSE Environmental Health Office for professional assessment.

The HSE has a duty of care to the Stonestown community, under the **Public Health Act**, the HSE has the power to address public nuisance.

It is widely recognised — including in WHO guidelines — that children and older people are especially vulnerable to the effects of environmental noise. A child losing sleep due to turbine noise may experience impacts on learning, concentration, and development. This underlines the need for urgent, health expert intervention.

Immediate Actions Requested

To ensure proper response and accountability, we respectfully request that Offaly County Council:

Acknowledge the failure to date in addressing noise complaints from Stonestown residents.

Immediately start collaborating on all existing and future complaints with the local **HSE Environmental Health Officer**.

Appoint an **independent acoustic consultant**, with a declaration of independence, to:

- Review the Cloghan compliance report o Conduct new noise monitoring at affected homes to assess compliance with planning conditions. Also, to investigative noise nuisance and in the absence of formal procedures in Ireland, to adopt DEFRA NANR277. While dated it is the only available standard methodology.

Report the adverse noise impacts in the **SEA Monitoring Report** of the County Development Plan, specifically under the indicator "Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan," in consultation with the Health Service Executive.

Implement a **clear, formal complaint procedure** for wind farm noise, with regular quarterly review at the relevant Strategic Policy Committee.

Engage in open dialogue with the Stonestown community to agree on a resolution pathway.

We note the number of wind farms that have recently been commissioned in Co Offaly, with complaints from Cloncreen and Rhode residents. The issue of wind turbines noise complaints is a significant matter for Offaly County Council.

We remain open to engaging with Offaly County Council to ensure that public health, transparency, and fair process are upheld – and that public authorities remain accountable to the people they serve.

Yours sincerely,



Communities & Environmental Protection Alliance (CEPA)

Key Concern: Cloghan Wind Farm Noise Compliance Report

Having reviewed the noise compliance report for Cloghan Wind Farm (dated 01 November 2023), we wish to highlight several serious issues, including:

1 Compliance Report Is Incomplete The report did not test for "tonal" (whistling) or "impulsive" (sudden, banging) noises, even though the planning conditions clearly say these types of noise are not allowed. The author claimed no one had raised concerns about tonal noise and the report fails to mention impulsive noise. A proper compliance report must check for both, as required by the planning permission.

2 Questionable Wind Speed Data Source The wind speed data used in the report came from sensors on the turbine itself (nacelle at hub height) — this is the least preferred option, according to expert guidance (IOA GPG), because it can lead to less accurate (+/- 4dBs) noise levels.

The preferred method is to use a 10 m meteorological mast, which we understand is available on site, but was not used.

3 Missing Wind Speeds in Noise Report The table below highlights missing noise results for more than half the range of wind speeds required by the official guidelines (ETSU-R-97 and IOA GPG).

The author stopped at 7 m/s, saying the turbine had already reached its loudest point. But that's not a valid reason to ignore the rest of the guidelines.

In reality the noise levels recorded at nearby homes can be louder at higher wind speeds. This happens because sound travels more easily in certain weather conditions — like at night, during strong wind shear, ground frost and especially as the turbines are placed too close together (causes excessive turbulence).

Table 6 – Assessment Results – H06 - Night Hours (dB L_{A90})

Data	Standardised 10 m Height Integer Wind Speed (m/s)								
	4	5	6	7	8	9	10	11	12
Prevailing Operational Noise Level (dB L_{A90})	34.3	38.9	42.3	44.4	-	-	-	-	-
Prevailing Shut-down Noise Level (dB L_{A90})	20.7	28.2	36.7	42.9	-	-	-	-	-
Calculated Turbine Noise Level (dB L_{A90})	34.1	38.6	40.9	#[5]	-	-	-	-	-
Noise Limit (dB L_{A90})	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0

4 Background Noise Levels Not Compared to Original Planning Data The report fails to compare the compliance 'shut-down' background noise levels to those reported in the original Environmental Impact Statement (EIS). This is a key step recommended in the IOA's Good Practice Guide (GPG) to ensure consistency. The table below shows inconsistencies of up to 8.4 decibels which appears to make the turbines comply more easily.

Separately, in the report declares for H06 (below), at 7 m/s 'background noise is indicated to be dominant, and turbine noise component is implied to be below the noise limits' but there is no scientific evidence or justification to support this statement.

Table 6 – Assessment Results – H06 - Night Hours (dB L_{A90})

Data	Standardised 10 m Height Integer Wind Speed (m/s)								
	4	5	6	7	8	9	10	11	12
Prevailing Operational Noise Level (dB L_{A90})	34.3	38.9	42.3	44.4	-	-	-	-	-
Prevailing Shut-down Noise Level (dB L_{A90})	20.7	28.2	36.7	42.9	-	-	-	-	-
Calculated Turbine Noise Level (dB L_{A90})	34.1	38.6	40.9	#[5]	-	-	-	-	-
Noise Limit (dB L_{A90})	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Background Noise EIS, planning	**25.7**	**25.8**	**30.3**	**34.5**	**39.5**	**44.8**	**49.5**	**52.7**	**53.5**
Background Noise Change	**-5.0**	**+2.4**	**+6.4**	**+8.4**					

5 Noise Data Set Not Compliant with Institutes Guidelines The IOA's good practice guidelines (sec 6.5), "It is important that the noise measurements cover a representative range of meteorological conditions, turbine operating modes, and times of day." It recommends separating daytime and night-time data but does not restrict night-time to 23:00–04:00 which was done for the noise compliance report.

This attachment is relied upon in Section 2.12 as evidence of foreseeable impacts on human health and residential amenity.

ATTACHMENT 5B - CORBEG

APPENDIX 5-B – STATUTORY PLANNING CONTEXT (CORBEG, COUNTY OFFALY)

5.B.1 Purpose

This appendix provides **supporting statutory planning evidence** regarding the status of Corbeg, County Offaly, as referenced in **Section 3 (Sensitive Receptors)** of this submission.

It is included to assist in **verifying the baseline description of the receiving environment** presented in the Environmental Impact Assessment Report (EIAR).

5.B.2 Current Development Plan (2021–2027)

A review of the adopted **Offaly County Council Offaly County Development Plan 2021–2027** confirms that:

- Corbeg is **not identified within the Settlement Hierarchy**
- Corbeg does **not have an adopted Settlement or Village Plan**
- Corbeg does **not appear within Volume 2 (Settlement Plans)**
- Corbeg has **no defined settlement boundary or zoning**

These documents represent the **statutory framework for settlement designation and development management** within County Offaly.

5.B.3 Historic Development Plans

A review of the **Offaly County Development Plan 2009–2015** confirms that:

- Corbeg was **not identified as a village**
- No Village Plan was adopted for Corbeg
- No settlement zoning was applied

This indicates that Corbeg has **not been designated as a village in either current or historic statutory planning policy**.

5.B.4 Planning Status

Based on the above statutory review:

- Corbeg is **not a designated settlement**
- Corbeg is **not recognised as a village within the statutory planning framework**
- Corbeg is treated as part of the **rural countryside for planning purposes**

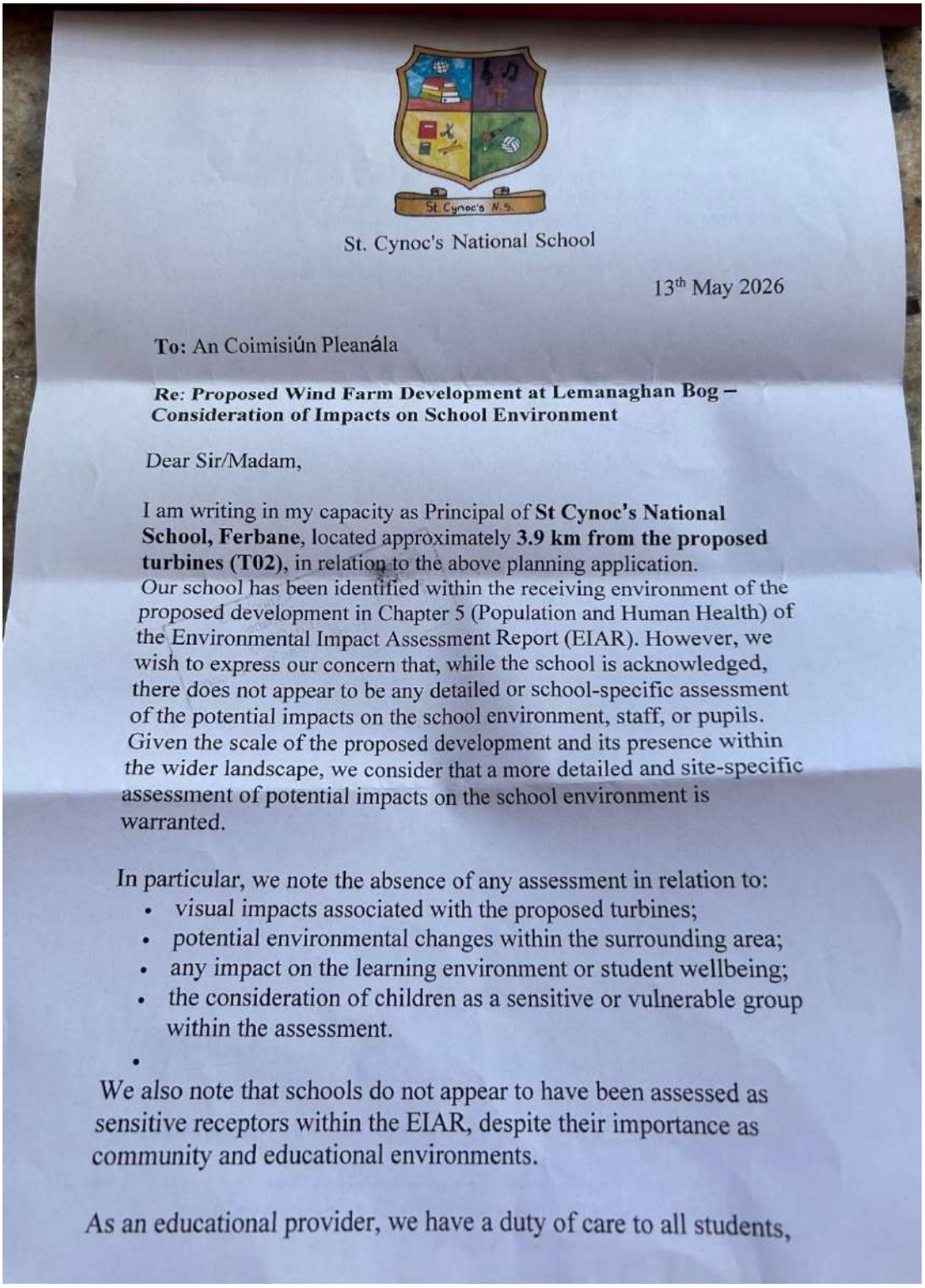
Corbeg may therefore be understood as a **townland or local place-name rather than a defined settlement**.

5.B.5 Supporting Documents

The following statutory documents support the above findings:

- Offaly County Development Plan 2021–2027 (Volume 1 – Core Strategy & Settlement Hierarchy)
- Offaly County Development Plan 2021–2027 (Volume 2 – Settlement Plans)
- Offaly County Development Plan 2009–2015

Supporting Material 5C – School Letter



St. Cynoc's National School

13th May 2026

To: An Coimisiún Pleanála

Re: Proposed Wind Farm Development at Lemanaghan Bog – Consideration of Impacts on School Environment

Dear Sir/Madam,

I am writing in my capacity as Principal of **St Cynoc's National School, Ferbane**, located approximately **3.9 km from the proposed turbines (T02)**, in relation to the above planning application.
Our school has been identified within the receiving environment of the proposed development in Chapter 5 (Population and Human Health) of the Environmental Impact Assessment Report (EIAR). However, we wish to express our concern that, while the school is acknowledged, there does not appear to be any detailed or school-specific assessment of the potential impacts on the school environment, staff, or pupils. Given the scale of the proposed development and its presence within the wider landscape, we consider that a more detailed and site-specific assessment of potential impacts on the school environment is warranted.

In particular, we note the absence of any assessment in relation to:

- visual impacts associated with the proposed turbines;
- potential environmental changes within the surrounding area;
- any impact on the learning environment or student wellbeing;
- the consideration of children as a sensitive or vulnerable group within the assessment.
-

We also note that schools do not appear to have been assessed as sensitive receptors within the EIAR, despite their importance as community and educational environments.

As an educational provider, we have a duty of care to all students,

Correspondence from St. Cynoc's National School, Ferbane, dated 13 May 2026, concerning the absence of school-specific assessment within Chapter 5 of the EIAR.

including those who may be more vulnerable to environmental or sensory impacts, and it is therefore essential that any potential effects of the proposed development are fully understood and appropriately assessed.

In light of the above, we respectfully request that the potential impacts of the proposed development on schools and educational environments be fully and specifically assessed, including consideration of school locations as sensitive receptors.

We trust that these matters will be given due consideration as part of the planning process.

Yours sincerely,

Ms Helena Kelly
Principal
St Cynoc's National School, Ferbane



Section 6: EIAR CHAPTER 6 REVIEW

Biodiversity

Third Party Planning Observation

LEMANAGHAN WIND FARM — OBJECTION BUNDLE

Chapter 6 Biodiversity — Bat Assessment · Aquatic & Fisheries · Flora & Habitats

---

1.0 Introduction

This planning objection report has been prepared on behalf of Lemanaghan Heritage & Conservation Group in respect of An Coimisiún Pleanála RED III planning application — Case Reference: PAX19.324161 — which pertains to proposed development comprising 15 no. wind turbines, a permanent 220kV on-site substation and associated infrastructure at Lemanaghan and surrounding townlands, Co. Offaly.

This submission addresses significant concerns arising from the applicant's assessment of biodiversity impacts under Chapter 6 of the Environmental Impact Assessment Report (EIAR). The objection is directed specifically at three interrelated areas of the biodiversity assessment:

- Chapter 6 Biodiversity and Appendix 6-1 Bat Survey Report — assessment of Annex IV bat species, collision risk, barotrauma, roost risk, habitat loss and cumulative effects.
- Chapter 6 Biodiversity and Appendix 6-2 Aquatic and Fisheries Baseline Report — assessment of aquatic species, protected habitats and Water Framework Directive compliance.
- Chapter 6 Biodiversity and Appendix 6-3 Vegetation Survey — assessment of Flora Protection Order species, invasive species, Annex I habitats and protected fauna.

This submission is supported by independent ecological evidence including an independent bat survey commissioned by the local community (An Doire Environmental / Jim Minogue Environmental Consulting, August 2024). It should be read in conjunction with ATTACHMENT A (independent Bat report)and ATTACHMENT B (Biodiversity Photobook) at the end of this section.

> **NOTE TO INSPECTOR: Chapter 6 of the EIAR should be read in conjunction with Appendix 6, a digital photobook documenting the rich biodiversity, living heritage and natural beauty of the wider Lemanaghan peatland landscape, submitted as a separate appendix to this objection bundle. The photographs within this submission bundle — including those taken by Tina Claffey and Aoife Phelan directly on Lemanaghan Bog — form part of that visual record.**

1.1 Validation

Validation matters have been addressed in the covering letter and checklist form accompanying this objection bundle.

2.0 Part 1 — Executive Biodiversity Case

2.1 Overarching Biodiversity Objection

The proposed development raises fundamental tensions between renewable energy generation objectives and the protection of Ireland's legally protected biodiversity, protected habitats and protected species. While presented as a renewable energy project with positive environmental credentials, the biodiversity chapter of the EIAR contains critical internal contradictions, material omissions and methodological failures which individually and cumulatively undermine the reliability of Chapter 6 as a basis for decision-making.

In particular, this submission demonstrates that the EIAR:

- Applies the wrong project size classification to the bat collision risk assessment, invalidating every downstream risk conclusion.
- Fails to provide direct detector assessment for three of the fifteen proposed turbines.
- Does not clearly explain how compliance with the Article 12 strict protection regime for Annex IV bat species will be ensured.

- Identifies critical aquatic species — including Annex II white-clawed crayfish and lamprey — while failing to provide adequate species-specific assessment or mitigation.
- Contains direct internal contradictions between Chapter 6 conclusions and the applicant's own supporting appendices, including false statements that no Flora Protection Order species were recorded and that no Third Schedule invasive species were present.
- Admits potential disturbance and mortality of legally protected badger without identifying a Wildlife Act licence pathway.
- Fails to carry a Wildlife Acts protected reptile species from its own desk-study baseline into the impact assessment.

The community expressly recognises the importance of biodiversity-sensitive renewable energy development. The issue is not whether Ireland requires renewable energy. The issue is whether this particular application, at this particular site, has been assessed in a manner that is legally complete, scientifically reliable and sufficient to enable the competent authority to reach a reasoned conclusion on the significant effects on biodiversity before consent is granted.

2.2 Detailed Biodiversity Assessment Concerns

While the proposed development is presented and justified primarily as a renewable energy project contributing to national decarbonisation objectives, it is respectfully submitted that the EIAR's Chapter 6 biodiversity assessment does not clearly demonstrate compliance with the following legally applicable frameworks when the full range of direct, indirect and cumulative biodiversity effects are properly considered:

- Article 12 of the EU Habitats Directive (strict protection of Annex IV species).
- Regulation 51 of S.I. 477/2011 (transposition of Article 12 into Irish law).
- Section 171A of the Planning and Development Act 2000 (EIA biodiversity assessment obligations).
- The Flora (Protection) Order 2015.
- The Wildlife Acts 1976–2023.
- The Animal Health and Welfare Act 2013.
- Directive 2000/60/EC (Water Framework Directive).
- Article 6(3) of the Habitats Directive (Appropriate Assessment obligations in respect of downstream European Sites).

These issues are not confined to a single sub-report of the EIAR. Rather, concerns regarding biodiversity assessment completeness, internal consistency and legal compliance arise repeatedly across multiple elements of Chapter 6 and its accompanying appendices.

3.0 Executive Summary and Core Request

3.1 Observations on Chapter 6 of the EIAR

This submission draws the Commission's attention to material weaknesses across three interrelated areas of Chapter 6 of the EIAR and to demonstrate why, in each case, the biodiversity assessment is insufficient to support a grant of planning permission for the proposed development at Lemanaghan Bog.

It is respectfully submitted that permission should be refused. In the alternative, the Commission should require significant further information and independent review before any positive decision could lawfully be contemplated. The Chapter 6 assessment, as submitted, does not provide a sufficiently complete, precise, reliable and integrated basis on which the competent authority can reach a reasoned conclusion on the likely significant effects of the proposed development on biodiversity, protected species or European Sites.

3.2 Executive Summary and Core Request

The following table summarises the core concerns arising from this submission.

Issue	Planning / Legal Significance
Project size misclassification — NatureScot Table 3a	The applicant has applied "Medium" project size based on turbine count while ignoring the independently decisive turbine height criterion. This produces a wrong site risk score throughout the entire bat collision risk assessment.
Three turbines with no direct detector assessment (T02, T08, T13)	Bat collision mortality is localised at specific turbines. The competent authority is entitled to require a clear explanation of how risk at every turbine location has been assessed before consent.
No pre-consent curtailment plan — deferred to post-Year 1	Post-construction curtailment decisions cannot substitute for pre-consent assessment of what mitigation is required. This is inconsistent with Annex IV strict protection obligations.
Ecobat — recognised best practice tool — available but not used	No independent benchmark exists against which to verify whether bat activity at Lemanaghan is high, medium or low relative to comparable Irish or UK wind farm sites.
D12/T14 turbine-specific bat risk hotspot not adequately resolved	The highest bat activity location in the survey receives inadequate turbine-specific mitigation. Correct classification produces a summer peak overall risk score of 20 (High/red zone) for Leisler's bat.
Annex II white-clawed crayfish — no species-specific assessment	Confirmed at maximum eDNA detection confidence. The EIAR provides dedicated tables for otter and bats but subsumes crayfish into a generic grouped assessment.
Lamprey not identified to species level	River Lamprey is a qualifying interest of the Shannon Callows SAC. Species-level identification is required before Appropriate Assessment can be completed.
Contradictory survey dates between Chapter 6 and Appendix 6-2	August and September are materially different survey windows. The competent authority cannot assess an EIAR where the Chapter and its supporting Appendix give contradictory survey dates.
Flora Protection Order species denied in conclusion but present in Appendix	Drosera rotundifolia recorded at 0.5% cover within Construction Compound No. 4. Epipactis palustris recorded in Chapter 6 text. Both denied in the conclusion. No FPO licence pathway identified.
Third Schedule invasive species denied in conclusion but recorded in Appendix	Pinus contorta recorded at two locations within the project footprint in Appendix 6-3. Chapter 6 states no Third Schedule species are present. The invasive species mitigation strategy is built on a false premise.
Common/viviparous lizard — no targeted survey, no assessment, no mitigation	A Wildlife Acts protected species identified in the applicant's own desk-study baseline that has not been carried forward into the impact assessment.
Badger — admitted risk of disturbance and mortality, no licensing pathway	The EIAR explicitly states potential disturbance and mortality of a protected species. A permanent 10-hectare predator exclusion

Issue	Planning / Legal Significance
	fence is designed to exclude badger. No Wildlife Act licence pathway is identified.

3.3 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. In particular, the Commission must be satisfied that the EIAR identifies, describes and assesses the direct and indirect significant effects of the project on biodiversity, protected species and European Sites.

The applicable legal framework requires:

- Article 12 of the EU Habitats Directive — a system of strict protection for all Annex IV species, including all nine Irish bat species. Protection applies across the entire national territory, inside and outside designated sites.
- Regulation 51 of S.I. 477/2011 — transposes Article 12 and applies notwithstanding any consent, statutory or otherwise. Planning permission cannot authorise what Regulation 51 prohibits.
- Holohan v An Bord Pleanála (C-461/17) — the assessment must contain complete, precise and definitive findings removing reasonable scientific doubt before consent.
- Sweetman v An Bord Pleanála (C-258/11) — reasonable scientific doubt requires refusal where protected ecological interests are at stake.
- Wells v Secretary of State (C-201/02) — environmental assessment must be complete before consent and cannot be deferred to post-construction stages.
- Commission v Ireland (C-183/05) — Article 12 requires concrete and specific protection measures, not merely post-construction monitoring.
- Section 171A of the Planning and Development Act 2000 — EIA must identify, describe and assess the direct and indirect significant effects of the development on biodiversity.
- The Flora (Protection) Order 2015 — works that would damage, uproot or destroy a listed species require a separate ministerial licence. Planning permission does not authorise such works.
- The Wildlife Acts 1976–2023 — protection of badger, viviparous lizard and other named species is absolute at the level of the individual animal and individual sett or habitat feature.

The RED III regulatory framework and the 2025 Irish renewable energy planning regulations may recognise an accelerated public-interest context for renewable energy. However, that context does not disapply EIA obligations, Habitats Directive requirements, Wildlife Act protections or the precautionary principle. The public interest includes environmental protection, biodiversity conservation and long-term peatland ecology — not electricity generation alone.

4.0 Part 2 — Core Objection Themes

Core Objection Theme 1: Bat Assessment — NatureScot Misclassification, Assessment Gaps and Deferred Mitigation

4.1.1 Introduction

This theme addresses significant concerns arising from the applicant's assessment of impacts on bats arising from the proposed Lemanaghan Wind Farm. All nine resident Irish bat species are strictly protected Annex IV species under the EU Habitats Directive 92/43/EEC. The applicant's own Appendix 6-1 acknowledges this in terms: all Irish

species are listed under Annex IV of the Directive, requiring strict protection for individuals, their breeding sites and resting places (Appendix 6-1, Section 1.3).

The applicant's own surveys recorded 67,296 bat passes in 2024 and 51,025 bat passes in 2022. High-collision-risk species including Leisler's bat, common pipistrelle, soprano pipistrelle and Nathusius' pipistrelle are confirmed as present. Operational collision mortality and barotrauma are expressly admitted as risks. A bat roost was confirmed active during the survey period. The independent An Doire Environmental survey commissioned by the local community records 7 of 9 Irish resident bat species at the site.

4.1.2 Independent Community Evidence

This submission is supported by an independent bat survey prepared by An Doire Environmental / Jim Minogue Environmental Consulting (August 2024), commissioned by a member of the local community. The independent report records:

- Good habitat for bat species in terms of foraging and commuting routes within and around the site.
- Seven of Ireland's nine resident bat species recorded around the site — a highly significant finding.
- Brown long-eared bat, Leisler's bat, soprano pipistrelle and common pipistrelle confirmed active.
- Natterer's bat and whiskered bat recorded — species not previously logged on Biodiversity Ireland in this context.
- The importance of edge habitats and linear features — trackways, hedgerows, treelines, drains, groves and dark corridors — for commuting and foraging bats.
- Mature and dying trees within the landscape may support roosting bats at different times of the year.

This evidence independently contradicts the applicant's broad low-risk narrative and confirms that Lemanaghan Bog is a significant bat landscape of local importance.

4.1.3 Failure of Assessment: Project Size Misclassification

This is considered the most technically significant deficiency in the entire bat assessment. The applicant has applied the wrong project size classification under NatureScot (2021) Table 3a, thereby producing an incorrect site risk score that invalidates every downstream risk conclusion in the report.

NatureScot (2021) Table 3a defines project size using two independent criteria: turbine count AND turbine height. The proposed turbines have a hub height of 145m and a blade tip height of 220m. These turbines are unambiguously above the >100m height criterion that defines a "Large" project. They exceed this threshold by 45m at hub height alone.

The applicant applies "Medium" project size based solely on turbine count (15 turbines, within the 10–40 range), ignoring the independently decisive height criterion. This is factually incorrect on the face of the applicant's own appended guidance.

Project Size	NatureScot (2021) Table 3a Criteria	Correct Classification for this Development
Small	≤10 turbines. Turbines <50m in height.	—
Medium	10 to 40 turbines. Turbines 50 to 100m in height.	Applied by Applicant — INCORRECT
Large	>40 turbines. Turbines >100m in height.	Correct classification — hub height 145m, tip 220m

Applying the correct classification — Large project size, Moderate habitat risk — produces a Site Risk score of 4 (High/Highest) from Table 3a. The applicant used Site Risk 3 (Medium) throughout the entire report. Every Overall Risk Assessment table is therefore calculated from the wrong base figure. At the correct classification, Leisler's bat reaches a summer peak overall risk score of 20 (High/red zone) — which fundamentally undermines the conclusion that blade feathering at limited turbines, without pre-defined curtailment thresholds, is adequate mitigation.

4.1.4 Failure of Assessment: Three Turbines Without Direct Detector Data

Of the 15 proposed turbines, three — T02, T08 and T13 — do not appear in Table 3-4 as the direct paired turbine for any detector. Bat collision mortality is not evenly distributed across a wind farm: it is localised at particular turbines according to bat activity corridors, proximity to linear features and local habitat structure. The competent authority is entitled to require a clear explanation of how the risk at every turbine location has been assessed before consent.

The applicant has also prepared a formal quantitative collision risk assessment (Band model) for birds in Appendix 7-6. No equivalent turbine-by-turbine quantitative model was produced for bats, despite all Irish bats being Annex IV species. This asymmetry is unexplained.

4.1.5 Failure of Assessment: No Pre-Consent Curtailment Plan

Appendix 6-1 states that after Year 1 monitoring, if a curtailment requirement is identified, a curtailment programme will be devised. Deferring curtailment decisions until after turbines are operational is inconsistent with the pre-consent assessment obligations established by Holohan (C-461/17), Wells (C-201/02) and Commission v Ireland (C-183/05). The following information must be established before consent:

- Turbine-specific curtailment requirements, identified by turbine reference.
- Cut-in wind speed thresholds below which curtailment applies.
- Seasonal application periods with specific calendar dates.
- Temperature and rainfall triggers for curtailment activation.
- Dusk/dawn activity windows requiring restricted operation.
- A blade feathering protocol specifying which turbine model will be used.
- Carcass-search methodology, frequency and search radius per turbine.
- Fatality thresholds that trigger escalation, additional curtailment or turbine shutdown.
- Independent reporting requirements and ACP/NPWS oversight mechanism.

4.1.6 Failure of Assessment: Ecobat Not Used

NatureScot (2021) recommends Ecobat as recognised best practice for benchmarking bat activity at proposed wind farm developments. Ecobat relaunched at the end of 2024 — meaning it was available for approximately 15 months before the bat report was submitted in March 2026. The decision not to use it is unexplained and unjustified. Without Ecobat, no independent benchmark exists against which to verify whether bat activity at Lemanaghan is high, medium or low relative to comparable Irish or UK wind farm sites.

Furthermore, the 2022 supplementary data in Appendix 1 reveals an additional compounding error: the activity thresholds used in 2022 were adapted downward to reflect "more representative levels for conifer plantation/woodland habitats." Lemanaghan is cutover peatland with immature bog woodland — not conifer plantation. This adaptation systematically classifies more activity as "Low" by reference to an inappropriate comparator habitat.

4.1.7 Failure of Assessment: D12/T14 Turbine-Specific Risk Hotspot

Detector D12, paired with proposed turbine T14, recorded by a substantial margin the highest bat activity of any detector location across all survey seasons: 12,145 common pipistrelle passes in summer 2024 and 3,895 soprano pipistrelle passes in spring 2024. The applicant acknowledges High Median Activity at this location but proposes to address it by clearing the scrub that concentrates bat activity along the edge adjacent to T14. This is circular reasoning: removing the linear feature that directed bat flight paths below the rotor may push affected bats into the open rotor zone rather than along the protected feature.

4.1.8 Core Objection Theme 1 — Conclusion

The bat assessment submitted in support of this application contains fundamental methodological errors and legal gaps that cannot be resolved by condition. In particular:

- The entire collision risk framework rests on an incorrect project size classification.
- Three turbines lack any direct detector assessment.
- The strict protection derogation pathway has not been addressed.
- Pre-consent curtailment requirements have not been specified.
- The recognised best practice benchmarking tool was available but not used.

An Coimisiún Pleanála is respectfully requested to require a fully corrected and independently peer-reviewed bat assessment before any determination is made. If those matters cannot be satisfactorily resolved, permission should be refused.

Core Objection Theme 2: Aquatic and Fisheries Assessment — Critical Data Gaps and Protected Species Failures

4.2.1 Introduction

This theme raises significant concerns regarding the aquatic and fisheries assessment submitted as part of Chapter 6 of the EIAR and the associated Aquatic and Fisheries Baseline Report (Appendix 6-2, prepared by Triturus Environmental Ltd.). The proposed project site drains to the River Brosna and River Shannon, with downstream hydrological connectivity to two European Sites of international importance:

- River Shannon Callows Special Area of Conservation (SAC, Site Code 000216) — designated for qualifying interests including alluvial woodlands, floating river vegetation, and species including otter (Lutra lutra) and lamprey.
- Middle Shannon Callows Special Protection Area (SPA, Site Code 004096).

Given this downstream connectivity to European Sites, the standard of environmental assessment required is exceptionally high. Where there is scientific doubt about the impact of a project on a European Site, the competent authority must apply the precautionary principle.

4.2.2 Summary of Critical Deficiencies

A detailed review of Chapter 6 against Appendix 6-2 has identified seventeen distinct issues, including six that are considered critical. The six critical issues are set out below.

Issue No.	Classification	Issue
1	Critical	Factual contradiction between Chapter 6 (surveys August 2024) and Appendix 6-2 (surveys September 2024). These are materially different survey windows with ecological implications.
2	Critical	Confirmed Annex I habitat (Hydrophilous tall herb fringe communities [6430]) at Site B3 is not listed as a Key Ecological Receptor and receives no dedicated impact assessment.
3	Critical	White-clawed crayfish (Annex II / IUCN Endangered) confirmed present but receives only a generic grouped assessment. No species-specific mitigation is proposed.

Issue No.	Classification	Issue
4	Critical	Lamprey are recorded only as "Lampetra sp." throughout. River Lamprey and Brook Lamprey carry different legal protection levels. River Lamprey is a qualifying interest of the Shannon Callows SAC.
5	Critical	The Derrynagun Stream is named as a Key Ecological Receptor in Chapter 6, Table 6-9, but is entirely absent from the 16-site aquatic survey programme in Appendix 6-2.
6	Critical	Most surveyed watercourses are already at Q3 (Poor status). Chapter 6 does not assess whether the project is consistent with the WFD non-deterioration obligation.

4.2.3 Factual Contradiction in Survey Dates

Chapter 6, Section 6.3.2.3.5 states that 2024 aquatic surveys were conducted in August 2024, and Table 6-2 records survey dates of 18th and 19th August 2024. By contrast, Appendix 6-2 states throughout that all field surveys were conducted in September 2024. This is not a minor discrepancy: August and September are materially different survey windows for electro-fishing, crayfish activity, macrophyte growth and Q-sampling reliability. The competent authority cannot properly assess an EIAR where the Chapter and its supporting Appendix give contradictory survey dates.

4.2.4 White-clawed Crayfish — Inadequate Assessment of an Annex II Species

White-clawed crayfish (Austropotamobius pallipes) is listed on Annex II and Annex V of the EU Habitats Directive, strictly protected under the Wildlife Acts 1976–2023, and classified as Endangered on the IUCN Red List. The species is confirmed at Site A1 on the Ballynahown River (two adult individuals physically captured) and detected via eDNA at Site A2 downstream (12 out of 12 qPCR replicates positive — the maximum possible detection confidence).

The EIAR provides dedicated impact assessment tables for otter, badger, bats and marsh fritillary — yet white-clawed crayfish is simply subsumed into a generic aquatic species table. No species-specific mitigation is proposed. There is no commitment to restrict works near the Ballynahown River during the crayfish reproductive season. There are no crayfish-specific biosecurity measures, despite the Appendix's own survey section carefully addressing the risk of crayfish plague transfer.

The confirmed presence of white-clawed crayfish in the hydrologically connected Ballynahown system requires more than general biosecurity wording. The NIS and EIAR should clearly demonstrate each of the following in order to satisfy the Article 12 strict protection obligation and the Appropriate Assessment legal standard: (i) how machinery, pumps, drainage works and temporary works will prevent spread of crayfish plague between sub-catchments; (ii) how works will avoid sedimentation of crayfish habitat during and after construction; (iii) whether any NPWS licence or pre-construction consultation is required; (iv) how IFI and NPWS guidance on white-clawed crayfish biosecurity will be implemented and audited on the ground; (v) how works will be sequenced to avoid cross-contamination between sub-catchments; (vi) how site personnel and contractors will be trained in crayfish biosecurity protocols; and (vii) what emergency response will apply if crayfish plague or invasive species concerns arise during construction. The negative crayfish plague eDNA result recorded in September 2024 does not remove future biosecurity risk during the construction phase. Ireland's historical status as free of introduced crayfish species and proven crayfish plague is a material consideration that heightens the biosecurity obligation.

4.2.5 Lamprey — Legal and Scientific Gap

Throughout both Chapter 6 and Appendix 6-2, lamprey are referred to only as "Lampetra sp." Ireland supports two species with different protection tiers: Brook Lamprey (Lampetra planeri — Annex II only) and River Lamprey (Lampetra fluviatilis — both Annex II and Annex V, and a qualifying interest of the River Shannon Callows SAC). If River Lamprey is present in the surveyed catchments, it is a qualifying interest of the downstream SAC and must be assessed under the Appropriate Assessment process. The application should not be determined without species-

level lamprey identification, which can be achieved through eDNA analysis or targeted adult survey at appropriate season.

4.2.6 WFD Non-Deterioration Principle

Several of the receiving waterbodies are already at Moderate or Poor WFD status. The Lemanaghan Stream_010 SWB — which receives the largest number of outfalls from the wind farm site and within whose catchment 11 of the 15 turbines are proposed — is at Moderate status and is classified as "Under Review" for WFD risk. The construction-phase unmitigated scenario in Appendix 9-3 identifies that the Boor_020, Brosna_100 and Lemanaghan Stream_010 SWBs could deteriorate to Poor status without mitigation. The WFD non-deterioration obligation applies regardless of existing status.

4.2.7 Additional Concerns

In addition to the six critical issues identified above, the following significant concerns arise:

- IFI Consultation — No Response Obtained: Inland Fisheries Ireland is recorded in Chapter 6 as having received a pre-application consultation letter with "No response received" and no follow-up documented. An Coimisiún Pleanála is asked to request IFI observations directly before determining the application.
- Lamprey Population Decline (~90%): Appendix 6-2 records that lamprey ammocoete density at Site B3 fell from 22 per m^2 in 2021 to 1–2 per m^2 in 2024 — an approximately 90% decline. Chapter 6 makes no reference to this decline and proposes no specific mitigation.
- Derrynagun Stream — KER Without Survey Data: Chapter 6, Table 6-9 identifies the Derrynagun Stream as a Key Ecological Receptor. However, this watercourse is entirely absent from the Aquatic Baseline Report. An applicant cannot simultaneously identify a watercourse as a KER and present no baseline data for it.
- European Eel (IUCN Critically Endangered): Confirmed via eDNA at pond P1 but subsumed into the generic aquatic species assessment with no stand-alone impact assessment.
- Additional Aquatic Receptors Not Individually Assessed: Appendix 6-2 records smooth newt (Lissotriton vulgaris) detected by eDNA at pond site P3, common frog (Rana temporaria) recorded at site B5, and red-listed duck mussel (Anodonta anatina) recorded at sites B3 and B5. The River Brosna is additionally identified in the Aquatic Baseline Report as a county-importance ecological corridor. None of these receptors receive stand-alone species-specific impact assessment in Chapter 6 or Appendix 6-2, despite their conservation significance and proximity to construction activities and drainage outfalls.
- Survey Limitations Require Precautionary Approach: Appendix 6-2 records that Site B6 was dry at the time of survey so no biological water-quality sampling was possible there; that several Q-ratings were tentative due to poor summer flows or absence of suitable riffle areas; and that eDNA sampling is not quantitative and does not establish population size. These documented limitations mean that "not detected during survey" cannot be converted into "no risk" for the purposes of Appropriate Assessment. Absence of survey evidence is not evidence of absence, particularly where hydrological connectivity, historic records, suitable habitat and protected species are confirmed in the connected water network.
- Missing Receptor-Outfall Matrix: The aquatic assessment documentation does not provide a clear receptor-by-receptor matrix linking each identified outfall to: the receiving watercourse; the protected aquatic species or habitat downstream; the WFD status and Q-value of the receiving water; the specific construction activity creating risk; the proposed mitigation measure; the monitoring location and trigger value; the stop-work threshold; the responsible party; and the remedial action if deterioration occurs. Without such a matrix, the Commission cannot verify whether the "no significant effects" conclusion is scientifically robust for each of the confirmed hydrological pathways to the River Shannon Callows SAC and Middle Shannon Callows SPA. This gap is particularly material given that the Applicant's own Chapter 9 confirms that all surface water from the site ultimately reaches the River Shannon.
- Distance to European Sites Is Not a Legal Substitute for Scientific Assessment: Chapter 9 refers to hydrological flowpaths of approximately 10.5 km (via the Ballynahown Stream and Boor River) and 22.1 km (via the Brosna River) to the River Shannon Callows SAC and Middle Shannon Callows SPA, and suggests that distance limits the potential for significant effects. Distance alone is not a sufficient legal answer where: hydrological connectivity is expressly accepted by the Applicant; all site surface water ultimately reaches the River Shannon; the receiving catchment contains poor and moderate biological status; the proposed works involve peat excavation, borrow pits, dewatering, new roads and drainage; and protected aquatic species are confirmed within the connected water network. Per the CJEU in Weser (Case C-461/13), the WFD non-deterioration obligation applies regardless of distance. The legally correct question is whether the competent authority can exclude adverse effects on European site integrity on the basis of

complete, precise and definitive scientific findings — not whether the designated sites are geographically remote from the development footprint.

- Lamprey Sedimentation Risk from Peatland Construction: Appendix 6-2 records that siltation (primarily from peat) and historical drainage have already reduced the quality of salmonid and lamprey spawning habitat across the survey sites, and that lamprey densities in 2024 were lower than those recorded at site B3 in 2021, with increased sedimentation identified as a possible contributing factor. The proposed project involves extensive peatland construction activities — including peat excavation, borrow pit development, dewatering, road construction, drainage management, hardstands and construction compounds — all of which carry elevated peat silt mobilisation risk. The assessment should provide a specific fisheries and lamprey habitat protection assessment addressing: spawning and nursery habitat at each outfall location; sediment release and peat silt mobilisation during construction; seasonal timing constraints in relation to lamprey migration and spawning; watercourse crossing methods; compensation measures in the event of habitat loss; and a clear IFI-compliant sediment management plan with site-specific trigger levels.

4.2.8 Core Objection Theme 2 — Conclusion

The aquatic and fisheries assessment submitted in support of this application contains critical data gaps, factual contradictions and failures to apply species-specific assessment obligations for confirmed Annex II species and Annex I habitats. An Coimisiún Pleanála is respectfully requested to issue a significant further information request addressing all of the matters identified in this theme, and to directly notify Inland Fisheries Ireland before any determination is made. In the absence of satisfactory resolution of these matters, permission should be refused.

Core Objection Theme 3: Flora, Fauna, Habitats and Invasive Species — Internal Contradictions and Protected Species Omissions

4.3.1 Introduction

This theme addresses critical deficiencies in the assessment of flora, fauna, habitats and invasive species within Chapter 6 of the EIAR and Appendix 6-3 (Vegetation Survey). Of the critical findings identified below, several arise directly from internal contradictions within the applicant's own submitted documents, where Chapter 6 conclusions are directly contradicted by findings in the applicant's own supporting appendices.

4.3.2 Critical Finding 1: Flora Protection Order Species — Direct Internal Contradiction

Chapter 6 states, at Section 6.3.2.1.8 and again in the habitat evaluation conclusion: "No botanical species protected under the Flora (Protection) Order (1999, as amended 2022) were recorded during any surveys undertaken." This statement is directly contradicted by the applicant's own evidence in two separate ways.

Contradiction A — Drosera rotundifolia (Round-leaved Sundew)

Appendix 6-3, Section 2.19 records Drosera rotundifolia at 0.5% cover within the direct construction footprint of Construction Compound No. 4. Drosera rotundifolia is listed under the Flora Protection Order 2015. This species does not appear anywhere in Chapter 6. If Construction Compound No. 4 proceeds as proposed, the destruction of the recorded Drosera rotundifolia plants is not a risk — it is a certainty.

Under the Flora (Protection) Order 2015, works that would damage, uproot or destroy a listed species require a licence from the Minister. Construction Compound No. 4 is proposed within the area where Drosera rotundifolia is recorded in Appendix 6-3. No licence pathway, avoidance plan or translocation protocol is identified in the application. An Coimisiún Pleanála is requested to require the applicant to clarify the FPO licence position in respect of Construction Compound No. 4 before any determination is made.





Drosera rotundifolia (Round-leaved Sundew) photographed at Lemanaghan Bog by Tina Claffey Photography. This Flora Protection Order 2015 listed species is recorded at 0.5% cover within the footprint of Construction Compound No. 4 in the applicant's own Appendix 6-3, yet is stated to be absent in the Chapter 6 conclusion.

Contradiction B — Epipactis palustris (Marsh Helleborine)

Chapter 6 itself, at Section 6.3.2.1, records marsh helleborine (Epipactis palustris) — a Flora Protection Order 2015 species — within the western portion boundary of the Proposed Project site. The document therefore records a FPO species in its own habitat description, then concludes in the same chapter that no FPO species were recorded. This is a direct self-contradiction within Chapter 6 itself. Neither species appears in the Key Ecological Receptors table, no mitigation is proposed for either, and no FPO licence application is referenced.

4.3.3 Critical Finding 2: Invasive Species — Direct Internal Contradiction

Chapter 6, Section 6.3.2.1.8 states: "No invasive species, listed on the Third Schedule of the S.I. No. 477/2011, were recorded within the Proposed Project site." This statement is factually incorrect on the basis of the applicant's own Appendix 6-3, which records Pinus contorta (lodgepole pine) at two locations within the Proposed Project footprint: at Construction Compound No. 2 (sapling at 1% cover) and at the Met Mast (at 2% cover). Pinus contorta is listed on the Third Schedule of S.I. No. 477/2011. Chapter 6 then designs its invasive species mitigation around the false assumption that no Third Schedule species are present.

4.3.4 Critical Finding 3: Annex I Habitat Screening — Adequacy Questioned

Chapter 6 reaches the conclusion that no Annex I habitats occur within the project footprint. However:

- Areas of secondary heath dominated by Calluna vulgaris (up to 70%), Erica tetralix, Molinia caerulea and Eriophorum spp. are present at the 220kV substation/Compound 5 location and Borrow Pit No. 2 near T04. The Chapter makes no explicit assessment of whether these areas could constitute Potential Peat-Forming Habitat.
- The Sphagnum threshold argument is applied to Active Raised Bog (7110) without clearly addressing the classification criteria for Degraded Raised Bog (7120).
- Article 17 mapping shows Active Raised Bog (7110) at approximately 2km west of the site. The Chapter's own evaluation acknowledges that "some areas of remnant raised bog have potential to correspond to

the Annex I habitat Degraded raised bog still capable of natural regeneration." These should be formally screened against EUR 28 Annex I interpretation criteria.

4.3.5 Critical Finding 4: Common/Viviparous Lizard — No Assessment of a Wildlife Acts Protected Species

The common/viviparous lizard (Zootoca vivipara) is Ireland's only native terrestrial reptile and a protected wild animal under the Wildlife Act 1976, as amended by S.I. No. 282/1980. Chapter 6 Table 6-5 records it in the NBDC records as: Common lizard — Zootoca vivipara — WA — N00.

Despite this, Chapter 6 does not carry the species forward into any meaningful species-specific assessment. There is no targeted reptile survey, no mapped assessment of suitable habitat, no identification of potential basking, refuge, hibernation or breeding areas, no assessment of direct mortality risk during construction, and no species-specific mitigation.

The proposed development involves extensive ground-disturbing works — turbine bases, crane hardstands, access tracks, cable trenches, borrow pits, drainage works, vegetation clearance — all of which may affect habitat features used by common/viviparous lizard. The hibernation risk is particularly significant: winter clearance, excavation or ground disturbance could kill or injure animals in hibernation.



Two small amphibian and reptile species recorded during field observations at Lemanaghan Bog — photographed by Aoife Phelan. Both smooth newt (Lissotriton vulgaris) and common/viviparous lizard (Zootoca vivipara) are protected species whose presence at Lemanaghan is acknowledged in the applicant's own baseline data yet not carried forward into species-specific impact assessment.

4.3.6 Critical Finding 5: Badger — Admitted Risk, No Licence Pathway

Badger (Meles meles) is a protected wild animal under the Wildlife Acts 1976–2012. The EIAR explicitly states: "There is potential for disturbance or displacement, and potentially mortality, of badger during the construction phase" and "There is potential for injury or mortality of individual badgers." These are admissions that the proposed development creates a foreseeable pathway to outcomes prohibited under the Wildlife Acts. The Wildlife Acts do not provide an exception for impacts classified as not significant at population level — the prohibition operates at the level of the individual animal and the individual sett.

Section 3.2.2.2 of Appendix 6-5 describes a permanent predator exclusion fence around the full 10-hectare lapwing breeding habitat area, explicitly designed to permanently exclude badger using buried Tornado badger wire (R15/158/5), buried mesh and concrete gate aprons. This fence constitutes a direct and documentable measure that will permanently exclude badgers from a 10-hectare area of the site. The EIAR's badger assessment does not address this fence at all. No Wildlife Act licence or NPWS derogation pathway is identified for any badger sett interference, exclusion or sett evacuation procedure.

4.3.7 Core Objection Theme 3 — Conclusion

The flora, fauna, habitats and invasive species assessment contains multiple critical findings that arise directly from contradictions within the applicant's own submitted documentation. These are not matters of interpretation. They are factual contradictions between the Chapter 6 conclusions and the applicant's own supporting appendices. The independent FPO licensing obligation arising from Drosera rotundifolia at Construction Compound No. 4 exists regardless of the outcome on planning grounds and warrants clarification before determination.

An Coimisiún Pleanála is respectfully requested to require significant further information addressing all of the matters identified in this theme before any determination is made.

5.0 Conclusion

The Lemanaghan Wind Farm application (PAX19.324161) is fundamentally flawed in its biodiversity assessment. While the need for renewable energy is acknowledged, the applicant has failed to demonstrate that the proposed development is consistent with its legal obligations under the Habitats Directive, the EIA Directive, the Water Framework Directive, the Flora (Protection) Order, the Wildlife Acts and the Animal Health and Welfare Act.

The Chapter 6 biodiversity assessment and its supporting appendices contain:

- A fundamental methodological error that invalidates the entire bat collision risk framework.
- Admitted assessment gaps for three of fifteen proposed turbines.
- Direct internal contradictions between Chapter 6 conclusions and the applicant's own appendices on Flora Protection Order species and Third Schedule invasive species.
- Failure to provide species-specific assessment for confirmed Annex II species.
- Failure to identify lamprey to species level in a catchment with direct connectivity to a SAC qualifying interest.
- Admitted potential for disturbance and mortality of legally protected badger without a corresponding licensing pathway.
- Failure to carry a Wildlife Acts protected species from the applicant's own desk-study baseline into the impact assessment.
- Factual contradictions in survey dates that prevent the competent authority from properly evaluating the aquatic baseline.

These deficiencies are not isolated. They reinforce each other: the classification error in the bat assessment undermines the climate and biodiversity case; the deferred curtailment approach undermines the assessment's reliability on Annex IV species protection; the FPO and invasive species contradictions undermine confidence in Chapter 6 as a whole; the absence of species-specific assessments for white-clawed crayfish, viviparous lizard and badger leave significant legal gaps that cannot be cured by condition.

The Commission is therefore asked to find that the applicant has not discharged the burden of demonstrating that the proposed development at Lemanaghan Bog is acceptable from a biodiversity perspective, and that the EIAR does not provide a sufficient basis for the grant of consent.

6.0 Recommendation

It is recommended that the Commission refuse permission for the proposed development on the grounds set out in Section 6.1 below.

Failing this, the Commission should require the Applicant to submit substantial further information and independent expert review on the following before any decision is made:

- A fully corrected and independently peer-reviewed bat collision and barotrauma assessment, applying the correct Large project size classification under NatureScot (2021) Table 3a.
- Turbine-specific bat assessment data for T02, T08 and T13.
- A complete pre-consent curtailment plan specifying all operational parameters required for Annex IV bat species protection.
- Ecobat benchmarking analysis for the recorded bat activity levels at Lemanaghan.
- A dedicated species-specific impact assessment and mitigation schedule for white-clawed crayfish.
- Species-level lamprey identification (eDNA or targeted survey) across all affected catchments.
- Documentary evidence clarifying the correct dates on which the 2024 aquatic surveys were conducted.
- Survey data for the Derrynagun Stream Key Ecological Receptor.
- Clarification of the FPO licence position in respect of Drosera rotundifolia at Construction Compound No. 4.
- An updated invasive species assessment and management plan acknowledging the presence of Pinus contorta within the project footprint.
- A targeted, seasonally appropriate viviparous lizard survey with habitat assessment and species-specific mitigation.
- A full badger survey covering the entire development footprint and identification of the Wildlife Act licence pathway for all proposed exclusion, fencing and sett evacuation measures.
- An explanation of the approximately 90% decline in lamprey density between the 2021 and 2024 surveys.

6.1 Recommended Reasons for Refusal

This planning application should be refused for the reasons set out below.

Reason No.	Reason for Refusal
Reason 1	Bat Assessment — Invalid Methodology: The applicant has applied an incorrect project size classification under NatureScot (2021) Table 3a, producing a site risk score that is wrong throughout the entire bat collision and barotrauma risk assessment. The error affects every species, every season and every mitigation conclusion. The assessment does not provide a complete, precise and reliable basis for the competent authority to reach a reasoned conclusion on likely significant effects on Annex IV bat species, as required by Holohan v An Bord Pleanála (C-461/17) and Article 12 of the Habitats Directive.
Reason 2	Bat Assessment — Inadequate Turbine Coverage and Deferred Mitigation: Three proposed turbines (T02, T08 and T13) have no direct detector assessment. Pre-consent curtailment requirements have not been specified. Reliance on post-Year 1 monitoring and deferred curtailment decisions is inconsistent with the strict protection obligations applicable to

Reason No.	Reason for Refusal
	Annex IV bat species under Regulation 51 of S.I. 477/2011 and Commission v Ireland (C-183/05).
Reason 3	Aquatic Assessment — Critical Data Gaps and Protected Species Failures: The EIAR contains a factual contradiction on survey dates between Chapter 6 and Appendix 6-2; does not provide a dedicated assessment for confirmed Annex II white-clawed crayfish; does not identify lamprey to species level in a catchment with direct connectivity to the River Shannon Callows SAC; identifies a Key Ecological Receptor (Derrynagun Stream) for which no baseline survey data has been provided; and does not demonstrate compliance with the Water Framework Directive non-deterioration principle.
Reason 4	Flora Protection Order — FPO Species Present but Denied: The EIAR concludes that no Flora Protection Order species were recorded, while the applicant's own Appendix 6-3 records Drosera rotundifolia at 0.5% cover within Construction Compound No. 4 and Chapter 6 itself records Epipactis palustris within the project boundary. No FPO licence pathway has been identified. Planning permission does not authorise works that may require a separate ministerial licence under the Flora Protection Order 2015.
Reason 5	Invasive Species Assessment Built on False Premise: The EIAR concludes that no Third Schedule invasive species are present on the site, while the applicant's own Appendix 6-3 records Pinus contorta at two locations within the project footprint. The entire invasive species mitigation strategy is designed around a false baseline.
Reason 6	Common/Viviparous Lizard — Protected Species Not Assessed: A Wildlife Acts protected species identified in the applicant's own desk-study baseline has not been carried forward into the impact assessment. No targeted reptile survey, habitat assessment, construction-phase mortality assessment, hibernation risk assessment or species-specific mitigation has been provided.
Reason 7	Badger — Admitted Risk Without Licensing Pathway: The EIAR explicitly admits potential disturbance and mortality of legally protected badger while proposing a permanent 10-hectare predator exclusion fence specifically designed to exclude badger, and while identifying no Wildlife Act licence pathway for any proposed sett interference, exclusion or evacuation procedure. These contradictions cannot be resolved by condition.

Additional Comments:

Bats: No Wind Speed Threshold Stated

The feathering mitigation — the primary bat protection measure — does not specify an actual wind speed threshold. At the turbine cut-in speed (~3 m/s), most European bat fatalities still occur, as the literature consistently shows the peak mortality window is 3–7 m/s. Leisler's bat (Near Threatened in Ireland, 22.9% of spring bat activity) receives no species-specific collision estimate at all, which is a significant gap for a Red Data Book species.

Required Actions:

1. A quantified mortality assessment should be prepared for each high-risk species including Leisler's bat. A species-specific curtailment protocol for Leisler's bat should be prepared.

2. A specific wind speed curtailment threshold should be stated in the application documents (recommended: ≥5.5 m/s for turbines within 200m of scrub/drainage channels, ≥6.5 m/s at low-activity turbines), covering April–October, dusk to dawn. Pre-agreed mortality thresholds from post-construction carcass searches should be established.

Section 6 ATTACHMENT

ATTACHMENT A : Detailed Bat Survey underpinning the main submission on Chapter 6

&

ATTACHMENT B : Photobook of Biodiversity

ATTACHMENT A

Lemanaghan Bog Bat Survey

AN DOIRE ENVIRONMENTAL



Bat Survey . August 2024.

This report has been prepared by Jim Minogue Environmental Consulting with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for a private client and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk

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4. Conclusion page 10

1.1 Introduction

I Jim Minogue was commissioned by Ciara Egan to undertake a bat survey on a site lying within peatland, scrub, pasture and meadow lands at Co Offaly in August 2024. This survey was to determine whether the site and an existing structure was being utilised by bats.

The survey was undertaken following a submission for the development as a wind farm with the construction of turbines, roadways and cable infrastructure. The peatland is worked and cutover raised bog, with signs of vegetative succession occurring. The building is a stone and galvanised single story house within an abandoned farmstead. The August 2024 survey found the structure not being utilised by bat species. The site did provide good habitat for bat species in terms of foraging and commuting routes

1.2 Desktop research.

Prior to the site survey a review of existing information on bat roosts and local activity was undertaken. The national biodiversity database was searched for records of all bat species within a 10km grid of the site (Grid N12). A number of the nine species of resident Bats have been recorded in this area. The following bat species were recorded In the 10km N12 square on Biodiversity Ireland Maps.

- Brown Long-eared Bat (Plecotus auritus)
- Daubenton's Bat (Myotis daubentonii)
- Leisler's Bat (Nyctalus leisleri)
- Common Pipistrelle (Pipistrellus pipistrellus)
- Soprano Pipistrelle (Pipistrellus pygmaeus)

On a survey conducted on an adjoining farm last year the above bats were monitored as well as the above species.

- Natterer's Bat (Myotis nattereri)

This survey conducted in Augst 2024 additionally monitored Whiskered bat (Myotis mystacinus) present in the area.



Graphic 2: bat landscape surrounding site (Biodiversity Ireland)

The below survey illustrates that this is a relatively significant area for bat species, preservation of habitat and maintenance of foraging, commuting routes and of summer and winter roosts would be important for their conservation in this landscape.

All Irish bats are protected under European legislation, namely the Habitats Directive (92/43/EEC). All Irish species are listed under Annex IV of the Directive, requiring strict protection for individuals, their breeding sites and resting places. The lesser horseshoe bat (Rhinolophus hipposideros) is further listed under Annex II of the Directive, requiring the designation of conservation areas for the species. Under this Directive, Ireland is obliged to maintain the favourable conservation status of Annex-listed species. This Directive has been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011.

In addition, Irish species are further protected by national legislation (Wildlife Acts 1976-2018).

Under this legislation, it is an offence to intentionally disturb, injure or kill a bat or disturb its roost. Any work at a roost site must be carried out with the agreement of the National Parks and Wildlife Service (NPWS) and a derogation licence must be granted before works commence.

1.3 Competences and limitations

Limitations: the weather for the evening survey was conductive to bat activity and the survey was undertaken during the bat activity season on the 27th of August 2024. This would be within the breeding season with young bats in maternity roosts prior to being weaned. Non breeding individuals would be in satellite roosts. The temperature was 14 C with broken cloud.

1.4 The site.

The structure and the surrounding site was in a settled area with good vegetation and tree lines,



Graphic 3: The wider landscape, showing cutover peatland, extensive and intensive agriculture with hedgerows and plantations.

The habitat occurring surrounding the project site is representative of the Fossitt habitats: Raise bog (PB1), cutover bog (PB4), dry calcareous grasslands (GS1), dry meadow and grassy verges (GS2), tree lines (WL2), and hedgerows (WL2). Within the wider landscape existing land-use is mixed agricultural with cropping and grazing with cattle, sheep and horses, with silage and hay meadows. There is cultivated and tilled land (BC3). There are mixed (WD3) and pure (WD4) conifer plantations There are dwellings and farmsteads scattered along roads. The roadways and yards and other building units has resulted in buildings and artificial surfaces. (BL3). Some of these habitats are important ecological features and contribute to the linear landscape connecting the immediate area and wider agricultural landscape. The variety of habitats present exists within a relatively highly settled area with good landscape features and habitats in the vicinity. The land is intensively and extensively farmed and is highly settled with relatively high levels of human activity. The decline in human activity with the reduction of peat extraction has led to increased availability of habitat for biodiversity.

No features such as cellars or caves are present on site.

The Survey

During the daylight/evening survey around the structure, external evidence such as the following was taken into consideration:

- The presence of droppings on surfaces around the interior/exterior of the house
- Urine staining beneath access points; • Scratch marks around access points; and
- Visual signs of roosting bats.

The roof comprises timber joists with galvanized sheeting . There are small crevices in the stone wall and along wall plates and apex. Bats exiting and access to the house was presumed likely through the roof or wall plate or soffit. There were no visible signs of bat activity sighted in the cottage and monitoring equipment did not record activity from within. There were no bats monitored emerging from the house on the night of the survey.

The bat survey was undertaken on the 27th of August 2024. It comprised of monitoring and recording bat species which might or might not emerge from the structure at dusk. If bats were recorded emerging on the evening survey, a dawn survey would be required to ascertain if bat species returned to roost. The survey took a transect through the peatland and the pasture adjoining it monitoring and recording bat species encountered.

Bat Detector Surveys methodology

Prior to the survey a full site walk was undertaken to assess areas where bat activity was likely.

Sunset on August 27th was at 20.31 at Ferbane. For two hours after sun-set, one surveyor undertook a survey around the house, to record any potential emerging bat species and along a transect to determine commuting/foraging. This was undertaken with a Batlogger M2 hand-held monitor.

Ultrasonic bat detectors were also used during the survey to aid the detection of bats. Sweeps were made at lower to higher frequency to establish the presence or otherwise of all potential bat species.

The following equipment was used:

- A Ciel Electronique CDP102 R3
- Batlogger handheld M2
- High-powered hand torches and head torches.

Bats were identified in the field to species level, *Myotis* sp. were identified to family level.

During hand-held bat surveys species were identified in real time by recording peak frequency. Notes were also made on the time of recording and type of behaviour of each bat encountered during the activity surveys, such as flight type and altitude.

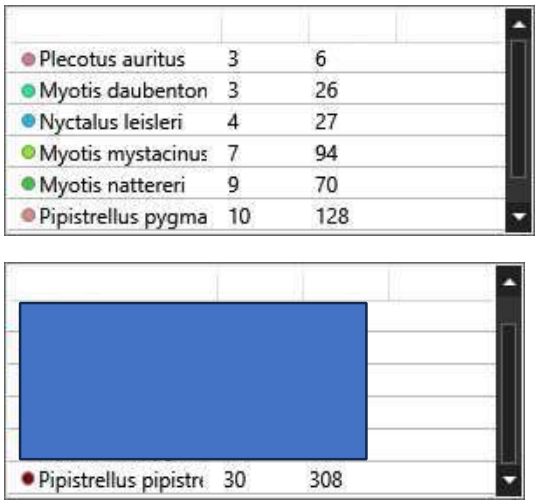
Limitations

The survey was within the bat activity season. Weather conditions was optimal for bat surveys, with good visibility and calm conditions. The site was in a quiet part of the countryside with good landscape features present for bats, no artificial lighting and good insect activity. Various dwellings and farmsteads meant moderate levels of human activity, away from the site. There were few limitations for this survey.

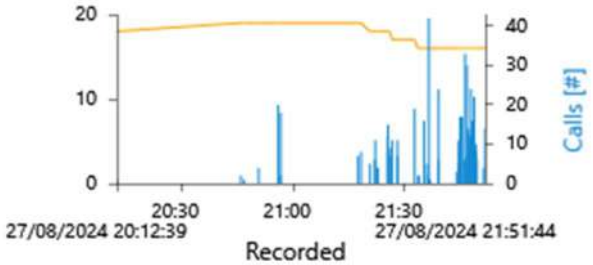
Results

The results of the bat surveys as follows

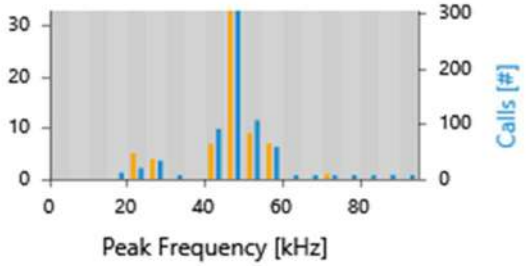
- The survey confirmed the presence of bats utilising the site. 3 species of bat were recorded utilising the area within 50m of the house.
- No species of bats were detected by the Batlogger detectors emerging from the house.
- Three species of bat , Brown long eared bat (Plecotus auratus), Leisler's bat (Nyctalus leisleri) along with Soprano pipistrelle (Pipistrellus pygmaeus) were monitored utilising the site around the cottage, particularly to the west of the structure.
- Common Pipistrelle (Pipistrellus pipistrellus) was the most common bat species surveyed.
- No bat species were observed or monitored utilising the house.
- Two species of Myotis bats were recorded that had not been logged on Biodiversity Ireland previously; these were Natterer's Bat (Myotis nattereri) and Whiskered bat (Myotis mystacinus)
- In total 7 bat species were monitored around the site, these species were commuting or foraging largely with no individuals recorded emerging from the structures on site. The presence of 7 out of the 9 species of bat resident on the Island is significant.



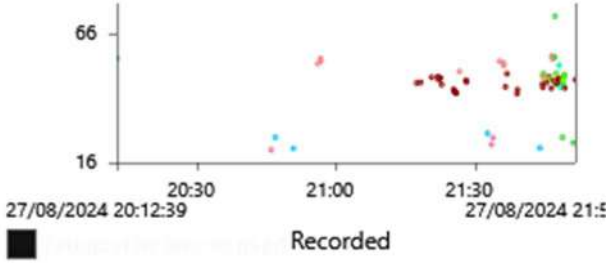
Above; Key and species surveyed, the figure to the left is recordings and the figure to the right is calls made. Species are colour coded with the same on the map below.



Bat activity around the site during survey.



Bat species and frequencies below





The above graphic shows species around the structure which were recorded with a Brown long eared bat（ Plecotus auratus) monitored at 20.45 a Leisler's bat (Nyctalus leisleri) monitored at 20.46 and a Soprano pipistrelle at 20.56. These species being recorded at these times of the evening would suggest that they are utilising roosts in trees or abandoned structures in the vicinity of the cottage.



Graphic : Showing species around the site including all bats monitored and identified..5 out of the 7 bat species surveyed were located around the peatlands. Daubenton's bat (Myotis daubentoniid) and Whiskered bat (Myotis mystacinus) were associated with the pasture land to the east, yet are well within foraging range of the peatland site.



The above graphic illustrates the importance of edge habitats and linear features for the bats in this area for commuting between roosts and foraging. Pipistrelle species were encountered on the peatland while Leisler's bat and Brown long eared bat were monitored around the cottage. Natterer's bat was recorded on the eastern boundary of the peatland and pasture land. Daubenton's and Whiskered bat were located to the east on pasture land.

Evaluation

A bat dusk survey with a static survey carried out on the 27th of August 2024 confirmed bats utilizing the site, but not the structure

There is always some limitations in concluding on use of buildings based on one survey, however the building is small in scale and with one surveyor and a fixed static as well as a hand-held Batlogger, any bats present were recorded. The evidence recorded during the survey did not find any bat species utilising the building. This could be due to it being open for predation, there were signs of pine martin activity within the building.

The monitoring of 3 species of bat around this old farmstead which was significantly encroached with scrub and with very low levels of human activity would suggest the presence of satellite roosts in the vicinity.

Recommendations

The survey undertaken demonstrate the significance of the landscape in particular the existing trackways, hedgerows and treelines that bound the site, for 7 bat species, these habitats are significant and important linear features for the local bat community and are of high value for foraging and commuting bats.

There are a variety of mature broadleaved treelines surrounding the site. There are a diversity of wet-land and dry-land habitats with extensive agricultural intensity surrounding the site. The wetlands, woodland habitat and residues from agricultural activity meant good insect life.

Connectivity for bat species to the larger landscape is important, this is created by the maintenance of linear features such as tree-lines or hedgerows, ideally this linear feature gaps should be under 5m wide, as some bat species do not cross open non-linear feature areas.

There is a positive association for a number of bats, between the extent and proximity of broadleaved woodland and roost locations. Having such woodland to shelter, screen and provide foraging for the bats utilising the landscape is of considerable importance.

Hedgerows can also be both a barrier to disturbance and a screen for any light or background noise. The management of the hedgerow for its stated objectives is of importance. It should exhibit the following in terms of creating beneficial conditions for bats.

The hedge should be wide and tall (at least 2.5m) comprising native species and ideally pollinating plants. To add the screening effect of the hedge, if needed, it is thought to include holly at a relatively high density giving year round screening. Willows and blackthorn give early season nectar for insects, hawthorn, bramble and rose give summer nectar and ivy gives autumn nectar. These species also produce berries and create habitat for an number of species of insect and birds.

Commuting Routes

Hedgerows are a good way to link foraging and commuting routes for bat species. When there are standard trees present it can increase the abundance and diversity of moths as prey. Due to the increasing incidence of ash-die-back disease there will be older standard trees that will die in the coming years.

The linear features consisting of drains, tracks, hedgerows, groves and tree-lines are all important for bat species commuting and foraging. The removal or loss of these features therefore have the potential to affect local bat species.

A suitable measure, to ensure minimum disturbance to bat species would be the enhancement of hedgerows throughout the site. The opportunity to provide additional ecologically appropriate planting and provide for pollinator friendly planting in line with the All-Ireland Pollinator Plan (particularly night scented or moth friendly planting) could provide additional foraging resources for bat species within the area. It would also increase commuting pathways.

Lighting

The reduction and minimising of additional light and light pollution is a key conservation measure, in addition to bat friendly lighting structures and bulbs. The avoidance of additional light or light spill on the utilised linear features is of particular importance in this regard, with particular attention paid to the provision and maintenance of dark corridors along these features.

Guiding principles in design should be that lighting should only be erected where it is needed, in use for the required time that it will be utilised and only at levels that enhance visibility

Using the minimal lighting required for safety, there should be no excessive lighting, both in time duration and spatial spread. Never illuminate commuting or foraging or roost areas. Minimise light spill and do not utilise bare bulbs or any up lighting. The linear features formed by trackways, hedgerows and tree-lines are important for bats commuting and foraging.

Light should be spread below or near the horizontal - flat cut off lanterns and shaded down lighting achieve this.

Narrow spectrum bulbs should be used, this reduces the amount of species affected by artificial lighting. Light should minimise the amount of ultra-violet and white and blue wavelengths in the light spectrum. This avoids attracting insects that might otherwise be in foraging areas and available as prey.

It is important to note that the winter when most lighting is required is also the dormant period for bat activity.

Conclusion

The maintenance of the commuting and foraging corridors and provision of an appropriate buffer around these linear features should maintain the overall connectivity within the wider landscape.

The surveys have shown the active use of the site and its landscape features that bound this site for foraging and commuting; the mature and dying trees may also support roosting bats at different times of the year. The presence of the three Myotis species on the survey are of note as two of these species were not previously recorded. There is good bat habitat around the peatlands.

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085-1634879

August 2024 References;

Kelleher C. and Marnell F., (2006). Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No.

25. National Parks and Wildlife Service, Department of Environment, Heritage and Local Governement, Dublin, Ireland

Dietz, C and Kiefer,A. (2014) Bats of Britain and Europe. Bloomsbury

Irish bats in the 21st Century. (2014) Bat Conservation Ireland

Exploring Irish mammals

ATTACHMENT B: Photobook

Lemanaghan is far more than a landscape. It is a living peatland environment that continues to shape the identity, heritage and daily lives of the people who live around it.

The bog is woven into our sense of place, our local history and our connection to nature. Its open horizons, wetlands, wildlife, plant life and quiet beauty form part of a landscape that generations of people have known, respected and cared for.

The photographs contained within this appendix reflect only a small part of the biodiversity and living heritage that exists throughout the Lemanaghan peatland landscape. They show a landscape that is alive with birdlife, pollinators, wetland habitats, peat-forming vegetation, archaeological heritage and community activity. They also reflect the strong relationship that continues to exist between the local community and the bog environment.

As a community, we value the ecological richness, cultural significance and natural beauty of Lemanaghan. We recognise the importance of protecting biodiversity and peatland habitats, not only for the present generation, but for those who will come after us. We remain deeply committed to caring for this landscape and to preserving its unique character, wildlife and heritage into the future.

We believe that, if given the opportunity to heal and thrive, Lemanaghan possesses all of the qualities necessary to become an increasingly rich and resilient biodiversity landscape that future generations and the wider community can continue to cherish and enjoy.

Images captured by members of the Lemanaghan Heritage & Conservation Group between 2021 and 2026, with additional photographic contributions from Tina Claffey Photography and Kevin O'Dwyer Photography.

Open Peatland Landscape Character

The Lemanaghan landscape is characterised by extensive open peatland, low horizons and uninterrupted skyline views across the bog environment.









Extensive open peatland landscape within the receiving environment of the proposed development.







Flat and visually exposed bog landscape characteristic of the wider Lemanaghan peatland complex.





















Heather-dominated peatland habitat at Lemanaghan
Extensive areas of flowering heather and regenerating peatland vegetation form part of the rich mosaic of habitats supporting biodiversity, carbon storage, hydrological function and ecological connectivity across the Lemanaghan landscape.

FLORA & PEATLAND BIODIVERSITY









Tufted Vetch



Whitethorn



Ling Heather





Common Spotted Orchid and Butterfly Orchid



Green Lacewing



Sundew

The Sundew — one of Ireland's most extraordinary native bog plants — survives only where peatlands remain wet, living and ecologically intact.



Lesser Butterfly Orchid: Rare and delicate orchid species continue to survive within the living peatlands of Lemanaghan — habitats shaped over thousands of years and deeply connected to the biodiversity of the Midlands.





Bog Cotton and Sundew thriving within the active peatland habitats of Lemanaghan.
These iconic bog species are closely associated with healthy, waterlogged peatland ecosystems. The delicate white heads of Bog Cotton and the remarkable insect-catching Sundew depend on stable hydrology, acidic wet conditions and intact living peat soils to survive. Together they reflect the ecological richness, biodiversity and environmental sensitivity of this rare living bog landscape.



One of Ireland's most remarkable native bog plants, the **Sundew** is a carnivorous species dependent on wet, nutrient-poor peatland habitats. Its delicate sticky leaves trap tiny insects, allowing it to survive in the challenging conditions of living bog ecosystems. The presence of Sundew reflects the ecological sensitivity and biodiversity value of the active peatlands of Lemanaghan.














Wild Poppy


Hawthorn / Whitethorn


Elder


Greater Stitchwort


Coltsfoot


Holly


Red Valerian



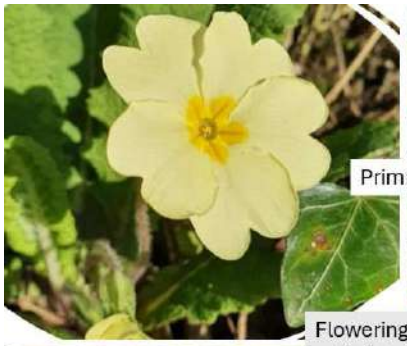

Spindle

Seasonal wetland and grassland flora within the Lemanaghan landscape.

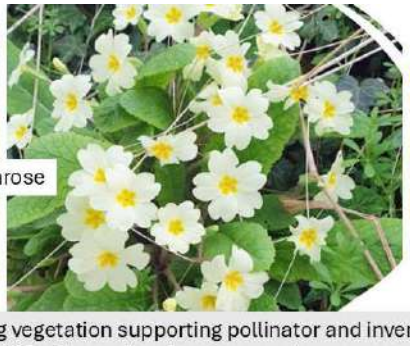

Devil's-bit Scabious


native mixed woodland


Marsh Thistles



Primrose





Gorse

Flowering vegetation supporting pollinator and invertebrate activity within the peatland environment.



Hawthorn / Whitethorn buds



Guelder Rose (Viburnum opulus)

Native shrubs and hedgerows provide seasonal food sources and shelter for wildlife throughout the Lemanaghan landscape



Wild Rose



Rosebay Willowherb



Common Centaury









Common Spotted Orchid



Lesser Butterfly Orchid



Wild Carrot



Heath Spotted Orchid (Dactylorhiza maculata)
A delicate native orchid associated with peatlands, wet heath and species-rich bog habitats. The presence of Heath Spotted Orchid within Lemanaghan reflects the ecological sensitivity, biodiversity and conservation value of this living peatland landscape.

Bog Myrtle





Ling Heather / Common Heather

Tufted Vetch





Cross-leaved Heath (Erica tetralix)
A characteristic peatland species adapted to acidic, waterlogged soils and closely associated with intact bog and wet heath habitats.



Bulrush / Reedmace (Typha latifolia)
Wetland vegetation colonising shallow water habitats within the peatland landscape, supporting biodiversity and indicating functioning hydrological conditions



Early regenerating vegetation on peat soils
Native plant species recolonising exposed peat surfaces demonstrate the ongoing ecological succession and natural regeneration processes occurring within the wider peatland landscape



Native pollinators within the peatland landscape
Bumblebees feeding on native thistle species highlight the importance of species-rich grassland and peatland-edge habitats in supporting pollinator biodiversity.



Willowherb
Early successional vegetation on peat soils
Native pioneer plant species establish across exposed peat surfaces, contributing to ecological recovery and habitat diversity within the peatland landscape.



Blackberry clusters ripen through late summer, sustaining wildlife across the interconnected hedgerow and peatland-edge habitats of Lemanaghan.











Butterfly and pollinator species recorded within the Lemanaghan bog landscape.



The presence of butterfly species such as the **Common Blue** highlights the ecological value and habitat diversity associated with the wider peatland environment.





Pollinator activity within species-rich grassland habitat
Meadow Brown butterflies and native wildflowers such as Field Scabious form part of the interconnected ecological networks supporting biodiversity across the Lemanaghan landscape.



Fox Moth caterpillar within peatland habitat
Heathland and bog-edge habitats support a wide diversity of invertebrate species, including moths whose life cycles depend on intact native vegetation communities.

Invertebrate and insect activity associated with wetland and flowering habitats.



Top Image
A bumblebee forages on native knapweed, highlighting the importance of wildflower-rich habitats for pollinators across peatland and meadow ecosystems.



Bottom Right Image
Solitary bee sheltering among seed heads and wild vegetation within species-rich grassland habitat.



Bottom Left Image
Ground-nesting bumblebee resting on exposed peat soils — an important pollinator species dependent on diverse semi-natural habitats.





Peacock Butterfly within species-rich grassland habitat
Native flowering plants provide essential nectar sources for butterflies and pollinators across the diverse habitats of the Lemanaghan landscape.



A Large White butterfly gathers nectar among wildflowers, reflecting the intricate web of life supported within the peatland and meadow habitats of Lemanaghan.



A **Small Tortoiseshell** butterfly gathers nectar from Purple Loosestrife along the peatland margins of Lemanaghan.





Bog surface vegetation, mosses and ground habitats characteristic of peat-forming environments.









Peat-forming sphagnum moss habitat within the Lemanaghan bog landscape.



Sphagnum moss habitat characteristic of active peatland environments.



Intricate carpets of **Reindeer Lichen** spread across the peatlands of Lemanaghan — slow-growing communities shaped by clean air, wet conditions and long-established natural habitats.





Bog Asphodel (Narthecium ossifragum)
A characteristic plant of active peatlands and wet acidic bog habitats, reflecting the ecological sensitivity and biodiversity value of the Lemanaghan landscape. It is widely recognised as an indicator of functioning peatland ecosystems.

Wetland bird activity recorded within the wider Lemanaghan peatland environment.



Little Ringed Plover



Pheasant



Whooper Swans recorded within wetland habitat areas of the Lemanaghan landscape.



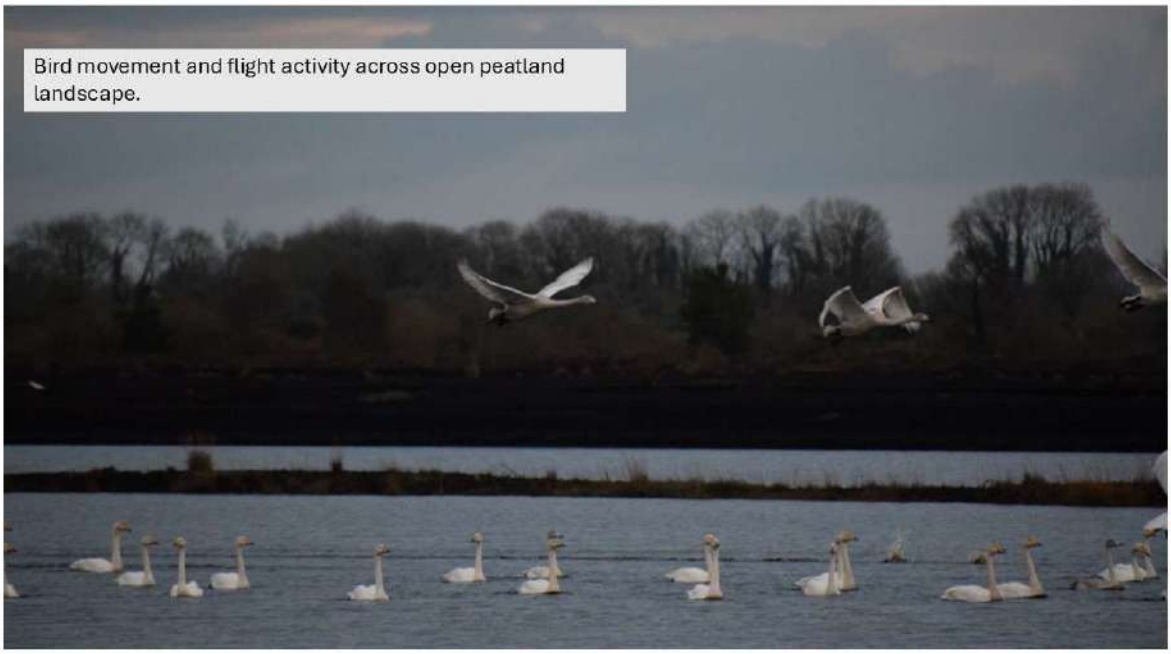




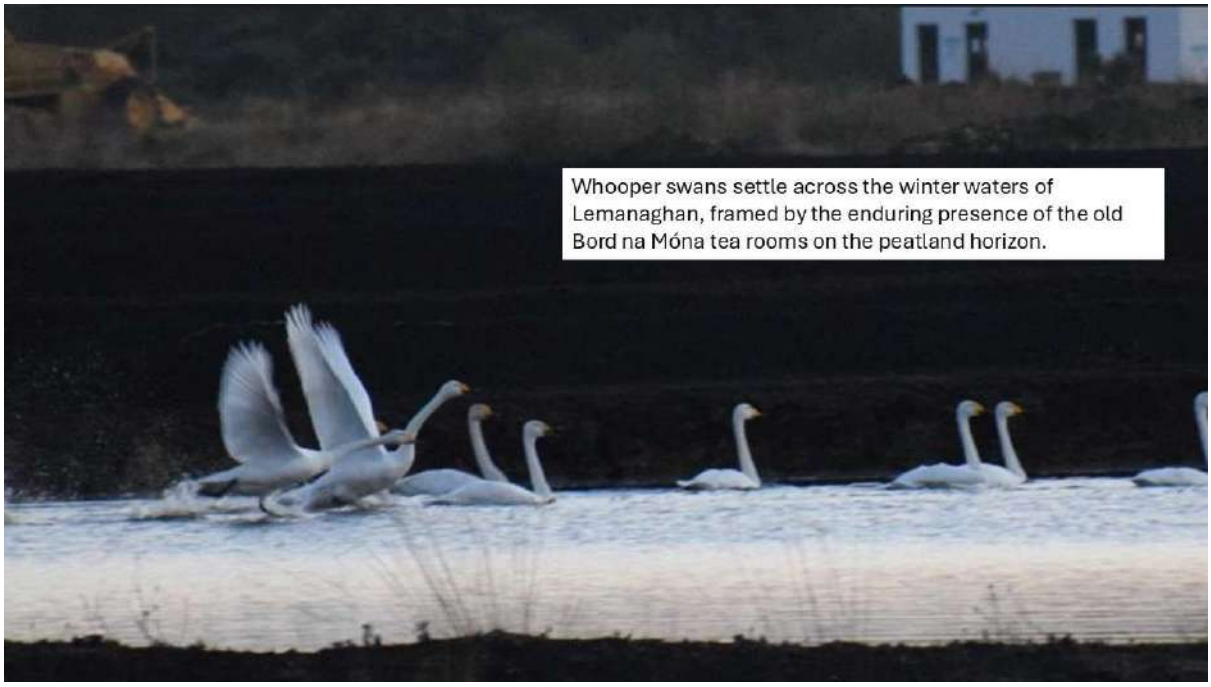
Wintering bird populations recorded within the bog and wetland landscape. Bord na Mona Lemanaghan Tea Rooms (Wellness Centre) in background.



Bird species observed within the Lemanaghan bog and surrounding wetland areas.



Bird movement and flight activity across open peatland landscape.



Whooper swans settle across the winter waters of Lemanaghan, framed by the enduring presence of the old Bord na Móna tea rooms on the peatland horizon.







Mixed waterfowl species including Mallard ducks using open wetland habitat within the Lemanaghan peatland landscape.





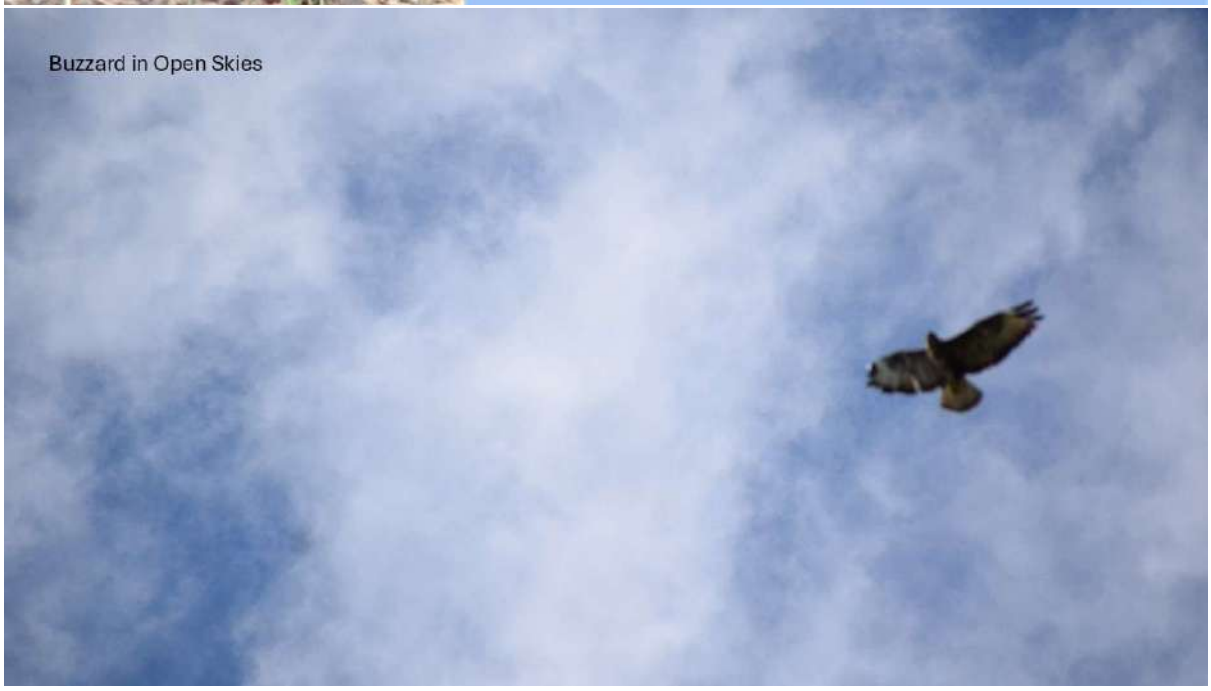






Song Thrush & Kestrel recorded within the wider receiving environment.







Kestrel open sky and unobstructed flight paths across the peatland landscape.



Long-eared Owl chick





Hidden among the grasses and peat soils of Lemanaghan, **fungi** form part of the intricate living systems that support biodiversity across this ancient landscape.









grove snails









Frogs & Frog Spawn: Seasonal wetland pools across Lemanaghan support amphibian life and form part of the intricate network of habitats sustained by the living peatland environment.



Smooth Newt (Lissotriton vulgaris)
Protected amphibian species rely on the wetlands, drains and water-rich habitats of the Lemanaghan landscape for breeding and survival.



Small amphibian species recorded during field observations at Lemanaghan.





Irish Hare (Lepus timidus hibernicus)
Ireland's native hare species relies on open bogland, grassland and heath habitats for shelter and survival. The presence of Irish Hare reflects the ecological importance and biodiversity value of the Lemanaghan landscape.



Snails, fungi and woodland flora thriving within the diverse peatland habitats of Lemanaghan.



Early Christian and Monastic Landscape of Lemanaghan





Lemanaghan remains an active cultural and community landscape with enduring connections between people, heritage and the bog environment.







Living cultural connections with the bog landscape remain an important part of community life in Lemanaghan.













St Manchans Shrine and Harry Clarke Windows, St. manchans Church Boher, Lemanaghan Parish











Sli Mor Pilgrim Path Connects Lemanaghan Monastic Site to Clonmacnoise



Sli Mor Pilgrim Path Connects Lemanaghan Monastic Site to Clonmacnoise across the flat peatlands



St. Mellas Cell Enclosure, the monastic landscape of Lemanaghan exists within, and is intrinsically connected to, the surrounding peatland environment.

Section 7: EIAR CHAPTER 7 REVIEW

Ornithological Third Party Planning Observation

An Coimisiún Pleanála — Case Reference: PAX19.324161

15 no. Wind Turbines, 220kV On-Site Substation and Associated Infrastructure

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LEMANAGHAN WIND FARM — OBJECTION BUNDLE

Lemanaghan Wind Farm — Ornithological Objection

Chapter 7 (Birds) EIAR · Appendix 7 Survey Data · Appendix 7-6 Collision Risk Assessment · Appendix 7-7 Bird Monitoring Programme

1.0 Introduction

This formal objection is submitted to An Coimisiún Pleanála in response to the planning application by Lemanaghan DAC for the construction of 15 wind turbines with a blade-to-tip height of 220 metres at Lemanaghan Bog, County Offaly (ACP Case Reference: PAX19.324161).

The objection is based primarily on two documents submitted by the applicant as part of the wind farm planning application:

- Appendix 7: Ornithology Survey Results (NIS Appendices, Reference 200804, dated 19 March 2026) — a single 573-page document forming the complete raw ornithological survey dataset. It comprises vantage point, walkover, waterbird, raptor, roost, breeding and incidental survey records for 18 bird species across five survey seasons (October 2020 to March 2025), and includes quantified Principal Collision Height (PCH) flight data for all key species.
- Chapter 7: Birds — Environmental Impact Assessment Report (EIAR, Reference 200804, dated 19 March 2026) — the applicant's formal impact assessment chapter, including collision risk modelling results, cumulative impact table, mitigation proposals and overall conclusions for all 15 Key Ornithological Receptors (KORs).

Where figures in these two primary documents diverge, or where a figure in Chapter 7 appears inconsistent with the raw data in Appendix 7, this objection identifies that discrepancy explicitly. Reference is also made to Appendix 5 (Bird Survey Report, MKO, Project No. 200804-e, Final 3 September 2025), submitted as part of a separate Remedial EIAR for peat extraction at the same site, as a comparison document only. The primary case for refusal rests entirely on Appendix 7 and Chapter 7 of the wind farm application.

1.1 Author Qualifications and Basis of Analysis

The author holds a Master of Science in Data Analytics and a Master's degree in Business, and has worked as a professional data analyst since 2012. The core findings of this objection — that the applicant's assessment relied on a single year's data when five years existed; that figures in Chapter 7 are inconsistent with the raw data in Appendix 7; that the Collision Risk Model input for Curlew represents two records from a single survey session against 2,746 individuals recorded in the applicant's own Waterbird Distribution Surveys; and that the 2021 single-year Golden Plover PCH figure used in the CRM represents approximately 2% of the five-season cumulative total in Appendix 7-3 — are findings of data analysis, not ornithology. They arise from reading the applicant's own submitted documents and comparing the figures within them.

This objection does not dispute the ornithological field surveys. It disputes the selective and incomplete use of those surveys' results in the formal impact assessment.

1.2 Independence of the Survey Evidence

All field surveys across all five seasons were designed, carried out and written up by MKO, a private environmental consultancy retained by Lemanaghan DAC, the applicant. The collision risk model, avoidance rate justification, bird monitoring programme and formal impact assessment were all produced by the same organisation for the same client. There is no independent verification of the field data, no independent review of the CRM methodology, and no independent ornithological assessment at any stage in this application.

BirdWatch Ireland played no role in any stage of the applicant's assessment. BirdWatch Ireland's relevance to this planning application is as an independent, state-commissioned source whose findings directly contradict the applicant's conclusions. The 2020 International Whooper Swan Census, coordinated by BirdWatch Ireland under contract to NPWS, established County Offaly as the most important county in Ireland for Whooper Swan. BirdWatch Ireland's long-term survey programme at Lough Boora — conducted in partnership with Bord na Móna's own ecology team — documents precisely the wildlife recovery on rehabilitated cutaway bog that the same company is now proposing to industrialise at Lemanaghan. An Coimisiún Pleanála is asked to weigh the applicant's self-commissioned assessment accordingly.

1.3 Validation

Validation matters have been addressed in the covering letter and associated documentation accompanying this objection.

2.0 Part 1 — Executive Ornithological Case

2.1 Overarching Ornithological Objection

The proposed development raises fundamental and unresolved concerns regarding impacts on protected bird species, the adequacy of the Appropriate Assessment, and the internal consistency of the applicant's own submitted evidence. The ornithological case advanced by the applicant in Chapter 7 rests on a series of methodological choices — the use of single-year collision-height data when five years of data exists, a developer-commissioned avoidance rate that reduces predicted Golden Plover mortality by a factor of five, and a collision model that feeds on vantage point survey data whilst ignoring a separate survey methodology that records dramatically higher species use — that collectively produce conclusions materially more favourable to the application than the full five-season dataset supports.

The three most significant concerns are:

- A five-season Golden Plover PCH record of 1,197,740 bird-seconds at collision height (Appendix 7-3) — including 915,927 bird-seconds in a single season — reduced to a CRM input of 26,171 bird-seconds by the use of the 2021 season data alone, representing approximately 2% of the cumulative total.
- 2,746 individual Curlew recorded across 68 survey events in the applicant's own Waterbird Distribution and Abundance Surveys — the only Irish bird on the IUCN Red List of Threatened Species, with a national breeding population of 123–138 pairs — entirely absent from the Collision Risk Model, whose near-zero input comes from two vantage point observations on a single day.
- Chapter 7 conceding three separate significant impacts for Whooper Swan and three for Lapwing Breeding — including the effective destruction of the primary Whooper Swan roost — then classifying the residual effect as "Not Significant" on the basis of unproven, legally unenforceable habitat enhancement plans.

These are not peripheral concerns arising from differences of ornithological opinion. They arise directly from comparing figures within the applicant's own submitted documents.

2.2 The Site, Its Ornithological Significance and the Lough Boora Context

Lemanaghan Bog covers approximately 1,110 hectares in County Offaly, approximately 2.5km southwest of Ballycumber. The proposed 15 turbines have a rotor-swept zone extending from approximately 70 metres to 220 metres above ground level. The survey area encompasses the bog itself and the surrounding improved agricultural grasslands and wetlands, including the Tumduff area and lands within the wider Boora bog group to the north.

The following Special Protection Areas fall within the zone of likely significant effect, with their Special Conservation Interests relevant to this application:

- Mongan Bog SPA (8.6km from site)
- Middle Shannon Callows SPA (8.7km) — SCIs include Whooper Swan, Golden Plover and Lapwing
- Lough Ree SPA (15.2km) — SCIs include Whooper Swan and Golden Plover
- River Suck Callows SPA (15.7km)
- Lough Derg (Shannon) SPA (33.6km)

Lemanaghan Bog and Lough Boora Discovery Park — part of the wider Boora bog group in County Offaly, managed by the same applicant (Bord na Móna) — are ecologically connected sites exhibiting the same pattern of wildlife recovery on rehabilitated cutaway bog. BirdWatch Ireland has been conducting long-term bird surveys at Lough Boora in partnership with Bord na Móna's own ecology team, documenting the return of Whooper Swan, Lapwing, Hen Harrier, Snipe, Kestrel and over 130 bird species as the cutaway recovers. Bord na Móna has promoted Lough Boora as a demonstration of how rehabilitated cutaway bog creates high-value wildlife habitat. Appendix 7 records, across five survey seasons, the same suite of species at Lemanaghan — Hen Harrier hunting over the bog in every season, Whooper Swans roosting by the hundred, Lapwing and Snipe breeding, Curlew and Woodcock present. The internal contradiction in Bord na Móna's own position — celebrating recovery at Boora while proposing to industrialise the same recovery at Lemanaghan — is addressed in Core Objection Theme 5.

2.3 Detailed Assessment Concerns

While Chapter 7 is presented as a complete and reliable ornithological assessment meeting the requirements of Article 6(3) of the Habitats Directive and the EIA Directive, it is respectfully submitted that the assessment does not clearly demonstrate the following when the full five-season dataset in Appendix 7 is properly considered:

- That the collision risk assessment uses the most representative available data for each species, as opposed

to the single season most favourable to the application.

- That the Appropriate Assessment has applied the correct reference populations for SCI species — the SPA population and SPA conservation objectives — rather than county or national population estimates.
- That an Ireland-specific, ecologically significant species used in nationally significant concentrations within the survey area has been assessed for collision risk.
- That the three admissions of significance for Whooper Swan and three for Lapwing Breeding can be resolved to "Not Significant" by unproven and legally unenforceable enhancement plans.
- That the cumulative collision assessment provides a sufficient basis for concluding no adverse effect on SPA integrity, given the absence of post-construction monitoring data from any existing operational wind farm within 25km.
- That the Bird Monitoring Programme provides adequate safeguards for the 29 unmonitored years in a 35-year operational lifespan.

3.0 Executive Summary and Core Request

3.1 Observations on Chapter 7 of the EIAR

This submission draws An Coimisiún Pleanála's attention to material weaknesses in the ornithological case advanced by the applicant and to demonstrate why the proposed development is not acceptable having regard to proper planning and sustainable development, the EIA Directive, and the Habitats Directive as it applies to the Natura 2000 sites in the zone of influence.

It is respectfully submitted that permission should be refused. In the alternative, the Commission should require significant further information and independent review before any positive decision could lawfully be contemplated. The Chapter 7 assessment, as submitted, does not provide a sufficiently complete, precise, reliable and integrated basis on which the competent authority can reach a reasoned conclusion on the likely significant effects of the proposed development on birds and on the integrity of the relevant SPAs.

3.2 Executive Summary and Core Request

The following table summarises the core concerns arising from this submission.

Issue	Planning/Legal Significance
Selective use of single-year PCH data: 1,197,740 bird-seconds at PCH for Golden Plover over five seasons (Appendix 7-3); Chapter 7 CRM uses the 2021 figure of 26,171 — approximately 2% of the five-season total	Fundamentally understates the collision-height exposure of an Annex I SCI species. The 2022 season figure of 915,927 bird-seconds is not referenced in Chapter 7 and has not been assessed.
Curlew entirely absent from Collision Risk Model: 2,746 individual Curlew across 68 survey events in Waterbird Distribution Surveys; CRM input from VP surveys is 2 observations on a single day	Curlew is the only Irish bird on the IUCN Red List. National breeding population 123–138 pairs. Flocks of 100–167 in survey area. Methodological artefact of VP-only CRM, not absence. Irish Curlew Task Force (2019) named Bord na Móna specifically, requiring conservation action on their estate.
Whooper Swan: three concessions of significance, primary roost effectively destroyed — residual classified "Not Significant"	Chapter 7 confirms a turbine and road will cause the effective loss of primary roost WS-a (up to 71 birds, all five seasons). Residual rests on unproven, legally unenforceable enhancement plan.
Lapwing Breeding: three concessions of significance, infrastructure within confirmed breeding areas — residual classified "Not Significant"	Turbine and road proposed within confirmed breeding locations L-a and L-d. Red-listed SCI species. Residual rests on same unverified enhancement plan.

Hen Harrier CRM uses outdated 2015 population (108–157 pairs); actual 2022 NPWS population: 85–106 pairs	The 2022 National Hen Harrier Breeding Survey (NPWS, published February 2024) found one-third decline since 2015. The Slieve Bloom SPA (30km from site) declined from 12–13 to 8 pairs 2015–2022. Chapter 7 overstates the reference population, understating the proportional impact. The 2022 survey explicitly identifies wind farms as a driver of decline.
Chapter 7 observation count: "20 occasions" for Hen Harrier — Appendix 7 records at least 54 observation events	16 VP observations + 4 walkover + 34 dedicated roost survey records = 54+ events. Chapter 7 figure excludes roost and walkover data, materially understating site use.
Developer-commissioned Golden Plover avoidance rate (99.6%) reduces predicted mortality from 9.14 to 1.828/year	Avoidance rate commissioned by MKO from a consultant retained for this purpose. Based on four UK wind farms with maximum 92m rotor diameter. Lemanaghan rotors are 150m — 2.65× the swept area. No adjustment made for scale difference.
Wrong population reference scales for SCI species (Whooper Swan, Golden Plover, Lapwing)	Legally correct reference for Appropriate Assessment is the SPA population and SPA conservation objectives, not county or national population. County Offaly holds more Whooper Swans than any other county in Ireland (2020 NPWS Census).
Cumulative assessment: no post-construction monitoring data from existing wind farms within 25km	126 turbines already operational on former Bord na Móna bogs in County Offaly. No monitoring data incorporated. This deficiency is the express basis for refusal in Slieveacurry Ltd (ABP, May 2024): "it cannot be satisfied that the cumulative environmental assessment… can reasonably exclude the possibility of significant impact."
Bellair Wind Farm (2.73km away) not included in cumulative collision table	The nearest proposed wind energy development is excluded from the cumulative assessment. All figures in Table 7-13 understate the full cumulative collision burden on affected species.
Bird Monitoring Programme covers only 6 of 35 operational years; no binding adaptive management trigger	29 unmonitored years. No threshold at which actual collision mortality triggers review, curtailment or any enforceable response. NPWS given no binding enforcement powers. Produces only unenforceable recommendations.
Withheld data: Appendix 7-5 (sensitive roosting/breeding records for 9 species)	Cover page only on public file. Roosting and breeding locations for Whooper Swan, Hen Harrier, Kingfisher, Peregrine, Lapwing, Barn Owl, Kestrel, Buzzard and Sparrowhawk withheld. Public cannot verify proximity claims in Chapter 7. Engages Aarhus Convention obligations.
Short-eared Owl and Common Grasshopper Warbler: Red-listed species detected in community survey, not in EIAR KOR list	Two Red-listed species detected independently by community participants within the survey area, not assessed in Chapter 7 or Appendix 7-6.

3.3 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own Appropriate Assessment and not simply adopt the applicant's conclusions. The applicable legal framework is:

- EU Birds Directive (2009/147/EC), Articles 1, 4 and 5 — requires Member States to maintain wild bird populations at ecologically appropriate levels and to protect Annex I species from deliberate killing, disturbance or displacement.
- EU Habitats Directive (92/43/EEC), Article 6(3) — requires Appropriate Assessment of any plan or project likely to significantly affect a Natura 2000 site. Permission may only be granted after the competent

authority has ascertained that the development will not adversely affect the integrity of the site.

- CJEU Case C-127/02 (Waddenzee) — precautionary principle: where reasonable scientific doubt remains as to the absence of adverse effects on site integrity, permission must be refused. The burden of proof rests with the applicant.
- CJEU Case C-254/19 (Holohan) — the Appropriate Assessment must contain "complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the proposed project on the site concerned."
- Article 191 TFEU — the precautionary principle as a Treaty obligation: where scientific uncertainty remains as to the nature or extent of an environmental impact, protective measures must be taken without waiting for uncertainty to be resolved.
- Wildlife Acts 1976–2012, s.23 — protection of all wild birds and their nests.
- Planning and Development Act 2000, s.177U — requires An Coimisiún Pleanála to carry out Appropriate Assessment before granting permission. Where the AA cannot exclude adverse effects on site integrity, permission must be refused.

Three of the KORs at this site — Whooper Swan, Golden Plover and Lapwing — are Special Conservation Interests (SCIs) of named SPAs. Any Appropriate Assessment must assess impacts by reference to the SPA populations and the SPA conservation objectives, not by reference to county or national populations. The applicant has assessed impacts against county and national figures throughout. This is a legally incorrect reference scale.

3.4 Fundamental Assessment Error: Single Year Used Against Five-Year Record

The applicant's Collision Risk Model is based, for each species, on the vantage point bird-seconds at Principal Collision Height recorded in a single survey season (primarily 2021). Appendix 7-3 (Summary Data) provides cumulative five-season PCH totals for all key species derived from the same vantage point survey programme. The discrepancy between the figures used in the CRM and the five-season totals available in the same document is the central analytical concern of this objection.

This is not a matter of ornithological opinion. It is a matter of which rows in the applicant's own spreadsheet are being used and which are being disregarded. An Coimisiún Pleanála is asked to require the applicant to explain, with reference to Appendix 7-3, why the 2021 season figures were selected as the basis for the CRM, what that selection criterion is, and why the cumulative five-season totals — including the exceptional 2022 Golden Plover season of 915,927 bird-seconds — were not given greater weight in the impact assessment.

3.5 Wrong Population Reference Scales for SCI Species

A consistent and fundamental flaw runs through the entire collision risk assessment in Chapter 7. For every species for which a collision rate is calculated, the significance of that rate is assessed by reference to the county population, defined as the population within a 25km radius of the site. For Whooper Swan, Golden Plover and Lapwing — each of which is an SCI of named SPAs — the legally correct population for Appropriate Assessment under Article 6(3) of the Habitats Directive is the SPA population and the SPA conservation objectives, not the county population. The integrity of the Middle Shannon Callows SPA and Lough Ree SPA is defined by the conservation status of the specific bird populations for which those SPAs were designated.

Assessing turbine mortality as a fraction of all Whooper Swans in County Offaly is legally incorrect. Furthermore, the 2020 International Whooper Swan Census — the most recent authoritative count, coordinated by BirdWatch Ireland under contract to NPWS — found that County Offaly recorded the largest concentrations of Whooper Swans in the Republic of Ireland. Expressing a predicted collision rate of 0.1 Whooper Swans per year as a percentage of the county population of 714 birds makes the impact appear trivial. Assessed against the specific SPA population — which is the reason Offaly's Whooper Swan concentrations matter at EU law level — the same figure carries an entirely different significance.

3.6 Key References

In preparing this submission, reference has been made to the following key sources:

- MKO (2026). Appendix 7: Ornithology Survey Results (573 pages). Reference 200804, 19 March 2026. Primary document.
- MKO (2026). Chapter 7: Birds — EIAR. Reference 200804, 19 March 2026. Primary document.
- Ruddock, M. et al. (2024). The 2022 National Survey of Breeding Hen Harrier in Ireland. Irish Wildlife Manuals No. 147. NPWS, February 2024.
- BirdWatch Ireland / NPWS (2021). 2020 International Whooper Swan Census — Republic of Ireland results.

- Lauder, A. et al. (2019). Action for Curlew in Ireland: Recommendations of the Curlew Task Force. NPWS, May 2019.
- O'Donoghue, B.G., Donaghy, A. and Kelly, S.B.A. (2019). National survey of breeding Eurasian Curlew in Ireland, 2015–2017. Wader Study 126:1 pp.43–48.
- CJEU C-127/02 (Waddenzee); CJEU C-254/19 (Holohan); EU Habitats Directive 92/43/EEC; EU Birds Directive 2009/147/EC.
- An Bord Pleanála: Cahermurphy Wind Farm, Co. Clare — Refused March 2023 (ABP Ref. PL05.310707).
- An Bord Pleanála: Slieveacurry Wind Farm, Co. Clare — Refused May 2024 (ABP Ref. 312728-22).
- An Bord Pleanála: Cloghercor Wind Farm, Co. Donegal — Refused May 2024 (ABP Ref. 312760-22).

4.0 Part 2 — Core Objection Themes

CORE OBJECTION THEME 1: ANNEX I SPECIES — WHOOPER SWAN, GOLDEN PLOVER, HEN HARRIER AND LAPWING

4.1.1 Golden Plover (Annex I; SCI of Middle Shannon Callows SPA and Lough Ree SPA)

Appendix 7 records 57 vantage point observations of Golden Plover across all five survey seasons, with flocks of up to 275 birds recorded, and multiple observations of flocks of 80 or more birds flying through the rotor sweep zone. The five-season cumulative PCH data from Appendix 7-3 (Summary Data) is as follows:

Season	Bird-seconds at PCH (Appendix 7-3)	Notes
2021 (CRM input)	26,171	Figure used by applicant in Collision Risk Model — approximately 2% of five-season total
2022	915,927	Exceptional season; large flocks at collision height; not referenced in Chapter 7
2023	108,938	—
2024	142,954	—
2025	3,750	—
FIVE-SEASON TOTAL	1,197,740	Chapter 7 does not explain why this figure is not given greater weight

The 2022 season figure of 915,927 bird-seconds at PCH in a single season is extraordinary. It appears likely to reflect large flocks — consistent with the 275-bird maxima recorded in Appendix 7-4 — spending extended periods in the rotor sweep zone. Chapter 7 does not clearly explain why the five-season cumulative figure, or the exceptional 2022 season, is not given greater weight in the impact assessment. Golden Plover is an Annex I species and an SCI of both the Middle Shannon Callows SPA and Lough Ree SPA.

Appendix 5 (the separate peat extraction submission) records 67 Golden Plover observations within the Application Site, noting flocks of up to 275 birds and two separate landing events on the bog surface. This confirms the bog surface itself is used, not merely overflown.

4.1.2 Whooper Swan (Annex I; SCI of Middle Shannon Callows SPA and Lough Ree SPA)

Appendix 7 records 142 Whooper Swan observations during vantage point surveys, 23 during winter walkover, 139 during waterbird distribution and abundance surveys, and 23 incidental observations. Regular roosting is confirmed across five separate on-site areas (WS-a to WS-e) in all five winter seasons surveyed, with maximum flock counts of 71 birds at area WS-a in Winter 2022/23 and 57 birds at area WS-c in the same winter.

The total vantage point PCH exposure across all five survey seasons is 30,258 bird-seconds (2021: 4,780; 2022: 3,383; 2023: 17,644; 2024: 4,451), with the 2023 figure of 17,644 bird-seconds in a single season particularly notable. The applicant's characterisation of Whooper Swan PCH exposure as 2,952 bird-seconds reflects the 2021 season only and substantially understates the cumulative five-season figure.

Chapter 7 makes three explicit admissions of significant impact for Whooper Swan before mitigation:

- Construction — direct habitat loss: "Without intervention, the loss of roosting habitat from direct habitat loss is assessed as significant at the county level."
- Construction — disturbance: "Without intervention, the potential disturbance to roosting areas during construction works is assessed as significant at the county level."
- Operational — displacement: "Without intervention, the potential displacement of swans from roosting areas is assessed as significant at the county level."

Chapter 7 further confirms: "A section of new internal road is proposed that would dissect the roosting area WS-a, in addition to a proposed turbine location directly adjacent to this area. This will likely result in the effective loss of this area as roosting habitat for whooper swan." Roost WS-a is the primary roost, used in all five survey seasons with flocks of up to 71 birds.

Despite these three concessions of significance and the explicit admission that the primary roost will be effectively destroyed, the residual operational effect is classified as "Not Significant" in the final summary table. The entire residual classification rests on an "enhancement plan" comprising the creation of alternative roosting habitat. This plan has not been independently assessed, has not been approved by NPWS, is not subject to any binding legal commitment, and there is no evidence that it has been tested at any comparable site. Under settled EU case law, mitigation measures can only be factored into an Appropriate Assessment where their effectiveness is established with certainty at the time of the decision.

4.1.3 Hen Harrier (Annex I)

Appendix 7 Table 3-1 records 16 Hen Harrier observations during vantage point surveys. Table 3-2 records 4 observations during winter walkover surveys. Table 3-5 records 34 observations during dedicated Hen Harrier Roost Surveys — including an evening (20 October 2020) when at least 9 individual Hen Harrier were recorded separately hunting and disappearing into cover at HHVP2, confirming the bog as a roost catchment. Combined, Appendix 7 records at least 54 separate Hen Harrier observation events within and immediately around the Application Site.

Chapter 7 states, repeatedly, that "Hen Harrier was recorded within the Proposed Project site on 20 occasions over the five winter seasons surveyed." This figure of 20 does not include the roost survey records or the walkover records. Whether this reflects a methodological choice or selective presentation, the effect is the same: the figure of "20 occasions" materially understates the recorded site use of this species.

Multiple VP observations record the species flying within Band 3 (25–200m PCH), including HH015 — a juvenile bird recorded at VP4 in September 2024 for 270 consecutive seconds within the rotor zone, described as "probably male from size, seemed to be displaying as it was stooping and soaring; white rump visible." This is the longest single Hen Harrier PCH observation in the entire dataset.

Critically, the applicant's CRM relies on a national population figure of 108–157 breeding pairs drawn from the 2015 national survey. The 2022 National Hen Harrier Breeding Survey, commissioned by NPWS and published in February 2024, established that the national population has since declined by one third to a maximum of just 85–106 breeding pairs — a 59% long-term decline since the first national survey in 1998–2000. The Slieve Bloom Mountains SPA, the nearest designated Hen Harrier SPA to Lemanaghan at approximately 30km, declined from 12–13 pairs in 2015 to just 8 pairs in 2022. The 2022 survey explicitly identifies wind farms as a significant driver of Hen Harrier mortality and decline. The applicant has not updated its collision risk assessment to reflect this significant downward revision in the reference population.

4.1.4 Lapwing — Breeding (Red-listed; SCI of Middle Shannon Callows SPA)

Appendix 7 records 89 Lapwing observations during vantage point surveys, with total bird-seconds at PCH across all five survey seasons of 75,755 (2020: 31,746; 2021: 37,001; 2022: 4,710; 2023: 1,525; 2024: 773). The figure of 37,001 bird-seconds cited in the applicant's assessment reflects the 2021 season only.

Chapter 7 records breeding activity in three of four breeding seasons, at four identified locations (L-a, L-b, L-c, L-d). It confirms that infrastructure is proposed within confirmed breeding areas L-a and L-d. Three separate significance findings follow:

- Construction — direct habitat loss: "Without intervention, the loss of breeding habitat from direct habitat loss is assessed as significant at the county level."

- Construction — disturbance: "Without intervention, the potential disturbance to breeding areas during construction works is assessed as significant at the county level."
- Operational — displacement: "Without intervention, the potential displacement of breeding lapwing is assessed as significant at the county level."

As with Whooper Swan, all three findings of significance are dismissed as "Not Significant" in the final residual effects table, on the basis of a proposed but unverified enhancement plan. Lapwing is a Red-listed species and an SCI of the Middle Shannon Callows SPA. The EIAR proposes to place a turbine and access road within confirmed breeding habitat of an SCI species, concedes this is significant, then classifies the residual effect as not significant on the basis of enhancement measures that are neither proven nor legally binding.

Appendix 5 records confirmed breeding at four locations across three seasons, with chicks confirmed in July 2023 at location L-c, and up to 2–3 breeding pairs in both 2023 and 2024. This reinforces that Lapwing has an established, multi-season breeding presence across the bog — not a marginal or transient one.

4.1.5 Core Objection Theme 1 — Conclusion

For the three SCI species (Whooper Swan, Golden Plover, Lapwing), the legally correct reference for Appropriate Assessment is the SPA population and conservation objectives — not the county population. The application has assessed all three against county populations throughout. This is legally incorrect and means the Appropriate Assessment has not been conducted at the correct scale for any of the species for which an SCI designation exists.

For Whooper Swan and Lapwing, the applicant concedes significant impacts and then relies on unverified enhancement plans. Under the Waddenzee and Holohan standards, this is not sufficient to meet the Appropriate Assessment threshold. For Hen Harrier, the CRM uses an outdated population figure that overstates the current reference population and understates the proportional impact.

An Coimisiún Pleanála is asked to find that the Appropriate Assessment cannot exclude adverse effects on the integrity of the Middle Shannon Callows SPA or the Lough Ree SPA for any of the three SCI species, and to refuse permission accordingly.

CORE OBJECTION THEME 2: COLLISION RISK MODEL — METHODOLOGY FAILURES AND INTERNAL CONTRADICTIONS

4.2.1 Introduction: The CRM and Its Inputs

Appendix 7-6 contains the full Collision Risk Assessment. Its contents raise serious concerns about the validity of the collision rate predictions on which Chapter 7's "Not Significant" conclusions are based. Three issues require specific attention: the developer-commissioned Golden Plover avoidance rate; the Whooper Swan and Hen Harrier site-specific rates; and the cumulative collision table and its omissions.

4.2.2 Golden Plover: A Developer-Commissioned Avoidance Rate Reduces Predicted Mortality by a Factor of Five

The standard default avoidance rate under NatureScot guidance for species without a species-specific rate is 98%. Applied to Golden Plover at this site, Table 7-6-13 of Appendix 7-6 shows that the 98% default produces a predicted annual collision rate of 9.14 birds per year. The applicant instead applies an avoidance rate of 99.6%, reducing the predicted annual site-specific rate to 1.828 birds per year (Table 7-6-15) — a reduction by a factor of more than five.

The justification for the 99.6% avoidance rate is found in Appendix 1 of Appendix 7-6: a report entitled "Golden Plover Avoidance Rates" authored by a consultant retained for this purpose and dated 18 July 2022. This report was commissioned by MKO — the applicant's own ornithological consultant — for use in this and similar applications.

The consultant's report is based on data from only four UK wind farms: Blood Hill, Norfolk (10 turbines, 27m rotor diameter); Goole Fields I and II, Yorkshire (16 and 17 turbines, 92m rotor diameter); and Haverigg II and III, Cumbria (8 turbines combined). The largest turbines in that dataset have a rotor diameter of 92m. Lemanaghan's proposed turbines have a rotor diameter of 150m and a tip height of 220m. The swept area of the Lemanaghan rotors is approximately 2.65 times greater than the Goole Fields turbines. A higher blade tip height, greater rotor swept area, and different rotor speed all increase the collision risk for birds flying through the rotor zone. Avoidance rates empirically derived from turbines with 92m rotors cannot be assumed to apply without adjustment to turbines with 150m rotors. The developer-commissioned report makes no adjustment for this difference.

An Coimisiún Pleanála is asked to require clarification as to whether NatureScot 2025b guidance endorses the 99.6% rate as applicable to turbines of this scale. If not, the Commission should require the CRM to be recalculated using the NatureScot default 98% rate, producing a site-specific predicted collision rate of 9.14 Golden Plover per year, and should require Chapter 7's conclusions to be reassessed accordingly.

Even accepting the applicant's preferred 99.6% rate, Appendix 7-6 Table 7-6-15 predicts 1.828 Golden Plover deaths per year from 15 turbines. Over the 35-year operational lifetime, that is 64 Golden Plover from this one wind farm alone. The cumulative figure across all wind farms within 25km is 17.4 birds per year (Chapter 7, Table 7-13) — 609 Golden Plover over 35 years. An Coimisiún Pleanála is asked to consider whether these figures can properly be characterised as negligible for an Annex I species that is an SCI of two named SPAs.

4.2.3 Whooper Swan: One Bird Killed Every Nine Years from 15 Turbines

Appendix 7-6 Table 7-6-15 predicts 0.112 Whooper Swan collisions per year from this site, using a 99.5% avoidance rate — equating to one Whooper Swan collision every 9 years. Without avoidance, the model predicts 22.5 Whooper Swan collisions per year (Table 7-6-12). Whooper Swan has a maximum wingspan of 220cm, a relatively low flight speed of 17.3m/s, and the highest single-transit collision probability of any species in the model at 0.076 (Table 7-6-11). The model also assigns Whooper Swan a 25% nocturnal activity factor. These are the applicant's own figures using the applicant's own most favourable assumptions. The cumulative figure across wind farms within 25km is 1.618 Whooper Swan per year (Table 7-13) — birds belonging to the most important Whooper Swan concentration in Ireland, using a roost that Chapter 7 concedes will be effectively destroyed.

4.2.4 Hen Harrier: An Outdated Population Figure

Appendix 7-6 Table 7-6-15 confirms the site-specific Hen Harrier collision rate is 0.001/year — one Hen Harrier from this site every 35 years or more. The cumulative rate across wind farms within 25km is 0.44/year (Chapter 7, Table 7-13) — over 15 Hen Harrier deaths over the wind farm's operational lifespan, assessed against a national maximum of 106 breeding pairs (2022 NPWS survey). The applicant's CRM uses the outdated 2015 population of 108–157 pairs. This overstates the reference population and means the predicted collision rates represent a proportionally greater impact on the actual current population than the assessment acknowledges.

4.2.5 The Cumulative Collision Table — Table 7-13

Chapter 7 Table 7-13 provides cumulative predicted annual collision rates for all KORs, combining this site with all wind farms within 25km. These are the applicant's own figures:

Species	Predicted Annual Collisions (cumulative)	Legal Status	Chapter 7 Conclusion
Golden Plover	17.4 birds/year (609 over 35 years)	Annex I; SCI of 2 SPAs	Insignificant
Lapwing (wintering)	35.8 birds/year	Red-listed; SCI of 1 SPA	Insignificant
Kestrel	6.2 birds/year	Red-listed; up to 7 breeding territories on-site	Insignificant
Whooper Swan	1.618 birds/year	Annex I; SCI of 2 SPAs; primary roost being destroyed	Insignificant
Buzzard	10.79 birds/year	—	Insignificant
Hen Harrier	0.44 birds/year ≈ 15+ over 35 years	Annex I; national max. 106 breeding pairs	Insignificant

Note: Table 7-13 does not include Bellair Wind Farm, located 2.73km from the Lemanaghan site — the closest of any proposed wind farm in the 25km study area. When Bellair proceeds to planning, it will introduce a further tranche of cumulative collision pressure on each species, at closer proximity than any wind farm currently included in the cumulative assessment. The figures in Table 7-13 therefore represent an understatement of the full cumulative collision burden.

Chapter 7 states that "no monitoring data from existing wind farms in the area was available" to inform cumulative impact assessment. An Bord Pleanála cited precisely this absence of monitoring data as a specific ground of refusal in Slieveacurry (ABP Ref. 312728-22, May 2024) and Cahermurphy (March 2023). The applicant has acknowledged this gap but has not addressed it.

4.2.6 Core Objection Theme 2 — Conclusion

The collision risk assessment uses a developer-commissioned avoidance rate that is not based on turbines of comparable scale; applies single-season PCH data that represents a fraction of the five-season available record; and cumulates to predicted mortality rates for Annex I and Red-listed species that are not properly assessed against SPA populations. The cumulative table explicitly excludes the nearest proposed wind farm and contains no post-construction monitoring data from existing operational wind farms. An Coimisiún Pleanála is asked to require the CRM to be recalculated using the NatureScot default avoidance rate for Golden Plover and using five-season cumulative PCH data before determining this application.

CORE OBJECTION THEME 3: RED-LISTED SPECIES NOT ASSESSED — CURLEW, WOODCOCK, SNIPE AND OTHERS

4.3.1 Curlew — An Entirely Absent Species from the Collision Risk Model

Curlew is the only Irish bird on the IUCN Red List of Threatened Species. It is Red-listed in Ireland for both its breeding and wintering populations. The 2015–2017 NPWS national survey found only 138 breeding pairs — a 96% decline since the 1988–1991 Bird Atlas — declining further to 123 pairs per the IPCC's most recent figure. The Irish Curlew Task Force, established by the Minister in 2017 and including NPWS, BirdWatch Ireland, Bord na Móna and An Taisce, found in its formal recommendations (May 2019) that approximately two-thirds of Irish Curlew breed on bogs, that the national breeding population had collapsed, and that "a population model derived from known parameters predicts that in the absence of any action, the Curlew will become extinct as a breeding species in Ireland within 10 years." That extinction window from 2019 closes in 2029.

The Task Force explicitly identified wind turbines as a major threat, stated that they "are likely to have a population-level impact as increasing numbers of wind farms are constructed within breeding areas" (citing Pearce-Higgins et al., 2012), and issued Recommendation 6.1 calling for Ministerial Guidelines to safeguard Curlew sites from inappropriate development. No such guidelines have been issued. Recommendation 4.2 specifically named Bord na Móna, requiring the company to "continue to survey and monitor Curlew and propose conservation actions on their estate." Bord na Móna is now applying to build 15 wind turbines on a bog where Curlew in flocks of up to 167 are recorded — without a Curlew collision risk assessment.

The Waterbird Distribution and Abundance Survey data in Appendix 7-4 records the following Curlew concentrations in the survey area, covering the Tumduff area and Lough Boora lands directly adjacent to the Application Site:

- 140 Curlew at Boora, 9 November 2020 (CU002); foraging on improved agricultural grassland.
- 130 Curlew at Boora, 25 January 2021 (CU006); foraging on improved agricultural grassland.
- 80 Curlew at Tumduff, November 2022 (CU034).
- 90 Curlew at Tumduff, February 2023 (CU040).
- 100 Curlew at Tumduff, 29 January 2025 (CU064).
- 167 Curlew at Tumduff, 6 February 2025 (CU065) — "flying, calling, with Golden Plover and Lapwing; probably disturbed by something."
- 110 Curlew at Tumduff, 6 February 2025 (CU067); foraging on improved agricultural grassland.

The Appendix 7-3 Waterbird Distribution Survey records a cumulative total of 2,746 individual Curlew across 68 survey events over five seasons: 307 individuals in 2020, 486 in 2021, 422 in 2022, 449 in 2023, 496 in 2024 and 586 in 2025. By contrast, the CRM input is 2 VP observations on a single day (19 September 2024, VP5).

These two figures — 2,746 Waterbird Survey records versus 2 VP observations — are both from the same planning application document. The reason the CRM records near-zero Curlew is not that Curlew are absent from the site. It

is that the CRM uses only vantage point survey data, and the VP methodology, with fixed observation points overlooking the Application Site, does not capture the Curlew movement between feeding grounds at Tumduff and Boora and roost sites elsewhere. The exclusion of Curlew from the CRM is a direct consequence of the methodology chosen, not a reflection of absence.

CU065 is additionally significant as it records Curlew flying in mixed company with Golden Plover and Lapwing simultaneously — three Red-listed species using the same location within the survey area during a period when the proposed turbines would be in operation.

An Coimisiún Pleanála is asked to consider whether a planning application that records 2,746 individual Curlew across 68 survey events can be properly determined without a Curlew collision risk assessment.

4.3.2 Woodcock — Confirmed Breeding Across Multiple Seasons

Woodcock is Red-listed for its breeding population in Ireland. The dedicated Breeding Woodcock Surveys in Appendix 7-4 Table 14-3 record roding males — the species' crepuscular breeding display flight — confirmed within the Application Site across multiple breeding seasons. On 25 May 2021 alone, at least 11 separate roding records are recorded along transect WKT3, with one record explicitly noting "different male to first observation", confirming multiple individual males roding simultaneously. Direct male-to-male territorial competition is confirmed in the same survey period: WK024 records two males "calling/roding/fighting"; WK036 records two males fighting, "one went north other south." Roding and breeding activity continues in subsequent seasons including May 2022, June 2022, May 2023 and May 2024.

Woodcock is modelled in Appendix 7-6 at 0.007 collisions per year using a 98% avoidance rate. The collision risk assessment addresses collision mortality only. It does not address the disturbance and displacement impacts on confirmed breeding Woodcock during construction, when works within active roding areas could cause abandonment of established breeding territories. The pre-construction survey window of one month proposed in Appendix 7-7 is inadequate to characterise Woodcock roding activity across the full breeding season (April–July). This deficiency was specifically identified by the inspector in the Slieveacurry refusal.

4.3.3 Snipe — Breeding Confirmed Across Multiple Survey Sessions

Snipe is Red-listed for both its breeding and wintering populations in Ireland. The survey data in Appendix 7-4 records Snipe drumming — the species' diagnostic breeding display flight — confirmed repeatedly across the site throughout the breeding seasons. Multiple VP records describe Snipe "drumming from one spot up to end of survey" and "drumming repeatedly", confirming territorial males holding positions within the Application Site. Appendix 5 independently records 293 Snipe observations and identifies up to 7 probable breeding territories within the Application Site in 2023 and 5 in 2024, on cutover bog habitat directly affected by proposed access road and turbine infrastructure. Snipe is modelled in the CRM at 0.015 collisions per year; no assessment of construction disturbance to confirmed breeding territories is provided in Chapter 7.

4.3.4 Community Dawn Chorus Survey — Independent Corroboration and Two Additional Red-Listed Species

A community-led Dawn Chorus survey was conducted by local residents between 15 and 27 April 2023 using the Cornell Lab of Ornithology's Merlin Bird ID application. The survey involved 23 participants operating across 37 separate GPS-logged locations, recording 110 individual survey sessions over 13 days. A total of 76 bird species were detected. The results are presented as independent corroboration of the applicant's own data and, in two cases, as evidence of Red-listed species not assessed in the EIAR at all.

Eurasian Curlew was detected on 19 separate occasions across the survey period, by 11 different participants operating from 11 separate GPS-logged locations, on five different dates. These community detections are entirely independent of, and directly consistent with, the 2,746 individual Curlew in the Waterbird Distribution Survey dataset. The contrast between 19 independent community detections across 11 locations in a 13-day period in April 2023 alone, and the 2 VP observations on which the absence of a Curlew CRM is based, further confirms that the VP methodology fails to capture actual Curlew use of this landscape.

Short-eared Owl — Red-listed in Ireland, associated with open bog and rough grassland — was detected by one participant on 17 April 2023 within the survey area. Short-eared Owl is not included in the applicant's 15 KORs and has not been assessed in Chapter 7 or the CRM. Its detection introduces into the planning record a Red-listed species whose presence at and around the site has not been evaluated, and whose vulnerability to collision and displacement from wind turbines in open lowland bog habitats is not addressed anywhere in the EIAR.

Common Grasshopper Warbler — Red-listed in Ireland, strongly bog-associated — was detected on three separate occasions by two participants from three GPS-logged locations on three different dates. Like Short-eared Owl, it is

not included in the applicant's KOR list and has not been assessed in the EIAR. Its detection at three separate locations across the survey area suggests a level of site use not reflected in the professional survey record.

The community survey also independently detected seven of the applicant's own Key Ornithological Receptors, including Whooper Swan, Lapwing, Snipe, Woodcock, Peregrine, Kingfisher and Kestrel, providing independent corroboration that the professional survey data accurately reflects real species presence across the site during the spring breeding season.

4.3.5 Withheld Data: Appendix 7-5 and Appendix D (Confidential)

Sensitive roosting and breeding location records for nine species have been withheld from the public planning file and placed in a separate confidential appendix (Appendix 7-5 in the EIAR; referred to as Appendix D in the NIS). The species affected are: Whooper Swan (roosting), Hen Harrier (roosting), Kingfisher (breeding), Peregrine Falcon (breeding), Lapwing (breeding), Barn Owl (breeding), Kestrel (breeding), Buzzard (breeding) and Sparrowhawk (breeding).

The cover page of Appendix 7-5 is on the planning file, marked "Sensitive Information — Not for Widespread Distribution", finalised 20 March 2026. The entire substantive content has been withheld from the public record. Chapter 7 admits that infrastructure is proposed within confirmed Whooper Swan roost area WS-a and within confirmed Lapwing breeding areas L-a and L-d — all of whose locations are withheld in Appendix 7-5. Objectors cannot verify the proximity claims made in Chapter 7.

This objection formally requests that An Coimisiún Pleanála confirm that both Appendix 7-5 and Appendix D have been received and reviewed in their entirety by the inspector, require NPWS to independently verify whether any confirmed roost or nest site for any of the nine species falls within 500 metres of any proposed turbine or construction compound, and require the applicant to confirm on the public record the minimum separation distance between each confirmed roost or nest site and the nearest proposed turbine.

4.3.6 Core Objection Theme 3 — Conclusion

The omission of Curlew from the CRM is not a minor oversight. It is the omission of the only Irish bird on the IUCN Red List, present in nationally significant concentrations within the applicant's own survey area, from any collision risk calculation in a planning application whose approval could directly affect the last viable concentrations of this species in the Irish Midlands. The Irish Curlew Task Force specifically named the applicant and required conservation action on their estate. An Coimisiún Pleanála is asked to require a full Curlew collision risk assessment, informed by the Waterbird Distribution and Abundance Survey data, before determining this application.

CORE OBJECTION THEME 4: BIRD MONITORING PROGRAMME — INADEQUATE SAFEGUARD FOR THE 35-YEAR OPERATIONAL PERIOD

4.4.1 Collision Monitoring in Only 6 of 35 Operational Years

Appendix 7-7 proposes corpse searches for bird casualties at turbine bases in operational Years 1, 2, 3, 5, 10 and 15 only. For the substantial majority of the wind farm's 35-year lifespan — including Years 4, 6–9, 11–14 and all years from 16 to 35 — there will be no collision monitoring whatsoever. If birds are being killed in those years, it will not be detected, recorded or reported.

This is directly relevant to the cumulative collision figures in Chapter 7 Table 7-13, which predict 0.44 Hen Harrier deaths per year, 1.618 Whooper Swan deaths per year, and 17.4 Golden Plover deaths per year. These are annual predicted mortality figures. A monitoring regime that checks for carcasses in only 6 of 35 years cannot verify, detect or respond to actual collision mortality at anything approaching the frequency or scale suggested by the applicant's own predictions. Over the 29 unmonitored years, up to 12 Hen Harriers, 47 Whooper Swans, and over 500 Golden Plover could be killed with no detection mechanism in place.

4.4.2 The BMP Implicitly Concedes Impact on Whooper Swan and Lapwing

Appendix 7-7 proposes dedicated annual Enhancement Area Monitoring for two specific species: breeding Lapwing and roosting Whooper Swan. A specific objective of the BMP is stated as: "Monitor bird usage of the Whooper Swan and breeding Lapwing enhancement areas." The need for dedicated annual monitoring of these enhancement areas throughout the entire operational lifetime indicates that the success of the mitigation is uncertain and requires ongoing verification. This corroborates the submission that the "Not Significant" residual classifications for Whooper Swan and Lapwing Breeding in Chapter 7 are not credible. If the impacts truly were not significant, there would be no need for a dedicated annual monitoring programme for those two species alone.

4.4.3 No Adaptive Management Trigger and No Enforcement Mechanism

Appendix 7-7 contains no threshold at which actual collision mortality would trigger a review of the permission, a requirement for turbine curtailment, or any other enforceable response. The entire outcome of finding dead birds at turbine bases is described as producing a report to be submitted to the Planning Authority, which "will discuss potential impacts on birds and any recommendations that may inform additional mitigation measures." Recommendations are not mitigation. A report recommending that something might be considered does not protect a Hen Harrier, a Whooper Swan, or a breeding Lapwing pair.

For a site where the applicant's own collision modelling predicts ongoing annual mortality of SCI and Annex I species, the absence of any binding adaptive management trigger means the BMP provides no enforceable protection whatsoever against the impacts that Chapter 7 predicts will occur. NPWS has no power under the BMP to require monitoring to continue, to require its scope to be expanded, or to require turbine curtailment if monitoring reveals actual mortality of protected species.

4.4.4 Pre-Construction Survey Window Is Inadequate

Appendix 7-7 proposes that pre-construction surveys begin one month before the initiation of works. For a site where Hen Harrier roost locations already exist within 750m of the Application Site boundary, where a Whooper Swan roost used by up to 71 birds exists on the bog surface, and where a confirmed Kingfisher nest was active within 75m of a proposed road, a one-month pre-construction survey window is inadequate. The pre-construction survey as described does not include any dedicated Hen Harrier roost surveys comparable to the methodology used in the pre-planning baseline surveys.

4.4.5 The BMP Cannot Substitute for Adequate Pre-Consent Assessment

The BMP is a post-permission document. It cannot retrospectively remedy the deficiencies identified in this objection in relation to the Appropriate Assessment, the wrong population reference scales, the withheld data or the unverified mitigation. The existence of a monitoring programme does not lower the legal threshold for granting permission under Article 6(3). The Waddenzee principle requires that adverse effects on site integrity be excluded before permission is granted, not managed after it is implemented.

In summary, Appendix 7-7 monitors in only 6 of 35 years, has no enforcement mechanism, produces only unenforceable recommendations, gives NPWS no binding powers, and begins pre-construction surveys too late to adequately protect the species confirmed at this site. It cannot serve as the basis for a "Not Significant" residual effect conclusion for any of the species addressed in this objection.

CORE OBJECTION THEME 5: CUMULATIVE DISPLACEMENT, HABITAT SQUEEZE AND PRECEDENT DECISIONS

4.5.1 The Scale of Wind Farm Development on Offaly Bogs

The proposed Lemanaghan Wind Farm does not exist in isolation. Wind farms already operational in County Offaly include Mountlucas (28 turbines), Cloncreen (21), Derrinlough (21), Cloghan (9), Meenwaun (4), Leabeg (2), Moanvane (12) and Yellow River (29) — over 126 turbines already built and operational, almost all on former Bord na Móna peat bogs. Further wind farms are permitted or proposed, including Cushaling, Umma More, Bellair (2.73km from Lemanaghan) and the proposed Ballydermot Wind Farm (47 turbines at up to 220m tip height). If Lemanaghan is added, County Offaly will have accommodated one of the most concentrated programmes of bog-based wind energy development anywhere in Ireland.

The applicant's Chapter 7 cumulative assessment contains no monitoring data from any of the existing operational wind farms in the area. This is precisely the deficiency that An Bord Pleanála identified as fatal to the cumulative assessment in Slieveacurry (May 2024) and Cahermurphy (March 2023).

4.5.2 Displacement Is More Damaging Than Collision

The standard approach to wind farm ornithological assessment focuses on collision risk modelling because collision mortality is quantifiable. But NatureScot guidance, which the applicant's own Chapter 7 cites, states explicitly that assessments often focus on collision risk, which is easier to quantify, but that "displacement and habitat loss has the greater effect on population viability and should be incorporated as far as possible." Research on species confirmed at Lemanaghan found that Hen Harrier, Golden Plover, Snipe and Curlew showed decreases in breeding densities of between 15 and 53% in areas around wind turbines — not from being killed, but from simply avoiding the area.

A bird displaced from its foraging or roosting ground is not recorded in a carcass search and does not appear in a collision model. But it may fail to breed, fail to find adequate food, or be pushed into sub-optimal habitat where its survival prospects are materially reduced. The applicant's BMP and CRM are designed to detect and model only the

visible, countable harm. The invisible harm — the displacement of species from their last viable open lowland habitat — is not measured and cannot be undone.

4.5.3 Where Will the Wildlife Go?

The Offaly midland bogs are among the last remaining areas of open, flat, undisturbed lowland habitat in the Irish Midlands. The species that use Lemanaghan — Hen Harrier, Curlew, Lapwing, Snipe, Whooper Swan, Golden Plover — cannot retreat to the hills. They need open, low-lying ground with minimal human disturbance. The 2022 NPWS National Hen Harrier Breeding Survey records a 59% long-term decline in the national population since 1998–2000 — a decline that tracks, almost exactly, the progressive loss of suitable lowland habitat across the country.

The question of where the wildlife will go is not rhetorical. Based on the current state of lowland habitat in the Irish Midlands, the scientifically accurate answer is that there is no adequate alternative. The cutover bogs are the last refuge in this landscape. They are not being offered a better alternative. They are being offered nothing. Chapter 7 Table 7-13 does not and cannot model the cumulative displacement effect — the progressive loss of functional habitat as each successive bog is covered with turbines, access roads and construction disturbance, and the birds that formerly used those bogs are pushed into an ever-shrinking pool of viable open ground.

4.5.4 The Lough Boora Internal Contradiction

Lough Boora Discovery Park is part of the Boora bog group in County Offaly — the same bog group of which Lemanaghan forms part. It is a cutaway bog rehabilitated by Bord na Móna after peat extraction ceased and is now managed as a nature park. Bord na Móna's own published material describes Lough Boora as a demonstration of how large-scale ecological restoration of cutaway bog creates high-value bird habitat, and cites the long-term BirdWatch Ireland bird surveys as evidence of biodiversity recovery. Those surveys document precisely the same suite of species recorded at Lemanaghan in Appendix 7: Whooper Swan roosting, Lapwing breeding, Hen Harrier hunting, Snipe and Barn Owl breeding, Kestrel holding territories.

The internal contradiction in Bord na Móna's own position is stark. The company that has spent over a decade promoting Lough Boora as proof that rehabilitated cutaway bogs become important bird habitat is now applying to build fifteen 220-metre wind turbines on a bog in the same group that is exhibiting precisely the same wildlife recovery. Lemanaghan is at the same stage of natural recovery as Lough Boora was when it was designated a conservation area. An Coimisiún Pleanála is asked to consider whether it is consistent for the same company to promote rehabilitated cutaway bog as valuable wildlife habitat at Lough Boora while maintaining that residual impacts on the same suite of species at Lemanaghan Bog are "Not Significant."

The Lough Boora evidence also bears directly on the proposed mitigation. The applicant's enhancement plan proposes to create habitat for Whooper Swan and Lapwing within the development site. But the entirety of Lemanaghan Bog is already that habitat — naturally, without intervention. Proposing to manage a small designated enhancement area as compensation for the loss of the whole bog's open character is not mitigation. It is the replacement of a functioning ecosystem with a managed substitute of far smaller extent.

4.5.5 Relevant Precedent Decisions

Four recent decisions by An Bord Pleanála to refuse wind farm planning permission on ornithological grounds are directly relevant to this application. Collectively they establish a consistent approach to cumulative bird impact assessment, Hen Harrier, Golden Plover and the precautionary principle in the Midlands and Clare bog landscapes.

Cahermurphy Wind Farm, Co. Clare — Refused March 2023 (ABP Ref. PL05.310707)

An Bord Pleanála refused planning permission for a 10-turbine wind farm, ruling that "when taken in conjunction with other wind farms in the area, the development would result in unacceptable cumulative adverse ornithological impacts and for the Hen Harrier in particular." This decision is directly relevant to Lemanaghan: Hen Harrier is recorded across the survey area with at least 54 observation events, and the applicant's own cumulative CRM table records a cumulative Hen Harrier collision rate of 0.44 birds per year — the same class of cumulative impact An Bord Pleanála found unacceptable at Cahermurphy.

Slieveacurry Wind Farm, Co. Clare — Refused May 2024 (ABP Ref. 312728-22)

An Bord Pleanála refused planning permission for an 8-turbine wind farm. The third formal reason for refusal stated: "in the absence of data monitoring the impacts, if any, of existing wind farm developments in this area, it cannot be satisfied that the cumulative environmental assessment of the likely effects of the proposed development on avifauna can reasonably exclude the possibility of significant impact." This reasoning applies directly and without modification to Lemanaghan. Chapter 7 explicitly acknowledges that no post-construction monitoring data from existing wind farms within 25km has been incorporated into the cumulative assessment.

The Inspector's Report also found that the applicant's Enhancement Plan for Hen Harrier was not acceptable compensation, with the Department of Housing stating "there was reasonable scientific doubt as to the efficacy of the measure" — a finding that governs the Lemanaghan Whooper Swan and Lapwing enhancement plans in Appendix 7-7. The Inspector further noted that breeding Woodcock was present and vulnerable to barrier effects and acoustic disruption from turbines.

Cloghercor Wind Farm, Co. Donegal — Refused May 2024 (ABP Ref. 312760-22)

An Bord Pleanála refused planning permission for a 19-turbine wind farm based on concerns for the Golden Eagle and its habitat, demonstrating the Board's consistent approach to refusing wind farm applications where Annex I bird species with small national populations are at risk from cumulative mortality, even where the applicant's own assessment concludes impacts are acceptable.

4.5.6 Core Objection Theme 5 — Conclusion

These four decisions collectively establish that An Bord Pleanála applies the following principles consistently in wind farm cases involving sensitive ornithological sites: that cumulative assessments based solely on pre-construction modelling are inadequate where post-construction monitoring data exists but has not been incorporated; that cumulative collision rates for Annex I species such as Hen Harrier and Golden Plover justify refusal when assessed against declining national populations; that mitigation and enhancement plans unsupported by operational evidence cannot convert a significant residual impact into a not significant one; and that the precautionary principle requires refusal where Appropriate Assessment cannot exclude adverse effects on the integrity of relevant SPAs. Each of these principles applies to the Lemanaghan application.

5.0 Conclusion

Chapter 7 of the EIAR concedes, in the applicant's own words: that a turbine and road will cause the effective loss of the primary Whooper Swan roost (used by up to 71 birds in all five survey seasons); that the construction of turbines and roads within confirmed Lapwing breeding areas is significant at county level before mitigation; that a confirmed Kingfisher nest lies 75m from proposed construction works; and that cumulative predicted collision rates for six species across wind farms within 25km reach levels that, properly assessed against SPA populations and national populations for the most vulnerable species, cannot be dismissed as negligible.

The core deficiencies in the assessment are not matters of ornithological opinion. They arise from the applicant's own submitted data:

- The Golden Plover five-season PCH total of 1,197,740 bird-seconds (Appendix 7-3) is derived from the same dataset as the 26,171 bird-second figure used in the CRM. The 2021 season figure represents approximately 2% of the cumulative total.
- The 2,746 individual Curlew in the Waterbird Distribution Survey (Appendix 7-3, Table 7-3-4) and the 2 VP observations in the CRM are both from the same application document. The CRM input figure does not reflect low site use. It reflects a methodological choice.
- The three admissions of significance for Whooper Swan and three for Lapwing Breeding are in the applicant's own Chapter 7. The "Not Significant" residual classifications rest on enhancement plans that are unproven and legally unenforceable.
- The Hen Harrier population figure used in the CRM is from 2015. The NPWS published an updated figure in February 2024 showing a one-third decline. The applicant has not updated its assessment.

Beyond the applicant's own documents, the broader picture for County Offaly demands attention. Over 70 wind turbines are already operational on former Bord na Móna bogs in this county. The 2022 NPWS Hen Harrier survey records a 59% long-term national population decline and explicitly identifies wind farms as a significant driver. The 2020 Whooper Swan census confirms Offaly as the most important Whooper Swan county in Ireland. Lemanaghan Bog, recovering from six decades of industrial peat extraction, represents one of the last large, undisturbed open lowland habitats in the Midlands. The question of where these species will go if this bog is covered with turbines does not have a satisfactory answer.

The Appendix 7-3 Summary Data adds a final dimension. Curlew — a species on the verge of national extinction as a breeding bird, present in the survey area in flocks of 100–167, named specifically by the Irish Curlew Task Force in a recommendation directed at Bord na Móna — is entirely absent from the Collision Risk Model. This is not a peripheral omission. It is the omission of Ireland's most critically threatened bird from a collision risk assessment on a site where the applicant's own surveys record it in nationally significant concentrations.

The objection requests that An Coimisiún Pleanála refuse planning permission for the proposed Lemanaghan Wind Farm in its entirety, in accordance with the State's obligations under the EU Birds Directive, the Habitats Directive

and the Waddenzee precautionary principle, the Wildlife Acts 1976–2012 and the Planning and Development Act 2000.

6.0 Recommendation

It is recommended that the Commission refuse permission for the proposed development on the grounds set out in Section 6.1 below.

Failing this, the Commission should require the applicant to submit substantial further information and independent review on the following before any decision is made:

- A full recalculation of the Golden Plover CRM using the NatureScot default 98% avoidance rate and the five-season cumulative PCH data from Appendix 7-3, with reassessment of Chapter 7 conclusions.
- A Curlew-specific collision risk assessment informed by the Waterbird Distribution and Abundance Survey data (2,746 individuals, 68 survey events), not the VP-only dataset.
- An updated Hen Harrier CRM using the 2022 NPWS national population figure of 85–106 breeding pairs.
- Post-construction bird monitoring data from all existing operational wind farms within 25km, incorporated into the cumulative collision assessment.
- An updated cumulative assessment incorporating the Bellair Wind Farm (2.73km from site).
- Confirmation from NPWS, based on review of Appendix 7-5 and Appendix D in full, of the minimum separation distances between each confirmed roost and nest site and the nearest proposed turbine.
- Independent assessment of the proposed Whooper Swan and Lapwing enhancement plans by NPWS, with confirmation that their effectiveness has been established to the standard required by EU case law before any mitigation credit can be applied.
- A revised Bird Monitoring Programme providing for full collision monitoring throughout the operational lifetime, binding adaptive management triggers, and enforceable NPWS oversight.
- Assessment of Short-eared Owl and Common Grasshopper Warbler, both Red-listed and detected in the community survey within the survey area but absent from the EIAR KOR list.

6.1 Recommended Reasons for Refusal

This planning application should be refused for the reasons set out below.

Reason No.	Reason for Refusal
Reason 1	Whooper Swan (Annex I; SCI of 2 SPAs): Chapter 7 concedes three separate significant impacts at county level before mitigation, and confirms that a turbine and road will cause the effective loss of the primary on-site roost (WS-a, used by up to 71 birds in all five survey seasons). The "Not Significant" residual conclusion rests on an unverified, unenforceable habitat enhancement plan that has not been independently assessed, has not been approved by NPWS and for which there is no operational evidence of effectiveness at any comparable site. Impacts are assessed against county population rather than the SPA population as required by Article 6(3) of the Habitats Directive. Appropriate Assessment cannot exclude adverse effect on the integrity of the Middle Shannon Callows SPA and Lough Ree SPA.
Reason 2	Golden Plover (Annex I; SCI of 2 SPAs): The Collision Risk Model uses the 2021 single-season PCH figure of 26,171 bird-seconds, representing approximately 2% of the five-season cumulative total of 1,197,740 bird-seconds from Appendix 7-3 (including 915,927 bird-seconds in the 2022 season alone). The developer-commissioned 99.6% avoidance rate is derived from turbines with maximum 92m rotor diameter; Lemanaghan's turbines have 150m rotors with 2.65 times the swept area. Using the NatureScot default 98% rate, the site-specific collision rate is 9.14 birds per year; cumulative rate is 17.4 birds per year (Table 7-13). Impacts are assessed against the wrong reference population. Appropriate Assessment cannot exclude adverse effect on SPA integrity.
Reason 3	Lapwing — Breeding (Red-listed; SCI of Middle Shannon Callows SPA): Chapter 7 concedes three significant impacts before mitigation. A turbine and access road are proposed within confirmed breeding areas L-a and L-d. The "Not Significant" residual conclusion rests on the same unverified and legally unenforceable enhancement plan as Whooper Swan. Cumulative wintering collision rate 35.8 birds per year (Table 7-13). Impacts assessed against wrong reference population. Mitigation

	unverified and legally unenforceable. Appropriate Assessment cannot exclude adverse effect on SPA integrity.
Reason 4	Hen Harrier (Annex I): The 2022 National Hen Harrier Breeding Survey (NPWS, published February 2024) found the national population has declined by one third since 2015 to a maximum of 85–106 breeding pairs — a 59% long-term decline. The CRM uses the outdated 2015 figure of 108–157 pairs. Chapter 7 characterises site use as "20 occasions"; Appendix 7 records at least 54 observation events including 34 from dedicated roost surveys. Cumulative collision rate 0.44 birds per year across wind farms within 25km = 15 or more deaths over the operational lifespan against a current maximum national population of 106 breeding pairs. The 2022 NPWS survey explicitly identifies wind farms as a significant driver of Hen Harrier mortality and decline. The precautionary principle requires refusal.
Reason 5	Kingfisher (Annex I): Confirmed active nest within the Application Site, at its closest point 75m from proposed construction works. Chapter 7 concedes High magnitude/Medium significance disturbance before mitigation. The "Not Significant" residual classification relies on a single year of non-breeding activity — an inadequate basis for dismissing the risk to a confirmed Annex I nest site.
Reason 6	Curlew Omission from Collision Risk Model: Appendix 7-3 (Summary Data) records 2,746 individual Curlew across 68 Waterbird Distribution and Abundance Survey events over five seasons. Flocks of 100–167 Curlew are recorded in the survey area in January–February 2025. Curlew is the only Irish bird on the IUCN Red List, with a national breeding population of 123–138 pairs (a 96% decline since the 1988–1991 Bird Atlas) and predicted national extinction as a breeding species within 10 years absent action (Irish Curlew Task Force, 2019). The Curlew Task Force specifically named Bord na Móna by name in Recommendation 4.2, requiring conservation action on their estate. Despite this, Curlew is entirely absent from the Collision Risk Model. The omission is a methodological artefact of the VP-only CRM approach, not a reflection of absence. The Commission cannot determine this application without a Curlew collision risk assessment informed by the full survey dataset.
Reason 7	Wrong Population Reference Scales for SCI Species: Impacts on Whooper Swan, Golden Plover and Lapwing are assessed throughout against county and national populations rather than the SPA populations and SPA conservation objectives as required by Article 6(3) of the Habitats Directive. The 2020 International Whooper Swan Census established County Offaly as the most important Whooper Swan county in Ireland. Assessing a predicted collision rate of 0.1 Whooper Swan per year against the county population of 714 birds, rather than against the SPA population, fundamentally misrepresents the significance of the impact under EU law.
Reason 8	Inadequate Cumulative Assessment — Slieveacurry Precedent: Chapter 7 acknowledges that no post-construction monitoring data from existing wind farms within 25km has been incorporated into the cumulative collision assessment. The cumulative Table 7-13 is built entirely from pre-construction CRM modelling. This is the express basis for refusal in Slieveacurry Ltd v An Bord Pleanála (ABP Ref. 312728-22, May 2024): "in the absence of data monitoring the impacts, if any, of existing wind farm developments in this area, it cannot be satisfied that the cumulative environmental assessment can reasonably exclude the possibility of significant impact." 126 turbines are already operational on former Bord na Móna bogs in County Offaly with no monitoring data available. Furthermore, the nearest proposed wind farm — Bellair, 2.73km away — is excluded from the cumulative table. The cumulative assessment is insufficient.
Reason 9	Unverified Mitigation — Whooper Swan and Lapwing Enhancement Plans: The "Not Significant" residual findings for both Whooper Swan and Lapwing Breeding rest on habitat enhancement plans that are unproven, not approved by NPWS and not legally binding. This deficiency was found fatal by An Bord Pleanála in both Slieveacurry and Cahermurphy, where enhancement plans for Hen Harrier were found not to constitute acceptable compensation, with the Department of Housing stating there was reasonable scientific doubt as to the efficacy of the measures. Under settled EU case law (Waddenzee; Holohan), only mitigation whose effectiveness is established with certainty at the time of the decision can be factored into an Appropriate Assessment.

Reason 10	Inadequate Bird Monitoring Programme: The BMP covers only 6 of 35 operational years for collision monitoring, leaving 29 years unmonitored. It contains no binding adaptive management trigger, no enforceable response to actual collision mortality, and gives NPWS no binding enforcement powers. The dedicated annual monitoring programme proposed for Whooper Swan and Lapwing implicitly concedes that those species will be impacted. A monitoring programme that detects harm after the fact cannot satisfy Article 6(3) of the Habitats Directive, which requires adverse effects on SPA integrity to be excluded before permission is granted, not managed after implementation.
Reason 11	Cumulative Habitat Squeeze and Displacement: Lemanaghan Bog is part of a systematic programme of wind energy development across the former peatlands of County Offaly, where over 126 turbines are already operational on former Bord na Móna bogs. The cumulative loss of open lowland habitat to turbine displacement — which NatureScot guidance and published research confirm is often more damaging than collision mortality — is not quantified or addressed in the applicant's assessment. Research confirms decreases in breeding densities of 15–53% for key species in areas around wind turbines. There is no adequate alternative habitat in the Irish Midlands to which these species can retreat. The question of cumulative habitat loss across the Offaly bogs as a whole has not been addressed in the Appropriate Assessment.
Reason 12	Internal Contradiction — Bord na Móna and Lough Boora: Bord na Móna's own published evidence from Lough Boora Discovery Park — part of the same Boora bog group as Lemanaghan, managed by the same company, documented by the same BirdWatch Ireland survey partnership — demonstrates that rehabilitated cutaway bogs recover to become high-value wildlife habitat for precisely the species recorded at this site. Long-term BirdWatch Ireland surveys at Lough Boora, conducted in partnership with Bord na Móna, document Whooper Swan, Lapwing, Hen Harrier and over 130 species using the recovered habitat. Bord na Móna cannot simultaneously promote rehabilitated cutaway bog as valuable wildlife habitat at Lough Boora and maintain that residual impacts on the same suite of species at Lemanaghan Bog — which is at the same stage of natural recovery — are "Not Significant."

Signed:

Trevor Phelan MSc, MBS, BBS
Leamonaghan, Ballycumber, Tullamore, Co. Offaly
Tel: 087 944 2336
07 May 2026

Additional Comments:

Bird Collision Risk

Curlew are excluded from the collision risk model is a serious bird assessment deficiency. With fewer than 200 breeding pairs in the ROI, curlew is critically endangered, and any additional mortality at the individual level is potentially significant at the population level. A formal CRM calculation and consultation with the National Curlew Conservation Programme is essential. For golden plover (1.83 collisions/year), no population viability analysis is presented and the 99.6% avoidance rate for flat open bog is untested.

The CRM predicts 0.112 whooper swan collisions per year (one collision every 9 years; ~4 birds over 35 years). Whooper swan is Annex I under the Birds Directive and a qualifying interest of the nearby Middle Shannon Callows SPA. The proposed 10 ha flooded area is explicitly designed to attract whooper swans — creating a foraging/roosting resource that could increase swan use of the site and hence collision risk. This interaction, where a mitigation measure for one receptor may increase collision risk for the same receptor, is not assessed.

Required Actions:

1. A site-specific population viability assessment for golden plover should be prepared. The appropriateness of the 99.6% avoidance rate for open flat bog should be independently justified. If the collision rate cannot be demonstrated non-significant, a turbine curtailment protocol for peak migration periods (October–November, February–March) should be prescribed.

2. A formal curlew collision risk assessment should be prepared, even based on the low recorded frequency, using the precautionary principle. This should include a population-level assessment against the ROI breeding population of fewer than 200 pairs. Formal consultation with NPWS and the National Curlew Conservation Programme (NCCP) should be documented.

3. An assessment of whether the 10 ha flooded area will increase whooper swan use and consequential collision risk should be prepared.

Section 8: EIAR CHAPTER 8 REVIEW

Land, Soils and Geology

Third Party Planning Observation

An Coimisiún Pleanála

Case Reference: PAX19.324161

15 no. Wind Turbines, 220kV On-Site Substation and Associated Infrastructure

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LEMANAGHAN WIND FARM

LAND, SOILS AND GEOLOGY OBJECTION

1. Introduction and Scope

This submission is made by the Lemanaghan Heritage and Conservation Group CLG, a voluntary, unfunded community group comprising residents and landowners local to the proposed Lemanaghan Wind Farm. The submitters are not engineers, geologists, hydrogeologists or planning professionals. The matters set out are advanced as publicly verifiable facts drawn from the applicant's Environmental Impact Assessment Report (EIAR) and from the State's public archives of geological and exploration data.

This submission addresses Chapter 8 (Land, Soils and Geology) of the EIAR. It identifies a substantial body of State-archived geological data — borehole logs, exploration reports, geophysical surveys and GSI public datasets — which, in the submitters' respectful view, ought reasonably to have been consulted in the preparation of the EIAR's baseline and which is not referenced in the desk study sources listed at Section 8.2.1 of Chapter 8. The submitters do not advance engineering or geotechnical conclusions. Where an apparent inconsistency, omission or gap is identified, the matter is framed as a question for An Coimisiún Pleanála to be satisfied upon before reaching a decision. The legal framework is set out at Section 13; the questions are set out at Section 14.

2. Executive Summary

The Lemanaghan Wind Farm proposes a development of substantial scale on a peatland site with a documented history of mineral exploration drilling and geophysical surveying spanning more than four decades. The principal facts identified by the submitters, all drawn from the public planning file and the State's public archives, are summarised below.

Table 2-1: Summary of Principal Facts

Matter	Fact (Source)
Proposed foundations	13 of 15 turbines require piled foundations; 2 require Excavate/Replace; no turbine on a true gravity foundation. (EIAR Ch 4, Table 4-11)
Pile design	16 reinforced concrete piles per turbine, 1,200–1,600 mm diameter, 18 metres long each. (EIAR Ch 4, Section 4.4.1.1.5; Figure 4-6)
Pre-consent ground investigation	62 trial pits only. No boreholes drilled by the applicant. No bedrock encountered in any pit. Final pile depths and foundation design deferred to post-consent. (EIAR Ch 4 Sections 4.4.1.1.2 & 4.11.1.1; Ch 8 Section 8.3.4.2)
Substation siting	220kV substation sited in the deepest peat on the site (5–5.5 m) in Cooldorragh townland, while EIAR represents that "deeper peat areas have been avoided by the Proposed Project layout". (EIAR Ch 8 Section 8.3.3.2)
Historic borehole record	At least six State-archived borehole records totalling approximately 1,734.5 m of detailed subsurface logging exist within or immediately adjacent to the wind farm site. None are referenced in EIAR Section 8.2.1. (GSI/EMD archive; GOLDMINE)
Karst evidence at pile depth	Drillhole D-12 (Irish Base Metals, PL 480, 1976–1977) records "Rotten rock and clay. Only 5% core recovery. Cavities and mud" at vertical depth ≈ 7.5–22.6 m — the same vertical-depth range as the proposed 18 m piles. (EMD archive)
Karst evidence at depth	Drillhole 08-480-30 (Lundin Mining, 2008) records a karst cavity at 362–363.1 m and multiple fault gouge zones. (EMD archive)
Geophysical corroboration	Three independent surveys 1970–1986 (Induced Polarisation, drilling, Very Low Frequency) by three companies across the same lands, with consistent

Matter	Fact (Source)
	indications of clay-filled fractures or near-surface void systems. (GOLDMINE OF165-4; PL 480; PL 1110/1111)
GSI groundwater	Underlying Waulsortian limestone classified by GSI as Karstified (Ka). (GSI Groundwater Vulnerability Mapping, Co. Offaly Sheet 15)

The submitters respectfully invite the Commission, in the alternative, either to require the applicant by way of further information to address the matters set out in Section 14 below, or to refuse the application on the grounds that the EIAR fails to meet the requirements of S.I. No. 296 of 2018 (Schedule 7A paragraph 3(b)), Section 172 of the Planning and Development Act 2000 (as amended), and Article 3 of Directive 2011/92/EU as amended by Directive 2014/52/EU.

3. The Proposed Development — Facts from EIAR Chapter 4

The Proposed Project comprises 15 wind turbines, one permanent 145-metre meteorological mast, one 220kV on-site substation compound, and associated infrastructure (internal access roads, borrow pits, hardstands, cable trenches, temporary construction compounds and a grid connection corridor). The following factual matters are drawn directly from EIAR Chapter 4 and Appendix 4-1.

Table 3-1: Project Structures and Foundation Requirements

Structure	Foundation requirement / Source
15 wind turbines	13 piled (T1–T11, T13, T14); 2 Excavate/Replace (T12, T15); 0 true gravity. ITM co-ordinates set out at ATTACHMENT A. (EIAR Tables 4-1 and 4-11)
Pile design (per turbine)	16 reinforced concrete piles, 1,200–1,600 mm diameter, 18 m long. Across 13 piled turbines: ≈ 208 piles × 18 m ≈ 3,744 linear metres of pile penetration. (Section 4.4.1.1.5; Figure 4-6)
Meteorological mast	145 m permanent mast at ITM 614131, 727021 (Drawing 200804-45). Foundation type not separately identified in Table 4-11; Section 4.11.1.1 states foundations "may be of the gravity or bored piled type".
220kV on-site substation	Compound footprint 11,057 m^2 in Cooldorragh townland; deep peat at the substation location (5–5.5 m, per Section 8.3.3.2). Predicted peat excavation 12,170 m^3. (Section 8.3.3.2; Chapter 4 Table 4-3 and Chapter 8 Table 8-10)
Total predicted peat excavation	207,527 m^3 across the Project. (Chapter 4 Table 4-3; Chapter 8 Table 8-10)

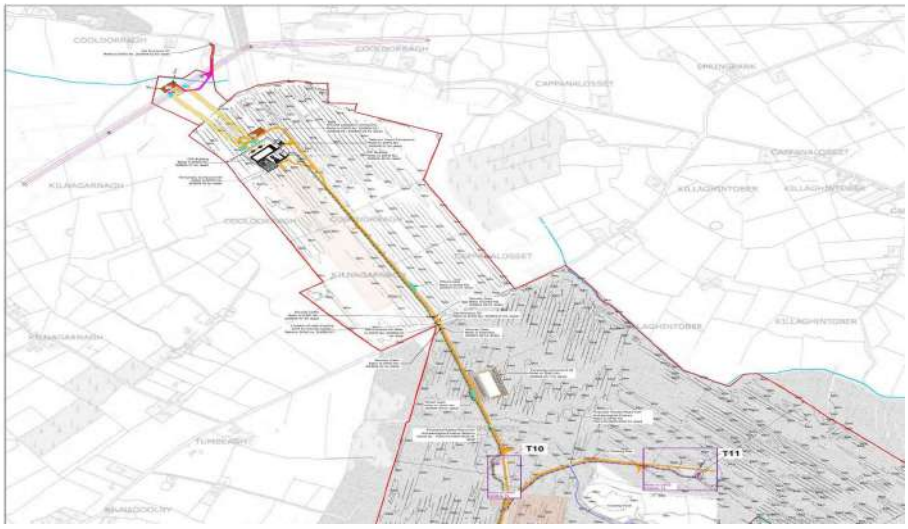


Figure 3-1: Site Layout Plan Sheet 04 of 04 (Drawing 200804-03.04, MKO, 23 March 2026), extract from EIAR Appendix 4-1. T10 and T11 are visible to the south (Tumbeagh townland); the 220kV substation compound and ancillary buildings are visible at the top of the extract (Cooldorragh townland).

4. The Pre-Consent Ground Investigation

Section 4.4.1.1.2 of the EIAR records that the pre-consent geotechnical investigation consisted exclusively of 62 trial pits across three rounds (April 2021, March 2022, October 2023). No boreholes were drilled by the applicant within the wind farm site. EIAR Section 8.3.4.2 confirms the depth reach of the investigation: "no bedrock was encountered in any of the 63 no. trial pits completed on site." EIAR Section 4.11.1.1 expressly defers final pile depths and foundation design to a post-consent stage:

> *"Piling depths will depend on site conditions. These will be established by detailed post-consent geotechnical investigations. Pre-construction final design will be carried out after post-consent geotechnical investigations have been completed."*

The planning drawings in Appendix 4-1 do not identify the locations of the 62 trial pits. The geographic distribution of the pre-consent investigation, accordingly, is not independently verifiable from the public planning file.

5. State-Archived Geological Data — Not Cited in EIAR Section 8.2.1

The submitters have consulted the following publicly accessible State sources of subsurface geological information for the Lemanaghan Wind Farm lands. None of these sources is cited in the desk study sources listed at EIAR Section 8.2.1.

Table 5-1: Public Sources of Geological Data Consulted by the Submitters

Source	Description	Public URL
GOLDMINE	Public archive of pre-2002 mineral exploration reports, drill logs and geophysical surveys (EMD / Dept. of Environment, Climate and Communications).	secure.decc.gov.ie/goldmine/
ECR2	Public archive of post-2002 exploration company reports submitted to EMD.	secure.decc.gov.ie/ECR2/
GSI Spatial Resources Viewer	Verified Bedrock Boreholes, Mineral Exploration Boreholes, Mineral Localities, Karst Landforms and Groundwater layers.	gsi.geodata.gov.ie
OPALS Viewer	Online Prospecting and Licence Search. Identifies historic prospecting licences and associated drillholes.	opals.decc.gov.ie
GSI Groundwater Mapping	Aquifer classification and groundwater vulnerability mapping for the State.	gsi.ie/en-ie/data-and-maps

Figures 5-1 and 5-2 below are screenshots of two State viewers showing the Lemanaghan Wind Farm area with the relevant exploration layers enabled. Both show multiple historic borehole locations in the immediate vicinity of the Proposed Project.

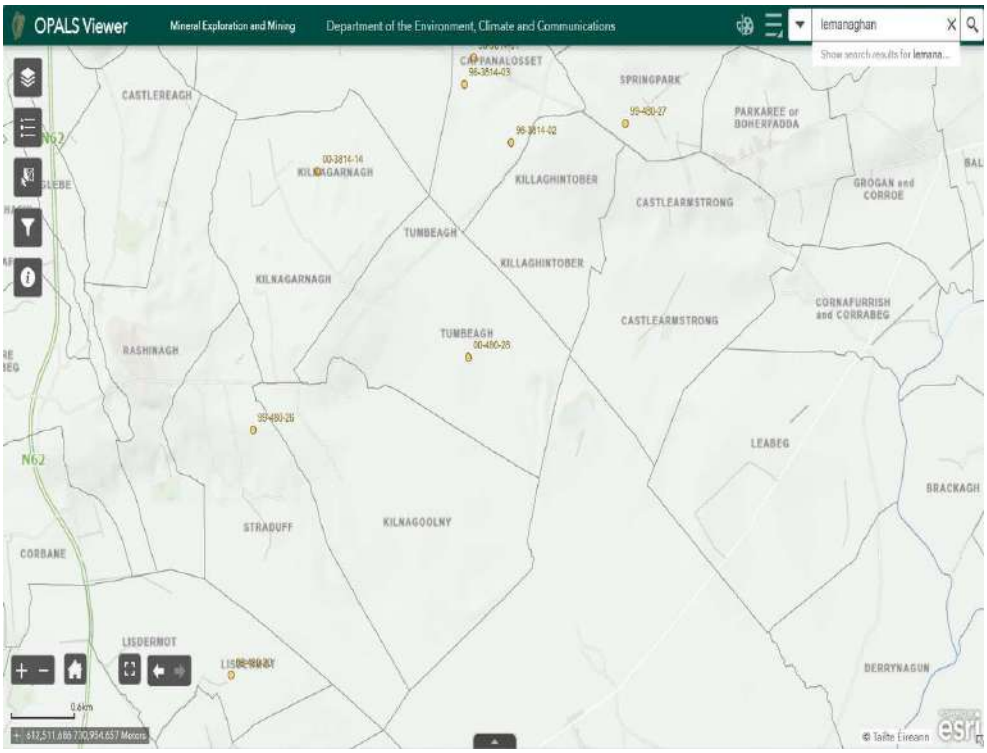


Figure 5-1: OPALS Viewer (Mineral Exploration and Mining division, DECC). The viewer shows historic mineral exploration drillholes within and immediately adjacent to the Lemanaghan Wind Farm site, including those bearing identifiers 99-480-26, 00-480-28, 08-480-30, 99-480-27, 00-3814-14, 96-3814-01, 96-3814-02 and 96-3814-03.

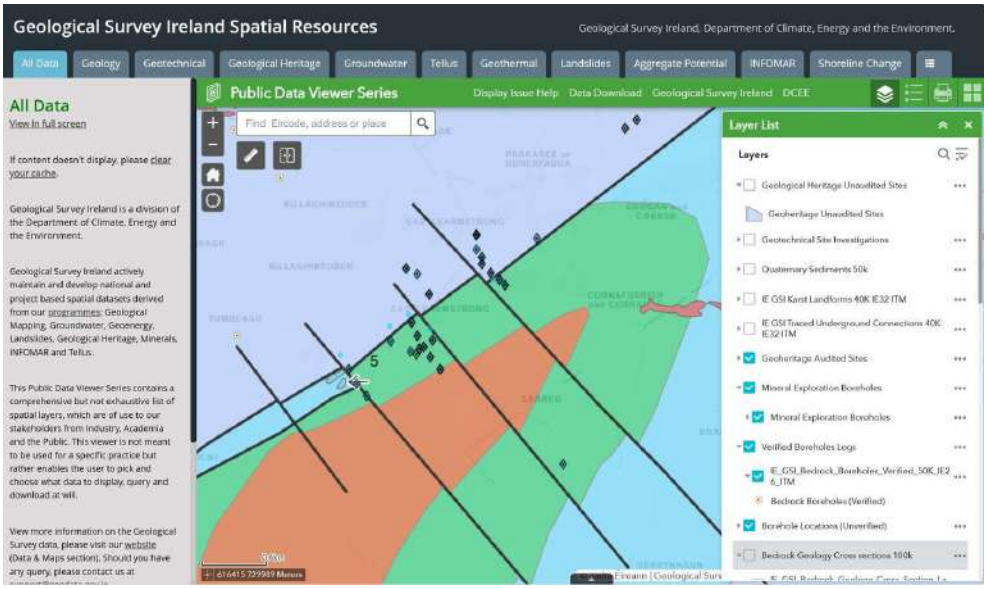


Figure 5-2: Geological Survey Ireland Spatial Resources Viewer with the Mineral Exploration Boreholes and Verified Bedrock Boreholes layers enabled. The blue and dark diamond symbols represent verified historic drillhole locations on the State's public record.

6. Key Historic Borehole Records

The submitters have identified six specific historic borehole records held in the State's public archives for the Lemanaghan Wind Farm lands. Detailed identifier tables for individual records are set out at ATTACHMENT B; the substantive findings of each record are summarised below.

Table 6-1: Summary of Six Verified Historic Borehole Records

Hole	Operator (year)	Licence	Depth	Headline finding
D-12	Irish Base Metals (1976–77)	PL 480	156.97 m (45°)	"Rotten rock and clay. Only 5% core recovery. Cavities and mud" at 35–105 ft (≈ 7.5–22.6 m vertical).
98-3814-12	CSA Ltd. for Rio Algom / Ivernia (1998)	PL 3814	301 m	Cooldorragh townland (same townland as proposed substation). Pale Beds sequence not in EIAR Section 8.3.4.
480/26	ARCON Exploration plc (1999)	PL 480	193.5 m	171.94 m Waulsortian profile; two low-angle faults at 174.6 m and 187.94 m; pyrite at 86.45 m.
99-3814-13	Rio Algom Exploration Inc. (1999)	PL 3814	297 m	Ferbane Mudstone at 291–297 m (not in EIAR); faulted contact at 291 m; zinc to 323 ppm.
480/28	ARCON Exploration plc (2000)	PL 480	337 m	0–6 m "harvested peat bog" overburden; 245 m unbroken Waulsortian Reef Limestone below.

Hole	Operator (year)	Licence	Depth	Headline finding
08-480-30	Lundin Mining (2008)	PL 480	449 m	Karst cavity at 362–363.1 m (0% solid core recovery); multiple fault gouge zones.
TOTAL	**Six operators (1976–2008)**	**PL 480 / 3814**	**1,734.5 m**	**None referenced in EIAR Section 8.2.1.**

6.2 Drillhole D-12 — The Single Most Significant Record at Pile Depth

Drillhole D-12 was drilled by the Irish Base Metals Ltd. Exploration Department under Prospecting Licence 480 at Broders Farm, in the "BD-Moate" (Bord na Móna Moate) exploration area, within the Lemanaghan Bog landscape. Logged by A.A. Bowden, Project 480 1976–1977 (I). Inclined at 45° dip / 145° azimuth; total drilled length 515 ft (156.97 m). The log records local exploration grid co-ordinates only ("8E 20N"), not ITM.

Table 6-2: Drillhole D-12 — Recorded Findings

Interval (drill axis)	Approx. vertical depth	Logger's verbatim description
0–35 ft	0–7.5 m	"Overburden — Peat and clay"
35–105 ft	**≈ 7.5–22.6 m**	**"Rotten rock and clay. Only 5% core recovery. Cavities and mud. The fragments are discoloured silty decalcified limestone."**
126.5–188 ft	≈ 27.2–40.4 m	Sandy Limestone with cavities; "brown sandy very leached limestone broken with cavities"; "cavity with soft brown mud"
≋ 169–176 ft	≈ 36.3–37.8 m	"Blue mud like fault gouge"
233–258 ft	≈ 50.0–55.4 m	"Weathered argillaceous and silty formation. Very broken with some gouge core recovery approximately 33%"
End of Hole	**515 ft / 156.97 m**	**Equivalent ≈ 110.5 m vertical depth**

Source: Irish Base Metals Ltd., Stratigraphic Log D-12, PL 480, Project 480 1976–1977 (I), logged by A.A. Bowden. Vertical depth ≈ drill length × sin(45°). Accessible via GOLDMINE (secure.decc.gov.ie/goldmine/).

A core recovery of 5% is the technical signature of drilling through karstic void or near-void ground — the rock is so fragmented, voided or replaced by soft fill that the drill returns less than 5% of the drilled volume as solid core. The descriptive wording ("Cavities and mud", "Rotten rock and clay") is the logger's own contemporaneous record. The submitters do not advance an engineering interpretation beyond what is stated on the face of the log.

The cavity zone documented in this State-archived borehole sits within the same vertical-depth range as the 18-metre piles proposed for thirteen of the fifteen turbines. **The submitters draw the Commission's attention to this co-incidence of recorded cavity depth and proposed pile depth without advancing an engineering conclusion as to the implications for pile installation: that is a matter for the Commission to be satisfied upon, on the basis of the applicant's assessment.**

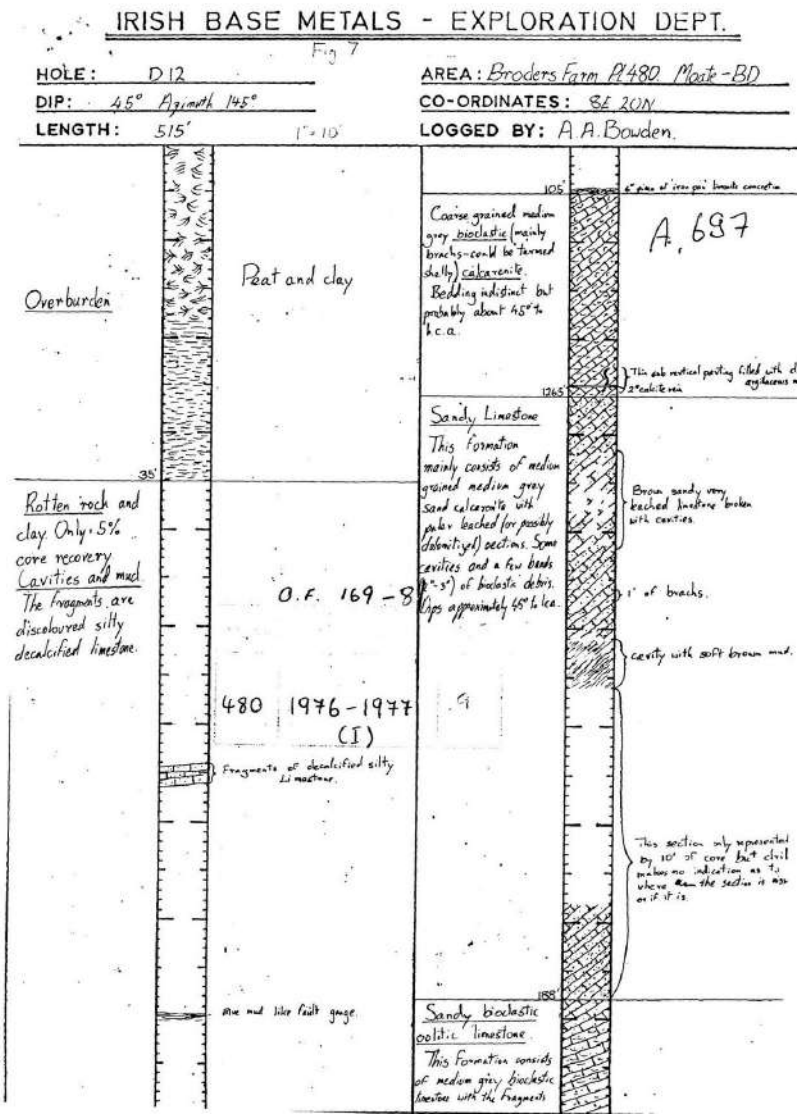
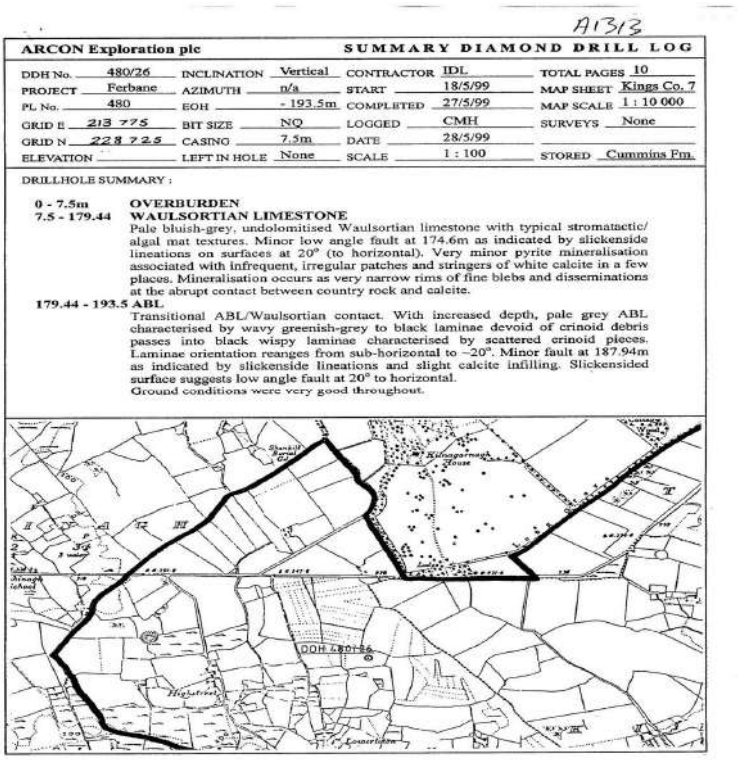


Figure 6-1: Page 1 of the stratigraphic log of Diamond Drillhole D-12. The interval 35–105 ft along the drill axis (≈ 7.5–22.6 m vertical depth below ground surface) is described by the logger as "Rotten rock and clay. Only 5% core recovery. Cavities and mud." Source: EMD archive (GOLDMINE).

6.3 Other Verified Borehole Records

Drillhole 98-3814-12 (CSA Ltd. for Rio Algom / Ivernia, June–July 1998, PL 3814): vertical hole, 301 m total depth, at ITM 615160 E, 731920 N in Cooldorragh townland — **the same townland as the proposed 220kV substation**. Stated purpose: "To test Navan Beds". Records the Argillaceous Bioclastic Limestone and the Upper / Middle / Lower Pale Beds sequence — a stratigraphic sequence not identified or discussed in EIAR Section 8.3.4.

Drillhole 480/26 (ARCON Exploration plc, 18–27 May 1999, PL 480, Project Ferbane): vertical hole, 193.5 m total depth, at ITM 613775 E, 728725 N. Records 7.5 m overburden, 171.94 m Waulsortian Limestone profile, two documented low-angle faults at 174.6 m and 187.94 m (slickenside lineations ≈ 20° to horizontal), and pyrite mineralisation at 86.45 m. ARCON's own Summary Diamond Drill Log is set out at Figure 6-2 below.



A1313

ARCON Exploration plc — **SUMMARY DIAMOND DRILL LOG**

DDH No.	480/26	INCLINATION	Vertical	CONTRACTOR	IDL	TOTAL PAGES	10
PROJECT	Ferbane	AZIMUTH	n/a	START	18/5/99	MAP SHEET	Kings Co. 7
PL No.	480	EOH	- 193.5m	COMPLETED	27/5/99	MAP SCALE	1 : 10 000
GRID E	213 775	BIT SIZE	NQ	LOGGED	CMH	SURVEYS	None
GRID N	228 725	CASING	7.5m	DATE	28/5/99		
ELEVATION		LEFT IN HOLE	None	SCALE	1 : 100	STORED	Cummins Fm.

DRILLHOLE SUMMARY :

0 - 7.5m **OVERBURDEN**

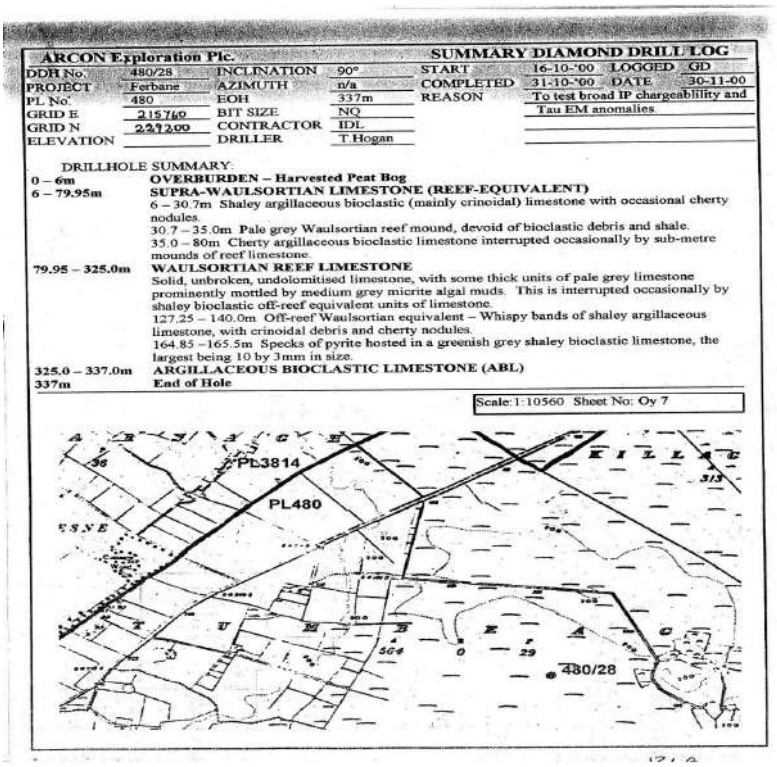
7.5 - 179.44 **WAULSORTIAN LIMESTONE**
Pale bluish-grey, undolomitised Waulsortian limestone with typical stromatactic/ algal mat textures. Minor low angle fault at 174.6m as indicated by slickenside lineations on surfaces at 20° (to horizontal). Very minor pyrite mineralisation associated with infrequent, irregular patches and stringers of white calcite in a few places. Mineralisation occurs as very narrow rims of fine blebs and disseminations at the abrupt contact between country rock and calcite.

179.44 - 193.5 ABL
Transitional ABL/Waulsortian contact. With increased depth, pale grey ABL characterised by wavy greenish-grey to black laminae devoid of crinoid debris passes into black wispy laminae characterised by scattered crinoid pieces. Laminae orientation reanges from sub-horizontal to ~20°. Minor fault at 187.94m as indicated by slickenside lineations and slight calcite infilling. Slickensided surface suggests low angle fault at 20° to horizontal.
Ground conditions were very good throughout.

Figure 6-2: Summary Diamond Drill Log for DDH 480/26 (ARCON Exploration plc, PL 480, 18–27 May 1999). Source: EMD archive (GOLDMINE).

Drillhole 99-3814-13 (Rio Algom Exploration Inc., June 1999, PL 3814): 297 m vertical hole at ITM 613710 E, 731340 N. Three features recorded which are not addressed in EIAR Section 8.3.4: (i) the Ferbane Mudstone Formation at 291–297 m — a stratigraphic unit not identified in the EIAR; (ii) a faulted contact at 291 m between the Lower Sandstone Unit and the Ferbane Mudstone; and (iii) zinc mineralisation up to 323 ppm across the 175–260 m interval.

Drillhole 480/28 (ARCON Exploration plc, 16–31 October 2000, PL 480, Project Ferbane): vertical hole, 337 m total depth, at ITM 615760 E, 729200 N. Records 0–6 m of "Harvested Peat Bog" overburden and approximately 245 m of unbroken Waulsortian Reef Limestone below; pyrite at 164.85–165.5 m. Turbine T10 lies approximately 203 metres from this borehole. ARCON's Summary Diamond Drill Log is set out at Figure 6-3 below.



ARCON Exploration Plc. — SUMMARY DIAMOND DRILL LOG

DDH No.	480/28	INCLINATION	90°	START	16-10-'00	LOGGED	GD
PROJECT	Ferbane	AZIMUTH	n/a	COMPLETED	31-10-'00	DATE	30-11-00
PL No.	480	EOH	337m	REASON	To test broad IP chargeability and Tau EM anomalies.		
GRID E	215760	BIT SIZE	NQ				
GRID N	227200	CONTRACTOR	IDL				
ELEVATION		DRILLER	T.Hogan				

DRILLHOLE SUMMARY:

0 – 6m	**OVERBURDEN – Harvested Peat Bog**
6 – 79.95m	**SUPRA-WAULSORTIAN LIMESTONE (REEF-EQUIVALENT)** 6 – 30.7m Shaley argillaceous bioclastic (mainly crinoidal) limestone with occasional cherty nodules. 30.7 – 35.0m Pale grey Waulsortian reef mound, devoid of bioclastic debris and shale. 35.0 – 80m Cherty argillaceous bioclastic limestone interrupted occasionally by sub-metre mounds of reef limestone.
79.95 – 325.0m	**WAULSORTIAN REEF LIMESTONE** Solid, unbroken, undolomitised limestone, with some thick units of pale grey limestone prominently mottled by medium grey micrite algal muds. This is interrupted occasionally by shaley bioclastic off-reef equivalent units of limestone. 127.25 – 140.0m Off-reef Waulsortian equivalent – Whispy bands of shaley argillaceous limestone, with crinoidal debris and cherty nodules. 164.85 – 165.5m Specks of pyrite hosted in a greenish grey shaley bioclastic limestone, the largest being 10 by 3mm in size.
325.0 – 337.0m	**ARGILLACEOUS BIOCLASTIC LIMESTONE (ABL)**
337m	**End of Hole**

Scale: 1:10560 Sheet No: Oy 7

Figure 6-3: Summary Diamond Drill Log for DDH 480/28 (ARCON Exploration plc, PL 480, 16–31 October 2000). Source: EMD archive (GOLDMINE).

Drillhole 08-480-30 (Lundin Mining, August–September 2008, PL 480): 449 m vertical hole at ITM 613570 E, 727100 N. Records **a karst cavity at 362–363.1 m with 0% solid core recovery**, and multiple fault gouge zones with bleached / dolomitised intervals.

7. The D-12 / Derevane Three-Survey Evidence Chain

The submitters identify a three-survey corroborated evidence chain on the State's public archive that extends across the same lands as Drillhole D-12 and covers a period of sixteen years (1970–1986). The three surveys were carried out by three different operators using three different methods.

Table 7-1: The 1970 — 1976/77 — 1986 Corroborated Evidence Chain

Year	Operator	Method	Recorded Finding
1970	Gortdrum Mines Ltd.	Induced Polarisation (IP) Survey	IP chargeability anomalies recorded at Broders Farm, Lemanaghan and adjacent areas. Anomaly pattern consistent with clay-filled fractures or near-surface void systems. GOLDMINE OF165-4 (PL 480).
1976–77	Irish Base Metals Ltd.	Diamond Core Drilling (D-12)	D-12 drilled at Broders Farm to test the 1970 IP anomaly. Log records "Rotten rock and clay. Only 5% core recovery. Cavities and mud" over the interval 35–105 ft (≈ 7.5–22.6 m vertical depth). PL 480 / GOLDMINE.
1986	Glencar Explorations	Very Low Frequency (VLF) Survey	VLF traverses (transmitting station FUO), drawn by Minerex Ltd, April 1986. Strong anomalies recorded on multiple lines consistent with clay-filled fractures or void systems. PL 1110 / PL 1111. GOLDMINE.

The factual significance of this chain is that three different operators using three different methods over sixteen years independently recorded consistent indications of subsurface anomalies in the same area. None of the three records is referenced in EIAR Section 8.2.1.

Drillhole D-12 was drilled at Broders Farm, on lands within the Lemanaghan Bog landscape but understood to be outside the applicant's site ownership. The applicant's pre-consent ground investigation, by definition limited to lands within site ownership, was therefore not in a position to confirm or rebut the conditions documented at that location. The State's archived record at the same location is, however, accessible to the applicant on the public record. A further confirming record exists in Drillhole D-21 (Irish Base Metals Ltd., 10–11 November 1981, Lemanaghan Townland, PL 480, 135 ft inclined drillhole) which records 21 ft of overburden over reef and reef-equivalent limestones — confirming that detailed State-archived subsurface data for these lands have been on the public record for over four decades.

8. Spatial Relationship — Proposed Structures vs Historic Boreholes

Table 8-1: Distance from Each Proposed Structure to its Nearest State-Archived Borehole

Structure	Foundation	Nearest borehole	Dist. (m)	Recorded feature
T1	Piling	08-480-30 (Lundin, 2008)	**686**	Karst cavity; fault gouge zones
T2	Piling	08-480-30	**925**	Karst cavity; fault gouge zones
T3	Piling	08-480-30	**1,343**	Karst cavity; fault gouge zones
T4	Piling	08-480-30	**1,744**	Karst cavity; fault gouge zones
T5	Piling	480/28 (ARCON, 2000)	**1,635**	0–6 m harvested peat bog
T6	Piling	480/28	**1,269**	0–6 m harvested peat bog
T7	Piling	08-480-30	**1,468**	Karst cavity; fault gouge zones
T8	Piling	480/28	**936**	0–6 m harvested peat bog
T9	Piling	480/28	**524**	0–6 m harvested peat bog
T10	Piling	480/28	**203**	0–6 m harvested peat bog
T11	Piling	480/28	**638**	0–6 m harvested peat bog
T12	Excavate/Replace	480/28	**1,228**	0–6 m harvested peat bog
T13	Piling	480/28	**1,369**	0–6 m harvested peat bog
T14	Piling	480/28	**1,893**	0–6 m harvested peat bog
T15	Excavate/Replace	480/28	**1,946**	0–6 m harvested peat bog
Met Mast	—	08-480-30	**567**	Karst cavity; fault gouge zones
Substation	—	480/28	**≈ 1,100**	0–6 m harvested peat bog
Substation (2nd)	—	98-3814-12	**≈ 1,724**	Same townland (Cooldorragh)

Six of the fifteen proposed turbine locations have a historic borehole within one kilometre; all six are scheduled for piling. Turbine T10 lies approximately 203 metres from borehole 480/28; the meteorological mast lies approximately 567 metres from borehole 08-480-30 (the historic borehole that documents the karst cavity); and the proposed 220kV substation lies in the same townland as borehole 98-3814-12. Drillhole D-12 is not shown on Figure 8-1 because its log records only local exploration grid co-ordinates; it is recorded as being at Broders Farm within the Lemanaghan Bog, in the same bog as the Proposed Project.

9. Comparative Scale of Evidence

Table 9-1: Comparative Scale of Evidence — EIAR vs State-Archived Record

Measure	EIAR (2021–2023 investigation)	State-archived record (1970–2008)
Number of investigations	**62 trial pits**	**6 named drillholes + further surveys**
Method	Shallow trial pits	Diamond core drilling, IP and VLF geophysics
Operators	Applicant's contractors	Six independent international mining companies
Aggregate depth reached	**192 m total (avg 19.2 m per pit, no bedrock reached)**	**≈ 1,734.5 m total subsurface logging**
Karst features documented	Not characterised; bedrock not reached	Cavities at 7.5–22.6 m (D-12); karst cavity at 362–363 m (08-480-30)
Structural / mineralisation features	Not characterised	Multiple fault gouge zones; two low-angle faults; faulted contact at 291 m; pyrite; zinc to 323 ppm; ZnS grain
Stratigraphic completeness	Overburden only; bedrock not reached	Full Carboniferous sequence including Ferbane Mudstone, Pale Beds, Waulsortian Reef (not in EIAR baseline)
Cited in EIAR Section 8.2.1?	**Yes — by definition**	**No — none of the six records cited**

The submitters do not advance the historic State-archived data as a substitute for site-specific investigation: the historic data are mineral exploration records, not geotechnical investigations carried out for the specific purpose of this Project. The submitters draw the Commission's attention to the comparative scale of the two evidence bases and to the fact that the body of historic data exists on the State's public record and is not referenced in EIAR Section 8.2.1.

10. Internal Inconsistencies Within the EIAR

Two specific internal inconsistencies within the EIAR itself merit the Commission's consideration.

Table 10-1: Two Statements Within EIAR Section 8.3.3.2

Statement	Text (Section 8.3.3.2)
Statement A	*"The greatest peat depths were recorded in the north of the Proposed Project site, with deep peat encountered at the proposed onsite 220kV substation location (5–5.5 m)."*

Statement	Text (Section 8.3.3.2)
Statement B	*"Where possible, the deeper peat areas have been avoided by the Proposed Project layout."*

Statements A and B, taken from the same section of the EIAR, are difficult to reconcile in respect of the 220kV substation: the substation is sited in the area of greatest peat depth on the site, while the EIAR represents that deeper peat areas have been avoided. The submitters separately note an inconsistency between the EIAR's description of the foundations (16 piles × 18 m at thirteen turbines) and the description of the ground investigation supporting those foundations (62 trial pits, no bedrock reached, final pile depths deferred post-consent).

11. Peat Depth Baseline and the Substitute Consent Lands

The submitters acknowledge that surface peat depths recorded in 1976–2008 may differ from present-day peat depths, given the continuation of industrial peat extraction at Lemanaghan Bog. The submitters do not advance the historic peat-depth figures as a substitute for current site-specific measurement.

The submitters do, however, draw to the Commission's attention that the lands in question are simultaneously the subject of a Substitute Consent application before the Commission (Case Reference SU19.323676), which expressly addresses the historic and ongoing extraction of peat at Lemanaghan Bog from 1988 to present. The Commission is therefore uniquely placed to cross-reference (i) the historic peat-depth measurements held in the State's EMD archive, (ii) the historic and present-day peat depths recorded in the substitute consent application, and (iii) the present-day peat probing data submitted with this Wind Farm application. That cross-reference would establish the magnitude of peat extracted at specific points within the Wind Farm footprint over the intervening period — information that is directly relevant to peat stability, foundation design, the rehabilitation case and the carbon balance advanced in this EIAR.

12. Climate and Carbon Considerations Bearing on Chapter 8

EIAR Chapter 8 cross-references Chapter 11 (Climate) in respect of the carbon balance of the Proposed Project; the integrity of any net-carbon-benefit case advanced by the applicant depends on the accuracy of the underlying peat-volume and peat-loss figures set out in Chapter 8 (total predicted peat excavation: 207,527 m^3; substation alone: 12,170 m^3 across 11,057 m^2). The cross-reference identified in Section 11 above is accordingly also relevant to the assessment of the EIAR's climate and carbon case.

13. Legal Framework

Table 13-1: Statutory and Case-Law Framework

Provision / Case	Substantive requirement / Proposition
Planning and Development Act 2000 (as amended), Section 172	Requires that planning applications subject to EIA be accompanied by an EIAR and that the Commission carry out environmental impact assessment in accordance with the Act.
S.I. No. 296 of 2018, Schedule 7A, paragraph 3(b)	Requires the EIAR to include a description of the likely significant effects on the environment, based on the best available information, including the likely effects on soils, geology, hydrogeology and underlying ground conditions.
Directive 2011/92/EU as amended by Directive 2014/52/EU, Article 3	Requires EIA to identify, describe and assess in an appropriate manner the direct and indirect significant effects of a project on, inter alia, land, soil, water and the interaction between these factors.

Provision / Case	Substantive requirement / Proposition
Directive 2011/92/EU as amended, Article 5(1) and Annex IV	Requires the developer to provide information specified in Annex IV, including a description of the baseline scenario, based on the best available information.
Case C-50/09 Commission v Ireland	The competent authority must carry out an EIA of all significant environmental effects of the project; assessment cannot be left to subsequent procedures.
Case C-215/06 Commission v Ireland	EIA must be carried out before consent is granted; a deficient pre-consent assessment cannot be remedied by post-consent monitoring or investigation.
Case C-261/18 Commission v Ireland (Derrybrien)	Arising from the 2003 Derrybrien wind farm peat-slide incident. The Court confirmed that Ireland's failure to require an adequate EIA of a wind farm development on peatland constituted a continuing breach of EU law.

The standard which falls to be applied, on the authority of the provisions and cases identified above, is whether the State-archived geological data set out at Sections 5 to 7 above **ought reasonably to have been consulted** in the preparation of the EIAR's baseline — an objective professional standard, not a knowledge claim against the applicant. The burden of demonstrating that the EIAR's baseline rests on the best available information for these lands is on the applicant. It is for the applicant to demonstrate, through a complete and reasoned EIA, that the matters identified by the submitters have been properly addressed.

14. Specific Matters the Commission is Respectfully Invited to Consider

On the basis of the publicly verifiable facts set out in Sections 3 to 12 and the legal framework summarised in Section 13, the submitters respectfully invite An Coimisiún Pleanála to satisfy itself, before reaching a decision on this application, in respect of each of the following matters:

Question 1. Whether the desk-study compilation of the geological baseline in EIAR Section 8.2.1 has had regard to the six named EMD borehole records identified in Section 6, the three corroborated geophysical and drilling surveys identified in Section 7, and the public GSI / OPALS viewers identified in Section 5; and if not, why those records have been omitted notwithstanding their public accessibility and direct geographic relevance to the wind farm site.

Question 2. Whether, in circumstances where the predicted foundation type at 13 of the 15 turbine locations is piling to a depth of 18 metres, the absence of any pre-consent borehole drilled by the applicant within the wind farm site is consistent with the requirement under Article 5(1) of the EIA Directive (2011/92/EU as amended) that the EIA report rely on the best available information.

Question 3. Whether the geographic distribution of the 62 trial pits referenced in EIAR Section 4.4.1.1.2 can be independently verified from the public planning file, and whether the Commission is satisfied that the pre-consent investigation gives an adequate basis for foundation design at every structure for which piling is proposed.

Question 4. Whether the State-archived record in Drillhole D-12 (Irish Base Metals Ltd., PL 480, 1976–1977), which describes the interval 35–105 ft along an inclined drill axis as "Rotten rock and clay. Only 5% core recovery. Cavities and mud" — corresponding to a vertical depth below ground surface of approximately 7.5 to 22.6 metres — has been considered in the assessment of piled foundations at the 13 turbine locations for which 18 m piles are proposed.

Question 5. Whether the documented karst cavity at 362–363.1 m in borehole 08-480-30 and the multiple fault gouge zones recorded in the same borehole have been considered in the assessment of piled foundations at turbines T1, T2, T3, T4 and T7, and at the meteorological mast — noting in particular that the meteorological mast is approximately 567 metres from that borehole.

Question 6. Whether the documented historic harvested peat bog overburden at borehole 480/28 and the 245-metre profile of unbroken Waulsortian Reef Limestone documented below it have been considered in the foundation design at turbines T8, T9, T10 and T11 — noting in particular that T10 is approximately 203 metres from that borehole.

Question 7. Whether the two documented low-angle faults recorded in borehole 480/26 (at 174.6 m and 187.94 m, slickenside lineations approximately 20° to horizontal) and the pyrite mineralisation recorded at 86.45 m have been considered, given that pyrite oxidation following exposure during pile boring and construction dewatering is a known source of acidic drainage and metal release.

Question 8. Whether the Commission is satisfied that the deferral of confirmatory ground investigation and final foundation design to a post-consent stage (EIAR Section 4.11.1.1) is consistent with the requirement of the Court of Justice of the European Union in Case C-215/06 (and subsequently Case C-261/18 Derrybrien) that environmental impact assessment be complete at the time consent is granted.

Question 9. Whether the foundation type and design for the 145-metre meteorological mast, which is not separately identified in Table 4-11 of the EIAR, has been the subject of an equivalent ground investigation and design process to the wind turbines.

Question 10. Whether the internal inconsistency identified at Section 10 above (Statements A and B at EIAR Section 8.3.3.2) has been reconciled by the applicant, and whether the Commission is satisfied that the siting of the 220kV substation in the deepest peat on the site has been justified by a reasoned alternatives analysis.

Question 11. Whether, in the absence of express cross-reference between this application and the Substitute Consent application before the Commission for the same lands (Case Reference SU19.323676), a complete picture of present-day peat depth at each proposed structure, read against the historic 1976–2008 baseline data, can be reconstructed from the public planning file alone.

15. Submission

The matters set out in this submission are not advanced as engineering or geotechnical conclusions. They are advanced as publicly verifiable facts, drawn from the applicant's own EIAR and from the State's public archives of geological and exploration data.

Primary submission: The submitters respectfully invite the Commission to require, before reaching a decision, that the applicant address by way of further information each of the matters identified in Section 14 above, by **specific reference** to (i) the six named historic EMD borehole records identified in Section 6, (ii) the three independent surveys identified in Section 7, (iii) the GSI public datasets identified in Section 5, and (iv) the internal inconsistencies identified in Section 10. The submitters further invite the Commission to satisfy itself, on the basis of the applicant's response, that the EIAR rests on the best available information for these lands, within the meaning of S.I. No. 296 of 2018 Schedule 7A paragraph 3(b) and Article 5(1) of Directive 2011/92/EU as amended.

Alternative submission: In the alternative, in the event that the Commission is not satisfied that the matters in Section 14 can adequately be addressed by way of further information, the submitters respectfully invite the Commission to **refuse the application** on the grounds that the EIAR fails to meet the requirements of Section 172 of the Planning and Development Act 2000, S.I. No. 296 of 2018 Schedule 7A paragraph 3(b), and Article 3 of Directive 2011/92/EU as amended by Directive 2014/52/EU, as interpreted in Cases C-215/06 and C-261/18 (Derrybrien).

The Lemanaghan Heritage and Conservation Group is a voluntary, unfunded community group. The submitters' members have, using only publicly accessible data sources, identified the matters set out in this submission. The submitters respectfully say that the planning system should apply the same standard of compliance and diligence to all parties — and that, where a community group without the benefit of public funding or technical resources is able to identify a substantial body of relevant State-archived data not referenced in an EIAR, it is reasonable to expect a semi-State applicant with full resources, statutory remit and access to the same archives to have considered that data in the preparation of its environmental impact assessment.

16. References

EIAR Documents

- Lemanaghan Wind Farm — EIAR Chapter 4 (Description of the Proposed Project), Fehily Timoney & Co., 19 March 2026.
- Lemanaghan Wind Farm — EIAR Chapter 8 (Land, Soils and Geology), Fehily Timoney & Co., 19 March 2026.
- Lemanaghan Wind Farm — EIAR Appendix 4-1 (Site Layout Planning Drawings), MKO, 23 March 2026.
- Lemanaghan Wind Farm — EIAR Chapter 11 (Climate), Fehily Timoney & Co., 19 March 2026.

State-Archived Borehole Records (all accessible via GOLDMINE / ECR2)

- Irish Base Metals Ltd. — Stratigraphic Log of Diamond Drillhole D-12, PL 480, Project 480 1976–1977 (I); Broders Farm, BD-Moate area; logged by A.A. Bowden; 515 ft (156.97 m), inclined 45° dip / 145° azimuth.
- Irish Base Metals Ltd. — Stratigraphic Log of Drillhole D-21 (480-21), PL 480, Lemanaghan Townland, 10–11 November 1981.
- ARCON Exploration plc — Summary Diamond Drill Log, DDH 480/26, PL 480, 18–27 May 1999 (193.5 m).
- ARCON Exploration plc — Summary Diamond Drill Log, DDH 480/28, PL 480, 16–31 October 2000 (337 m).
- CSA Ltd. for Rio Algom / Ivernia West JV — Summary Drill Log, Drillhole 98-3814-12, PL 3814, 26 June – 7 July 1998 (301 m); Cooldorragh townland.
- Rio Algom Exploration Inc. — Drill Log, Borehole 99-3814-13, PL 3814, June 1999 (297 m).
- Lundin Mining — Surrender Report PL 480 & 481 (2008), incorporating drillhole 08-480-30 (449 m).

Historic Geophysical Surveys

- Gortdrum Mines Ltd. — Induced Polarisation Survey, Broders Farm and Lemanaghan, 1970. GOLDMINE OF165-4 (PL 480).
- Glencar Explorations / Minerex Ltd — Very Low Frequency (VLF) Survey, Lemanaghan area, April 1986. GOLDMINE, PL 1110/1111.

State Public Datasets and Viewers

- Geological Survey Ireland — Spatial Resources Viewer. gsi.geodata.gov.ie.
- GSI Mineral Locality Ref. 3972 (Shelly Marl, Kilnagoolny townland; ITM 619370 E, 728357 N).
- Dept. of Environment, Climate and Communications — OPALS Viewer. opals.decc.gov.ie.
- GSI — Groundwater Vulnerability Mapping, Co. Offaly Sheet 15 (Karstified Ka classification).
- DECC — GOLDMINE Public Archive. secure.decc.gov.ie/goldmine/.
- DECC — ECR2 Public Archive. secure.decc.gov.ie/ECR2/.

Legislation and Case-Law

- Planning and Development Act 2000 (as amended), Section 172.
- European Union (Planning and Development) (EIA) Regulations 2018 (S.I. No. 296 of 2018), Schedule 7A.
- Directive 2011/92/EU as amended by Directive 2014/52/EU.
- Case C-50/09 Commission v Ireland (3 March 2011).
- Case C-215/06 Commission v Ireland (3 July 2008).
- Case C-261/18 Commission v Ireland — Derrybrien (12 November 2019).

Related Application

- An Coimisiún Pleanála, Case Reference SU19.323676 — Substitute Consent Application for Peat Extraction at Lemanaghan Bog.

Chapter 8 ATTACHMENT

Detailed reference tables underpinning the main submission on Chapter 8

ATTACHMENT A — Full Turbine Co-ordinates and Foundation Types

The following table reproduces, from EIAR Chapter 4 Table 4-1 (turbine co-ordinates) and Table 4-11 (foundation types), the proposed location and foundation type of each of the 15 turbines.

Turbine	ITM Easting	ITM Northing	Proposed Foundation Type
T1	614199	727374	**Piling**
T2	614482	726940	**Piling**
T3	614780	726517	**Piling**
T4	615314	727112	**Piling**
T5	615979	727580	**Piling**
T6	615647	727936	**Piling**
T7	614968	727550	**Piling**
T8	615376	728346	**Piling**
T9	616022	728746	**Piling**
T10	615717	729399	**Piling**
T11	616380	729350	**Piling**
T12	616415	728161	**Excavate / Replace**
T13	616995	728609	**Piling**
T14	617357	728184	**Piling**
T15	617684	728907	**Excavate / Replace**

Source: EIAR Chapter 4, Table 4-1 (turbine co-ordinates) and Table 4-11 (foundation types). Co-ordinates are Irish Transverse Mercator (ITM).

ATTACHMENT B — Detailed Borehole Identifier Records

The following identifier tables reproduce the metadata recorded on the original drill logs for the five State-archived borehole records other than D-12 referenced in Section 6 of this submission. The detailed log for D-12 is set out at Table 6-2 in the main body.

Drillhole 98-3814-12 (CSA Ltd. for Rio Algom / Ivernia, 1998)

Identifier	Recorded Value
Drillhole No.	98-3814-12
Operator	CSA Ltd. for Rio Algom plc / Ivernia West Joint Venture
Prospecting licence	PL 3814 (Block: Ferbane)
Date	Started 26 June 1998 — finished 7 July 1998
Co-ordinates (log)	Irish National Grid 215160 E, 231920 N (≈ ITM 615160 E, 731920 N)
Townland	**Cooldorragh — same townland as the proposed 220kV substation**
Inclination	Vertical (−90°)
Total depth	301 m
Stratigraphy recorded	Argillaceous Bioclastic Limestone; Upper Pale Beds; Middle Pale Beds; Lower Pale Beds (Micrite)
Stated drilling purpose	"To test Navan Beds"

Drillhole 480/26 (ARCON Exploration plc, 1999)

Identifier	Recorded Value
Drillhole No.	480/26 (also: DDH 480/26)
Operator	ARCON Exploration plc (Project: Ferbane)
Date drilled	18–27 May 1999
Co-ordinates (log)	Irish Grid 213775 E, 228725 N (≈ ITM 613775 E, 728725 N)
Total depth	193.5 m (vertical)
Overburden	7.5 m
Waulsortian profile	7.5–179.44 m (171.94 m of profile)

Identifier	Recorded Value
Low-angle faults	**At 174.6 m and 187.94 m, slickenside lineations ≈ 20° to horizontal**
Pyrite mineralisation	**Recorded at 86.45 m**

Drillhole 480/28 (ARCON Exploration plc, 2000)

Identifier	Recorded Value
Operator / date	ARCON Exploration plc — 16 to 31 October 2000
Co-ordinates (log)	Irish Grid 215760 E, 229200 N (≈ ITM 615760 E, 729200 N)
Total depth	337 m (vertical)
Overburden recorded	**"0–6 m — Harvested Peat Bog"**
Bedrock profile	Supra-Waulsortian sequence overlying Waulsortian Reef Limestone
Waulsortian profile	Approximately 245 m of unbroken Waulsortian Reef Limestone
Pyrite mineralisation	Recorded at 164.85–165.5 m

Drillhole 99-3814-13 (Rio Algom Exploration Inc., 1999)

No.	Feature	Recorded depth	Comment
(i)	Ferbane Mudstone Formation	291–297 m	A stratigraphic unit not identified or discussed in EIAR Section 8.3.4
(ii)	Faulted contact	291 m	Between the Lower Sandstone Unit and the Ferbane Mudstone
(iii)	Zinc mineralisation	175–260 m interval	Up to 323 ppm Zn

Drillhole 08-480-30 (Lundin Mining, 2008)

Feature	Recorded depth	Description
Karst cavity	**362–363.1 m**	Cavity with 0% solid core recovery over the interval
Fault gouge zones	**Multiple intervals**	Several fault gouge zones recorded; bleached / dolomitised intervals

Section 9: EIAR Chapter 9 REVIEW

Planning Observation Report

Third Party Planning Observation Report in respect of An Coimisiún Pleanála planning application — Case Reference: 324161 — which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly.

1.0 Introduction

The proposed development comprises 15 wind turbines with a tip height of up to 220 metres, together with a 220kV substation, grid connection, access tracks, borrow pits, and ancillary infrastructure, across an area of approximately 1,258 hectares centred on Lemanaghan Bog in west Offaly, situated approximately 3 km north-east of Ferbane and 2.5 km south-west of Ballycumber.

I respectfully request An Coimisiún Pleanála to REFUSE permission for the proposed development for the planning reasons set out below. This observation is based on planning considerations, including the protection of designated and protected waters, the protection of the receiving environment, the protection of national archaeological and architectural heritage, compliance with the Water Framework Directive (Directive 2000/60/EC), compliance with the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC), the principles of proper planning and sustainable development under the Planning and Development Acts 2000 (as amended), and the consultation and information rights provided for under the Aarhus Convention.

2.0 Grounds for Refusal

The proposed development should be refused on the following grounds, taken individually and cumulatively.

2.1 Inadequate protection of water resources and likely deterioration of Water Framework Directive status

The applicant's own Water chapter (Chapter 9, Volume 1 EIAR, March 2026) records that the site sits within an unusually sensitive and already-pressured hydrological setting. The proposed development is, in my view, inconsistent with the non-deterioration obligation of the Water Framework Directive (transposed by S.I. No. 272/2009 and S.I. No. 9/2010) and with the objectives of the Water Action Plan 2024 (Ireland's third River Basin Management Plan).

I draw the Commission's attention to the following matters set out in the applicant's own assessment:

- The site drains, via 8 surface water outfalls, to four small first- and second-order watercourses — the Lemanaghan Stream, the Kilcolgan Beg Stream, the Fortified House Castlearmstrong Stream and the Ballynahown Stream — all of which have measured baseline flows in the range of 2 to 25 litres per second. These are very small receiving waters with extremely limited dilution capacity, into which a 1,258-hectare construction and operational site is proposed to discharge.
- The Lemanaghan Stream_010 surface water body is already at “Moderate” status under the most recent (2019–2024) WFD cycle and its risk status is “Under Review”. The Brosna_100 surface water body is at “Moderate” status and is at risk of failing its WFD objectives. The downstream Blackwater (Shannonbridge) waterbodies have deteriorated to “Poor” status in the latest cycle, with peat extraction already identified as a significant pressure. Adding a major construction project on top of an already-pressured catchment is contrary to the WFD non-deterioration rule, which the applicant itself acknowledges requires that “there should be no negative change in status at all.”
- The Inny groundwater body, which underlies the proposed substation, grid connection works, overhead-line masts and gantry structures, deteriorated from “Good” to “Poor” status in the latest WFD cycle. The proposed grid connection infrastructure is precisely the part of the project located outside the manmade bog drainage network and in an area where the underlying Boor Gravels groundwater body is mapped as “High” vulnerability with rapid recharge characteristics. The risk that excavation, piling and dewatering activities will further compromise an already failing groundwater body has not been adequately addressed.
- Karst features — including a swallow hole and two springs — are mapped within 1 km of the site, with the closest swallow hole only approximately 300 m to the north. The Boher Lamonaghan Group Water Scheme's source protection area lies only approximately 400 m north of the site boundary, and the spring source itself is mapped only approximately 250 m from the site. The combination of karst pathways and a nearby drinking water source creates a real and unmitigated risk of contamination from suspended solids, hydrocarbons, cement-based products and dewatering effluent during the construction phase. The applicant's own characterisation describes the receiving karst as having “high degree of interconnection between surface and groundwaters.”
- There is no groundwater quality monitoring data for the aquifers underlying the site. The applicant concedes this in Section 9.3.11. To approve a project of this scale and duration on a site with no baseline groundwater

chemistry against which post-development impacts can be measured is contrary to the precautionary principle and frustrates any meaningful post-consent monitoring condition.

- The applicant has identified errors in the EPA's own drainage mapping in the vicinity of the grid connection works (Section 9.3.5), demonstrating that the published regulatory baseline is not reliable in this area. The fact that the EIAR relies in part on a corrected baseline that has not been subject to independent verification weighs against approval.
- Turbine T12, its hardstand, and a section of proposed new road between T12 and T05 are mapped within both Fluvial Flood Zone A AND Flood Zone B along the Lemanaghan Stream, as the applicant's Flood Risk Assessment (Appendix 9-1, Section 4.4.6, p. 36 and Table D, p. 32) and Chapter 9 expressly record. Under "The Planning System and Flood Risk Management — Guidelines for Planning Authorities" (DoEHLG/OPW, 2009) and Table 3.2 of those Guidelines, a wind turbine is "Highly Vulnerable Development" and the placement of Highly Vulnerable Development in Flood Zone A or B is presumptively inappropriate. The applicant's own FRA acknowledges (Section 4.4.4, p. 32) that "the Proposed Project can be categorised as Highly Vulnerable Development" and that "some key development infrastructures including 1 no. turbine and a section of proposed new road are located in mapped Fluvial Flood Zones". The proper response is the application of a rigorous Development Management Justification Test, and the test as set out in Appendix 9-1, Section 6.1 is not, in my respectful view, adequately substantiated.
- Most strikingly, the FRA attempts to reclassify the entire site as Flood Zone C in its own conclusions (Section 7, pp. 41–42), notwithstanding that the National Indicative Fluvial Flood Mapping and the GSI Historical Surface Water Flood Mapping place parts of the site in Flood Zones A and B. The applicant's reasoning — that the EPA-mapped Lemanaghan Stream has been "heavily modified" and that the modelled flood zones do not reflect the operation of Bord na Móna's existing private pumps — is an attempt to overrule the statutory OPW/GSI flood mapping on the strength of a private consultant's site walkover. That is not a legitimate basis on which to disapply the precautionary, risk-based sequential approach that the 2009 Guidelines require, and it does not address the principal regulatory question, which is what happens to the flood risk when those private pumps cease operating during the 30+ year operational and decommissioning lifetime of the project or in any future scenario in which Bord na Móna ceases to maintain Lemanaghan Bog.
- The FRA itself admits (Section 4.4.6, p. 36, and repeated in the Justification Test at point 2(iii), p. 40) that the proposed T12 turbine, hardstand and section of internal road will, by physical displacement of pluvial flood water, increase local flood levels within the bog by between 5 and 15 cm during extreme rainfall events, and that this water "can only be removed via pumping (i.e. there is no gravity outfall)". The applicant treats this as acceptable on the basis that the increased flood depth will be retained within the application site. That conclusion is unsafe: the bog is hydrologically connected to surrounding land, the receiving streams and the European Sites downstream; the integrity of the retention depends entirely on the continued operation of private pumps for the lifetime of the wind farm; and any increase in standing flood depth on the bog has consequences for peat stability, for the proposed Biodiversity Enhancement and Management Plan, and for the residual flood risk at neighbouring properties and at the recorded recurring flood incidents 500 m to the south at the R436/Lemanaghan (Flood ID 2906) and 1 km west at Derrica Beg (Flood ID 2907).
- The FRA's detailed assessment for the proposed onsite 220 kV substation (Section 4.4.5, pp. 33–35) records that existing ground levels at the substation location are only approximately 56 to 57 mOD, that the modelled 1-in-1,000-year pluvial flood level is 56.45 mOD, and that a substation formation level above 56.75 mOD (i.e. raised by up to roughly 0.75 m above natural ground at the lower end of the site) is therefore required to keep the substation in Flood Zone C with a 0.3 m freeboard. This is itself an acknowledgement that a Highly Vulnerable element of the project sits on land whose natural surface is below the 1-in-1,000-year flood level, and that the only thing keeping the substation out of a flood zone is the made-ground platform.
- The flood modelling in Section 4.4.5 of the FRA applies a +20% climate-change uplift to rainfall depths. This is the "Mid-Range Future Scenario" of the OPW CFRAM Programme; the corresponding "High-End Future Scenario" uplift is +30%, which the FRA itself acknowledges at Section 4.3.9 (p. 28). For Highly Vulnerable Development on deep peat with a 30+ year operational lifetime, the conservative regulatory approach is to design against the High-End scenario, not the Mid-Range. The OPW's most recent Climate Change Sectoral Adaptation Plan and the Met Éireann Translate Project both support the use of the higher uplift for sensitive infrastructure. Storm Éowyn (January 2025) is direct, recent, and local evidence that extreme weather events

are now affecting this very site — wind gusts of sufficient force to uproot four mature trees within the enclosure at St Mella's Cell — and reinforces the case for the High-End scenario.

- The hydrological methodology underlying the substation flood-level calculation (Section 4.4.5, p. 33) relies on Institute of Hydrology Report 124 (1994) and on a single-day rainfall duration assumption ("with no discharge on day 1, the peak storage occurs for a 1-day duration rainfall event"). The use of a >30-year-old methodology and a one-day rainfall duration for a sensitive 220 kV substation on a 1,258-hectare cutover peat catchment is not consistent with current best practice for Highly Vulnerable Development on peat.
- The FRA further acknowledges (Section 4.4.1, p. 31) that the gravity outfalls "will become submerged when the water levels of the watercourses into which they are discharging are high", with the result that "water [is] stored on the bog until such time as the rivers have receded". This means that during the very rainfall events for which the drainage system is most needed — coincident peak rainfall with high river levels in the Brosna, Boor and Blackwater systems — the proposed outfall system will not function, and the resilience of the project will depend on the continued operation of private pumping infrastructure that is not part of any statutory flood defence.
- The OPW Past Flood Events Map records a recurring annual flood incident along the R436 at Lemanaghan (Flood ID 2906) only approximately 500 m south of the site, a second recurring flood event approximately 1 km west of the site at Derrica Beg (Flood ID 2907), and a further recurring flood at Pollagh (Flood ID 13233) approximately 800 m south of the site where the Brosna River overflows its banks and floods local roads. The FRA (Section 4.3.3, p. 21) records each of these and yet the FRA's conclusion (Section 7) states that "no instances of recurring flooding were identified on OPW maps within the Site". That statement is technically true only because the recurring floods are recorded just outside the site boundary — but the test for proper planning is whether the development will exacerbate flooding on neighbouring land, and the FRA's own admission that T12 will increase flood depth within the bog by 5–15 cm by displacement creates a real, unmitigated risk that this will translate into worsening of the documented recurring floods at the R436 and Derrica Beg.
- The FRA states (Section 4.3.9, p. 28) that "flood zones at the Proposed Project site are unlikely to be significantly impacted by future climate change". This conclusion is reached without applying the Met Éireann Translate Project projections that Chapter 9 of the EIAR itself reproduces for County Offaly, which project increased winter precipitation under both 1.5 °C and 4 °C warming scenarios, and without engaging with the OPW's own guidance on climate uplift for Highly Vulnerable Development. The conclusion is inconsistent with the precautionary principle.
- A direct comparison between the surface water laboratory certificates in Appendix 9-2 and the summary table in Chapter 9 (Table 9-14, p. 9-27) reveals that the EIAR omits three parameters from its summary that were in fact measured on every one of the 18 surface water samples: Total Phosphorus (method P207), Total Nitrogen (P285) and Total Oxidised Nitrogen (P281). The omitted parameters are the ones most directly relevant to the WFD eutrophication assessment in this catchment. By summarising only orthophosphate (which was below detection in every sample at <0.02 mg/L P) and concluding that "All samples achieved 'Good' status with respect to ortho-phosphate", the EIAR's water-quality narrative materially misrepresents the WFD position of the receiving waters.
- The Appendix 9-2 laboratory certificates record Total Phosphorus values that exceed the S.I. No. 272/2009 Environmental Quality Standard for "Good" status in rivers (median annual value ≤0.035 mg/L P) at three monitoring locations on 17 April 2025: sample SW3 (P1540 Lemanaghan SW3 13:15 17/04/2025, ALS lab ref CLN89829) recorded Total Phosphorus of 0.10 mg/L P; SW6 (CLN89832) recorded 0.13 mg/L P; and SW10 (CLN89836) recorded 0.15 mg/L P. These values are between three and four times the "Good" status threshold. None of these exceedances is disclosed in Chapter 9 Table 9-14, and none of them is referenced in the narrative at Section 9.3.8.2 which concludes the watercourses meet "Good" status for phosphorus. This is a material omission from the EIAR's WFD compliance assessment and one that the Commission should not overlook in its consideration of the application.
- The Total Nitrogen results in Appendix 9-2 — also omitted from Chapter 9 Table 9-14 — show concentrations of up to 3.7 mg/L N (SW9, August 2024, ALS lab ref 6274307) and 3.1 mg/L N (SW5, April 2025, ALS lab ref CLN89831). Several samples are at the upper end of, or above, the typical "Good" status threshold for total nitrogen in rivers. Combined with the documented Total Phosphorus exceedances, this indicates a nutrient-pressured baseline that the EIAR's summary does not acknowledge and that materially weakens any

conclusion that the addition of a 1,258-hectare construction project to this catchment will not cause WFD deterioration.

- The EIAR's explanation for the only suspended-solids exceedance it does acknowledge — SW10 on 17 April 2025 at 60 mg/L, well above the S.I. 293/1988 threshold of 25 mg/L — is that this is attributable to "disruption of the streambed during sampling" (Chapter 9, Section 9.3.8.2). The Appendix 9-2 certificate for the same sample (CLN89836) tells a different story. Alongside the elevated suspended solids, that sample also recorded BOD_5 of 7 mg/L O_2 (the highest BOD_5 value in the entire 18-sample dataset), Ammonia of 0.91 mg/L NH_3-N (a "Moderate"/"Poor" status indicator), and Total Phosphorus of 0.15 mg/L P. The simultaneous occurrence of elevated suspended solids, elevated BOD, elevated ammonia and elevated total phosphorus is the recognised signature of organic pollution from a point or diffuse source — not the signature of streambed disturbance during a grab sample. The EIAR's "sampling disturbance" explanation does not survive contact with the contemporaneous chemical results, and the baseline picture for the Kilcolgan Beg sub-catchment is consequently materially more pressured than Chapter 9 presents it to be.
- Sample SW3 on the Derrynagun watercourse (17 April 2025, ALS lab ref CLN89829) recorded ammonia of 1.31 mg/L NH_3-N — over 30 times the "High" status threshold of 0.04 mg/L. The EIAR records this value in Table 9-14 but does not flag it as an exceedance. In the same sample, the Appendix 9-2 certificate also records Total Phosphorus of 0.10 mg/L P (a "Good"-status exceedance) and BOD_5 of 4 mg/L O_2. Read together, these three contemporaneous results indicate a genuine localised pollution source rather than natural background variability, and the EIAR's failure to investigate this finding before submission of the application is a deficiency in the assessment.
- Across the 18 surface water samples in Appendix 9-2, ammonia exceeded the WFD "High" status threshold of 0.04 mg/L in 11 of 18 samples (approximately 61%) and exceeded the "Good" status threshold of 0.065 mg/L in 10 of 18 samples (approximately 55.5%). Chapter 9 presents the inverse statistic — that "approximately 39% achieved 'High' status" — which is technically accurate but minimises the prevalence of nutrient pressure. On any fair reading of the data in Appendix 9-2, the receiving environment is nutrient-pressured at baseline, and that fact must be the starting point of the WFD non-deterioration assessment.
- The applicant calculates that, in the wettest month, the site currently generates approximately 36,230 m^3 of runoff per day from a runoff coefficient of 96%. Progressive replacement of the existing peat surface with low-permeability turbine bases, hardstandings, access roads, borrow pits and the substation footprint will further increase peak runoff into receiving streams that are, on the applicant's own measurements, already carrying only 2–25 litres per second. The sustainable drainage proposals are not sufficient to address this scale of hydrological change.
- Piling is proposed in peat of average depth 9.3 m and up to 14.6 m. The hydrogeological risk from piling — including the potential to create preferential pathways between peat porewater, lacustrine clays and the underlying bedrock aquifers — is acknowledged but, in my view, is not adequately mitigated. The relevant Scottish and DoE/NIEA guidance the applicant cites ("Wind farms and groundwater impacts", 2015) makes clear that piling in deep peat carries residual risks that no amount of construction-stage management can fully eliminate.

Taken together, these matters demonstrate that the development is likely to cause deterioration in the status of one or more water bodies, contrary to the binding objectives of the Water Framework Directive. Under the established case law of the Court of Justice of the European Union (Case C-461/13, Bund für Umwelt und Naturschutz Deutschland; Case C-535/18, IL and Others v Land Nordrhein-Westfalen), even a single deterioration in the status of a single quality element is a sufficient basis on which to refuse consent. The Commission is bound to apply that test on the evidence before it.

2.2 Hydrological connection to European Sites and the Habitats Directive

The applicant accepts that the proposed development has direct hydrological connections to the following European Sites via the Brosna, Boor and Shannon river systems:

- River Shannon Callows SAC (Site Code 000216) — approximately 10.5 km along the Boor flowpath and 22.1 km along the Brosna flowpath;
- Middle Shannon Callows SPA (Site Code 004096) — same flowpaths;

- Lough Derg, North-East Shore SAC (Site Code 002241) and Lough Derg SPA (Site Code 004048) — approximately 47 km hydrological flowpath via the River Shannon.

Given the documented inadequacies of the surface water and groundwater protection measures (Section 3.1 above), and given that the receiving streams carry baseline flows of only 2–25 litres per second so that any pollution event will reach European Sites with limited dilution, I respectfully submit that the application has not demonstrated, beyond reasonable scientific doubt and on the basis of the best available scientific evidence, that the proposed development will not adversely affect the integrity of these European Sites in view of their conservation objectives, as required by Article 6(3) of the Habitats Directive and as interpreted in Case C-258/11 (Sweetman) and subsequent authority. In the absence of such certainty, permission must be refused.

2.3 Unacceptable impact on the archaeological, architectural and cultural heritage landscape of Lemanaghan

Lemanaghan is one of the most significant early medieval ecclesiastical and wetland archaeological landscapes in Europe. The Heritage Council commissioned a dedicated Lemanaghan Conservation Plan in 2007 precisely because the site's significance is national and international, not merely local. The complex comprises:

- The 7th-century monastery founded by St Manchán (died AD 664), recorded in the written historical record and including a 12th-century Romanesque church with its noted Romanesque doorway;
- St Mella's Cell, a 10th–11th century single-cell oratory in its original rectangular enclosure, connected to the main monastic site by a paved causeway;
- St Manchan's Shrine, a 12th-century gilt-bronze, enamel and yew-wood reliquary considered to be among the most important surviving examples of medieval Irish metalwork and the oldest surviving medieval reliquary in Ireland, now housed at nearby Boher Church;
- St Manchán's Holy Well, which remains in active religious use, with an annual pilgrimage on the saint's feast day, 24 January;
- The Slí Mór pilgrim path, a network of toghers (wooden trackways) crossing the bog and linking Lemanaghan with Clonmacnoise, with the earliest dated tracks reaching back to approximately 5,000 BC and the greatest density of construction coinciding with the foundation of the monastery — making this one of the richest wetland archaeological landscapes in Europe, with over 750 recorded sites in the immediate area;
- Cross slabs, bullaun stones, the remains of St Manchan's House, and a holy tree associated with continuing local religious practice; and
- Most significantly, in January 2026, the discovery — exposed by Storm Éowyn on St Manchán's feast day — of previously unknown articulated human burials within the enclosure at St Mella's Cell. Radiocarbon dating, reported in early 2026, places one burial at 662–817 AD and another at 707–939 AD, meaning individuals were possibly interred within decades of the death of the founding saint. This is a discovery of national significance that was not, and could not have been, properly assessed in the EIAR. It fundamentally changes the archaeological context of the proposed development and is, on its own, sufficient reason for the Commission to refuse the application or, at minimum, to require the applicant to commence a fresh assessment that takes proper account of newly understood burial archaeology within the application footprint.

It is widely accepted that a project of this scale and visual prominence would not be considered acceptable in the immediate setting of Clonmacnoise. The Lemanaghan complex is part of the same monastic landscape, was a sister-foundation of Clonmacnoise, and is connected to it by the Slí Mór pilgrim path. A consistent application of planning policy and of national heritage protection requires that the same protection that would be afforded to Clonmacnoise be afforded here. The proposed 220-metre turbines — taller than the spire of the tallest building in Ireland by a substantial margin — will dominate the landscape setting of the monastic site, the holy well, the pilgrim path, and St Mella's Cell. The visual, setting and cultural impact is, in my view, manifestly contrary to the proper planning and sustainable development of the area.

2.4 Climate and peatland policy contradiction

The stated public-interest justification for the development is climate action. However, the development is to be constructed on a deep peat site where the applicant's own probing records depths up to 14.6 m. Industrial development on peat — including piling, road construction, borrow pits and ongoing drainage — causes oxidation of the residual peat, ongoing carbon emissions and the loss of climate-mitigation potential that intact and rewetted

peatlands provide. The Climate Action Plan and the Peatlands Climate Action Scheme support rehabilitation of cutaway bogs of this type to maximise long-term carbon storage and biodiversity. The applicant's assessment of cumulative climate effects, including with the Peatlands Climate Action Scheme, does not adequately reconcile the loss of rehabilitation potential at a 1,258-hectare site with the carbon benefit of the proposed turbines. In short, this is the wrong project on the wrong site, and there are demonstrably less environmentally damaging alternatives — including non-peatland sites and offshore wind — that better serve the same climate objective.

2.5 Inadequate assessment of cumulative effects

The wider Boora Bog Group has already been the subject of large-scale industrial peat extraction under EPA IPC Licence P0500-01, and An Bord Pleanála has recently granted permission for a 21-turbine wind farm at Derrinlough, also part of the Boora Bog Group, to the south. The Cloncreen and Derrinlough wind farm developments, ongoing peat extraction, agricultural pressures and the Lemanaghan urban wastewater treatment plant all discharge to, or are pressures on, the same Brosna and Shannon catchments. The cumulative assessment in Chapter 9 acknowledges these projects but treats them, in effect, as a backdrop against which the additional impact of Lemanaghan is described as "imperceptible". That conclusion is not adequately substantiated. Given the already-degraded WFD status of several of the surface water bodies in the receiving environment, and given the well-documented at-risk status of the Brosna_100, _110, _120 and _130 water bodies, the cumulative pressure on the receiving environment has, in the realistic view, already exceeded the resilience of the catchment. Adding a further 1,258-hectare construction project to that cumulative load cannot be considered consistent with proper planning and sustainable development.

2.6 Procedural and public-participation concerns

The application has reached An Coimisiún Pleanála via a strategic infrastructure development designation, with the consequence that the application has bypassed the elected planning process of Offaly County Council. The local community made over 2,300 submissions to Offaly County Council during the County Development Plan process opposing the rezoning of Lemanaghan Bog as an area open to consideration for wind energy. The local community has documented its concern that the rezoning of the site was permitted by a margin of only one vote (9–8) at council, and that early phases of the Wind Energy Strategy consultation described "Area 5" as "North West of Ferbane & West of Doon" — terminology which did not put residents on notice that Lemanaghan Bog was the proposed location. The Aarhus Convention requires that effective public participation take place at the earliest stage when all options are open. I respectfully request the Commission to give appropriate weight to the strong and sustained local opposition to this proposal, and not to discount it on the basis of any characterisation by the applicant of the opposition as a "small group" — a characterisation that the over-2,300 submissions to the County Council and the membership of the Lemanaghan Heritage and Conservation Group plainly contradict.

I respectfully submit that the manner in which this application was launched has further compromised the public participation rights provided for under Article 6 of the Aarhus Convention and under Directive 2014/52/EU. The Lemanaghan Heritage and Conservation Group has publicly recorded that local residents first learned of the application not through direct engagement by the developer but through advance media coverage on the morning of 27 March 2026, with site notices being erected the same day and a developer notification email arriving only at approximately 4:45 pm. The group further records that the developer's dedicated planning information website was password-protected and inaccessible when members of the public attempted to follow the link given on the site notices. Effective public participation requires that the public is given timely access to the relevant information, in a form that is reasonable, comprehensible and accessible from the start of the participation window. Where the very first days of a 7-week participation window are compromised by inaccessible documentation, the Commission should give particular weight to observations from local residents who were placed at an information disadvantage.

2.7 Other planning considerations

- Residential amenity and proximity: the EIAR records 21 sensitive receptors (inhabitable dwellings, a derelict property and an office building) within 1 km of the proposed turbine locations. The turbines are 220 m to tip — among the tallest land-based turbines yet proposed in Ireland — and the residential amenity, shadow flicker, noise and visual impacts on these receptors have not been adequately addressed against the more protective standards proposed in the draft 2019 Wind Energy Development Guidelines.
- Turbine Delivery Route accommodation works at Kennedy's Cross (junction of the N52/N64) — the works area is mapped as overlying both a Regionally Important Karst Aquifer (Banagher GWB) and a Locally Important Aquifer (Birr GWB), and the closest mapped designated site (Woodville Woods pNHA) is only 14 m

from the works area. The implications of working in this karst setting have been treated lightly in the application.

- Recreational and amenity infrastructure: Lemanaghan is the terminus of the 32.4 km Offaly Way national walking route, and the proposed project is on land actively used by pilgrims, walkers and visitors to the monastic complex. The proposed "amenity track" is not, in my view, an adequate offset for the loss of the existing setting.

2.8 Internal inconsistency between the WFD Compliance Assessment (Appendix 9-3) and Chapter 9 (Water)

- A side-by-side reading of Appendix 9-3 (Water Framework Directive Compliance Assessment, Hydro-Environmental Services Report No. P1540-0_WFD_F1, 18 March 2026) against the parent Chapter 9 (Water) reveals a sequence of factual contradictions, internal inconsistencies and editorial errors which, taken together, materially undermine the reliability of the EIAR's WFD compliance case. These are not merely typographical points. The principal question for the Commission under the Water Framework Directive is whether the application has demonstrated, on the basis of a consistent and verifiable assessment, that the project will not cause deterioration in the status of any affected water body. An assessment whose appendix and parent chapter give different numbers for the same parameters, omit material elements from one document that the other addresses, and contain copy-paste errors and out-of-order section numbering, is not an assessment that meets that standard.
- I draw the Commission's attention to the following matters, grouped by the nature of the defect.
- Substantive omissions from Appendix 9-3 that are addressed in Chapter 9:
- The cumulative wind farm assessment in Appendix 9-3 §4.4.7 dismisses the proposed Bellair Wind Farm — which Chapter 9 confirms is the closest wind farm to the proposed project, with its nearest turbine some 2.7 km north of the Lemanaghan turbines and only approximately 700 m from the Proposed Grid Connection — on the basis that there is "no information available in the public domain". Chapter 9 §9.5.7.7 nevertheless conducts a substantive cumulative assessment of Bellair, explaining that Bellair Bog South lies in the Boor_010 WFD river sub-basin and drains north, away from the project, and walking through which elements of the Lemanaghan project lie in the Boor catchment. The closest wind-farm receptor to the Lemanaghan project has therefore been left effectively unassessed in the WFD Compliance Assessment that is being relied upon for the WFD non-deterioration conclusion.
- The cumulative Peatlands Climate Action Scheme assessment in Appendix 9-3 §4.4.8 addresses only the 2024 PCAS selections (Curraghalassa Bog and Derrynagun Bog). Chapter 9 §9.5.7.8 confirms that PCAS also selected, in 2023, the Ballaghurt and Glebe Bogs located approximately 4.4 km west of the closest proposed turbine (T01). That earlier PCAS selection has been omitted from the WFD Compliance Assessment, with the consequence that the cumulative PCAS picture relied upon by the appendix is incomplete.
- Appendix 9-3 §2.7.3 identifies only the Brosna River as a Nutrient Sensitive Area under the WFD. Chapter 9 §9.3.14 also lists "the River Shannon downstream of the Boor River" as a Nutrient Sensitive Area. The omission from Appendix 9-3 is material because the subsequent screening of effects on Nutrient Sensitive Areas at §3.3 of the same appendix is conducted on the partial NSA list, not the complete one.
- Factual contradictions between Appendix 9-3 and Chapter 9:
- Appendix 9-3 §2.4 states that "the Proposed Project site is primarily underlain by a total of 3 no. GWBs", treating the Boor Gravels Groundwater Body as merely "in close proximity". Chapter 9 §9.3.9 states that the site is underlain by 4 GWBs, explicitly identifying the Boor Gravels GWB as underlying parts of the Proposed Grid Connection in the north of the site. This contradiction matters: Boor Gravels is, per the EIAR itself, a sand-and-gravel aquifer mapped as "High" vulnerability with rapid recharge characteristics — precisely the GWB to which the proposed grid connection, temporary access road and substation works pose the highest risk. Treating it as proximal-but-not-underlying in the WFD Compliance Assessment understates the receptor sensitivity at the most vulnerable part of the site. Appendix 9-3 §2.4 is, separately, inconsistent with its own screening table (Table D), which carries Boor Gravels through to the WFD Compliance Assessment as an underlying GWB.
- Appendix 9-3 §2.7.1 places the River Shannon Callows SAC/pNHA and the Middle Shannon Callows SPA approximately 8.3 km to the southwest, when measured via the Brosna_SC_060 sub-catchment. Chapter 9

§9.3.14 places the same European Sites approximately 13.6 km to the southwest. The two documents differ by 5.3 km on a measurement that is directly relevant to the Stage 1 screening of effects on European Sites under Article 6(3) of the Habitats Directive. Neither document explains the basis for its figure (straight-line versus hydrological flow-path), and the question of which is correct cannot be resolved from the application documents as they stand.

- Appendix 9-3 §4.2.1.2 cites the area of the Clara Groundwater Body as approximately 641 km^2. Chapter 9 §9.5.2.11 cites the area of the same Groundwater Body as approximately 71,200 hectares (equivalent to 712 km^2) — a difference of approximately 11%. The Inny and Ferbane GWB areas are consistent between the documents; the Clara figure is not. The Clara GWB area is used in Appendix 9-3 to support the proposition that the project footprint is small relative to the underlying aquifer — an argument whose force depends on the accuracy of the comparator.

Internal contradictions within Appendix 9-3 itself:

- Appendix 9-3 §2.7.3 states that the Brosna River Nutrient Sensitive Area is located "~2km directly south of the Proposed Project site". Appendix 9-3 §3.3, addressing the same designated feature, states that it is "located ~800m to the south of the Proposed Project site". The same document gives two different distances to the same regulated NSA, in two passages no more than a few pages apart.
- Appendix 9-3 §3.1 states: "Further downstream the Boor_020 and Brosna_120 to _140 SWBs are included in the WFD Compliance Assessment due to their location downstream of the Proposed Project site." Boor_020 is the proximal receiving surface water body for outfall SW22D, as the same appendix identifies elsewhere — it is not downstream of itself. The sentence is internally incoherent. The corresponding passage in Chapter 9 §9.3.13.2 treats Boor_020 correctly as the proximal surface water body, with Shannon (Upper)_120 and _130 as the downstream surface water bodies.

Editorial defects bearing on the standard of QA applied to the WFD Compliance Assessment:

- Section §4.4 of Appendix 9-3 (Cumulative Assessment) is numbered out of sequence. The subsection on cumulative effects with the Lemanaghan Urban Wastewater Treatment Plant is labelled §4.4.4 but appears in the document immediately after §4.4 itself and before §4.4.1 (Turbary), §4.4.2 (Agriculture) and §4.4.3 (Housing). The same subsection misspells "Lemanaghan" twice in close succession ("Leamanaghan" in the heading; "Leamaonaghan" in the body). Chapter 9 §9.5.7.4 has the correct spelling and the correct sequential numbering.
- The closing sentence of the cumulative agriculture analysis in Appendix 9-3 §4.4.2 reads: "we consider that there will not be a significant cumulative effect associated with turbary activities" — the word "turbary" being a copy-paste carry-over from §4.4.1 (Turbary). Chapter 9 §9.5.7.2 has the correct wording ("agricultural activities"). The conclusion of the WFD Compliance Assessment's cumulative agriculture analysis is therefore, on its face, a conclusion about a different subject.

These errors and inconsistencies, taken together, are not consistent with the standard of care that the Court of Justice of the European Union expects of an assessment relied upon to demonstrate compliance with the binding non-deterioration obligation under the Water Framework Directive. On the test in Case C-461/13 (Bund für Umwelt und Naturschutz Deutschland) and Case C-535/18 (IL and Others v Land Nordrhein-Westfalen), the assessment must enable the competent authority to verify, on the basis of a consistent technical record, that no deterioration of any quality element will occur. The Commission is entitled, and in my respectful view required, to give significant weight to the cumulative effect of these defects when assessing the reliability of the WFD case before it.

3.0 Relief Sought

For the reasons set out above, I respectfully request An Coimisiún Pleanála to REFUSE permission for the proposed development.

In the alternative, and without prejudice to the principal submission that the application should be refused, I request the Commission to require the applicant to provide significant additional information addressing the following matters before any decision is taken:

- A revised archaeological and cultural heritage assessment that takes proper account of the January 2026 discovery of articulated human burials at St Mella's Cell and the radiocarbon dating evidence reported in early 2026, including reconsideration of the visual, setting and direct impacts on the monastic complex as a whole;

- A WFD compliance assessment that is independently reviewed and that addresses the cumulative load on the at-risk Brosna and Blackwater water bodies, including a quantitative non-deterioration assessment for each quality element of each affected water body in accordance with the test in Case C-461/13;
- Baseline groundwater quality monitoring across a full hydrological year for all four underlying groundwater bodies (Clara, Ferbane, Inny and Boor Gravels) before any consent is granted, so that a defensible baseline exists against which any post-consent monitoring can be assessed;
- A revised water quality summary that reports all parameters measured in the laboratory certificates at Appendix 9-2 — including Total Phosphorus, Total Nitrogen and Total Oxidised Nitrogen — together with a re-statement of the WFD compliance position taking account of (i) the Total Phosphorus exceedances at SW3, SW6 and SW10 in April 2025, (ii) the ammonia exceedance at SW3 in April 2025 and the elevated total nitrogen results across the dataset, and (iii) the co-occurrence at SW10 in April 2025 of elevated suspended solids, BOD, ammonia and total phosphorus, with an investigation of the likely pollution source rather than a "sampling disturbance" explanation;
- A revised Flood Risk Assessment that (a) accepts the National Indicative Fluvial Flood Mapping and GSI Historical Surface Water Flood Mapping as the operative regulatory baseline and does not unilaterally reclassify mapped Flood Zones A and B as Flood Zone C; (b) does not treat Bord na Móna's existing private pumping infrastructure as a permanent flood defence; (c) applies the OPW CFRAM "High-End Future Scenario" climate-change uplift of +30% (not the +20% Mid-Range uplift used in Appendix 9-1 Section 4.4.5) and applies the Met Éireann Translate Project projections for County Offaly; (d) properly applies the sequential approach under "The Planning System and Flood Risk Management — Guidelines for Planning Authorities" (DoEHLG/OPW, 2009) and, where any Highly Vulnerable Development remains in a mapped flood zone, presents a properly conducted Development Management Justification Test in respect of T12, its hardstand and the associated road; (e) takes account of the recorded recurring flood incidents at Flood IDs 2906, 2907 and 13233 and assesses whether the admitted 5–15 cm increase in on-site flood depth from physical displacement will worsen those recurring floods; (f) updates the modelling methodology away from Institute of Hydrology Report 124 (1994) and from single-day rainfall durations to current best practice; and (g) addresses post-Storm Éowyn (January 2025) evidence of the actual response of the site to extreme weather events;
- A revised Water Framework Directive Compliance Assessment (Appendix 9-3) that is fully internally consistent and fully consistent with Chapter 9 (Water), addressing in particular: (i) the omission of the Bellair Wind Farm and the 2023 Peatlands Climate Action Scheme selections (Ballaghurt and Glebe Bogs) from the cumulative assessment; (ii) the omission of the River Shannon Nutrient Sensitive Area from the assessment of designated waters; (iii) the conflicting accounts as between the appendix and the parent chapter of the number of groundwater bodies underlying the site, the distance from the Brosna sub-catchment to the River Shannon Callows SAC/SPA, and the area of the Clara groundwater body; (iv) the internal contradiction within the appendix as to the distance from the site to the Brosna River Nutrient Sensitive Area; and (v) the editorial defects in §3.1 and §4.4 of the appendix;
- A revised cumulative effects assessment that includes the Derrinlough wind farm, Cloncreen wind farm, the wider Boora Bog Group rehabilitation programme, the Peatlands Climate Action Scheme and ongoing agricultural and wastewater pressures, on a quantitative rather than narrative basis.

3.1 Recommended Reasons for Refusal

Without prejudice to any further reasons that may arise from technical review and from the Commission's own assessment, and consolidating the grounds set out in detail in Section 3.0 above, the following refusal reasons are respectfully proposed for the Commission's consideration:

- **Reason 1 — Inadequate protection of water resources and likely deterioration of Water Framework Directive status.** The application has not demonstrated, on complete and reliable information, that the proposed development will not cause deterioration in the status of any affected surface or groundwater body, contrary to the binding non-deterioration obligation of the Water Framework Directive and to the test established in Case C-461/13 (Bund für Umwelt und Naturschutz Deutschland) and Case C-535/18 (IL and Others v Land Nordrhein-Westfalen), as set out in Section 3.1 above.
- **Reason 2 — Failure to discharge the Article 6(3) certainty test under the Habitats Directive.** The application has not established, beyond reasonable scientific doubt and on the basis of the best available scientific

evidence, that the proposed development will not adversely affect the integrity of the River Shannon Callows SAC, the Middle Shannon Callows SPA, the Lough Derg North-East Shore SAC or the Lough Derg SPA, contrary to Article 6(3) of the Habitats Directive as interpreted in Case C-258/11 (Sweetman), as set out in Section 3.2 above.

- **Reason 3 — Unacceptable impact on the archaeological, architectural and cultural heritage landscape of Lemanaghan.** The proposed 220-metre turbines would dominate the setting of the 7th-century monastic landscape founded by St Manchán, the Slí Mór pilgrim path, St Mella's Cell — within which articulated human burials radiocarbon-dated to 662–939 AD were exposed by Storm Éowyn in January 2026 — and St Manchán's Holy Well, contrary to the Lemanaghan Conservation Plan (Heritage Council, 2007) and to proper planning and sustainable development of the area, as set out in Section 3.3 above.
- **Reason 4 — Climate and peatland policy contradiction.** Industrial development of a 1,258-hectare site on deep peat (up to 14.6 m), with piling, road construction, borrow pits and ongoing drainage, is inconsistent with the National Peatlands Strategy, the Peatlands Climate Action Scheme and the climate-mitigation objective relied upon by the applicant, and demonstrably less environmentally damaging alternatives — including non-peatland sites and offshore wind — are available, as set out in Section 3.4 above.
- **Reason 5 — Inadequate assessment of cumulative effects.** The application has not adequately assessed the cumulative pressure on the receiving environment from Cloncreen, Derrinlough, Bellair and other consented and proposed wind farms within the Boora Bog Group, the cumulative effects of ongoing peat extraction, agricultural pressures, the Peatlands Climate Action Scheme and the Lemanaghan UWWTP, as set out in Section 3.5 above.
- **Reason 6 — Procedural and public-participation deficiencies.** The strategic infrastructure development designation, the absence of meaningful early engagement, the inaccessibility of the applicant's documentation in the first days of the participation window and the manner in which the rezoning of the site was achieved compromise the public participation rights provided for under Article 6 of the Aarhus Convention and Directive 2014/52/EU, as set out in Section 3.6 above.
- **Reason 7 — Residential amenity, Turbine Delivery Route and recreational concerns.** The 21 sensitive receptors recorded within 1 km of the proposed 220 m turbines, the karst-aquifer accommodation works at Kennedy's Cross (N52/N64) and the impact on the 32.4 km Offaly Way national walking route and on the pilgrim and monastic landscape have not been adequately assessed against the more protective standards proposed in the draft 2019 Wind Energy Development Guidelines, as set out in Section 3.7 above.
- **Reason 8 — Internal inconsistency between the WFD Compliance Assessment (Appendix 9-3) and Chapter 9 (Water).** The factual contradictions, internal inconsistencies and editorial defects identified in Section 3.8 above between Appendix 9-3 and the parent Chapter 9 — including conflicting accounts of the groundwater bodies underlying the site, conflicting distances to the River Shannon Callows SAC/SPA, omission of the Bellair Wind Farm and 2023 PCAS sites from the cumulative assessment, and the omission of the River Shannon Nutrient Sensitive Area — materially undermine the reliability of the EIAR's Water Framework Directive compliance case.

Additional Comments:

Water Quality: Already Degraded, No Operational Monitoring

Multiple downstream water bodies are already at Q3 (Poor) biological status or Moderate/Poor WFD status. There is no operational phase water quality monitoring programme for the 35-year project life. White-clawed crayfish (Annex II) are confirmed downstream, with no crayfish plague biosecurity protocol in the CEMP.

Water quality protection during construction is addressed through the CEMP and settlement pond network. However, no operational phase water quality monitoring programme is described for the 35-year project life. During operation, the 21.4 km road network, turbine drainage systems, and peat deposition areas will continue to generate pollution pathways for the full operational period. Given that several downstream water bodies are already at Moderate or Poor WFD status (Boor_020, Blackwater(Shannonbridge), Brosna_100, Lemanaghan Stream_010), this is a significant omission.

Required Actions:

1. A species-specific impact assessment for white-clawed crayfish should be prepared. The CEMP should include a specific Crayfish Biosecurity Protocol covering equipment decontamination between water bodies, site hygiene procedures, and procedures for any inadvertent dewatering. IFI should be formally consulted.

2. An operational water quality monitoring programme should be specified as a planning condition: annual sampling at each site outfall for pH, turbidity, suspended solids, DOC, iron (total and dissolved), and hydrocarbons over the full 35-year operational period. Results should be reported annually to the Planning Authority and EPA.

Reference List

- Environmental Impact Assessment Report, Lemanaghan Wind Farm, Co. Offaly — Chapter 9: Water (Hydro-Environmental Services, March 2026), as lodged with An Coimisiún Pleanála under case reference 324161, including Sections 9.3 (Baseline / Receiving Environment), 9.4 (Characteristics of the Proposed Project), 9.5 (Likely Significant Effects and Associated Mitigation Measures) and 9.5.7 (Cumulative Effects).
- Environmental Impact Assessment Report, Lemanaghan Wind Farm, Co. Offaly — Appendix 9-1: Stage III Site-Specific Flood Risk Assessment, HES Report No. P1540-0_FRA_F1, dated 18 March 2026, with particular reference to Section 4.3.3 (OPW Past Flood Events Mapping), Section 4.3.9 (Climate Change), Section 4.4.4 (Requirement for a Justification Test), Section 4.4.5 (Detailed FRA for the Proposed Onsite 220 kV Substation), Section 4.4.6 (Detailed FRA for Proposed Infrastructure within Mapped Flood Zones), Section 6.1 (Justification Test) and Section 7 (SSFRA Conclusions).
- Environmental Impact Assessment Report, Lemanaghan Wind Farm, Co. Offaly — Appendix 9-2: Laboratory Report, ALS Life Sciences Ltd Certificates of Analysis No. HYDR-938080824 (dated 26 August 2024, covering samples taken 7 August 2024) and No. CLN028362-1 Final (dated 30 April 2025, covering samples taken 17 April 2025).
- Environmental Impact Assessment Report, Lemanaghan Wind Farm, Co. Offaly — Appendix 9-3: Water Framework Directive Compliance Assessment, Hydro-Environmental Services Report No. P1540-0_WFD_F1, dated 18 March 2026, with particular reference to §2.4 (Groundwater Body Identification), §2.7 (Protected Area Identification), §3.1 (Surface Water Bodies screening), §4.2.1.2 (Groundwater Quality Effects), §4.4.2 (Cumulative Effects with Agriculture), §4.4.4 (Cumulative Effects with Lemanaghan UWWTP), §4.4.7 (Cumulative Effects with other Wind Farm Developments) and §4.4.8 (Cumulative Effects from PCAS).
- Lemanaghan Conservation Plan, Heritage Council and Offaly County Council, 2007.
- E. O'Carroll (2001), The Archaeology of Leamonaghan: The Story of an Irish Bog.
- C. O'Brien, Stories from a Sacred Landscape: Croghan Hill to Clonmacnoise.
- Daly, D. (September 2023). Drained Peaty Soils are a Wasting Asset for Farmers — Briefing Note prepared by Donal Daly, Catchment Scientist. Commissioned by Lemanaghan Heritage & Conservation Group Ltd. Reproduced in summary at ATTACHMENT B.1 below.
- Summary of Waterbodies — Lemanaghan Bog. Catchment-scientist report commissioned by Lemanaghan Heritage & Conservation Group Ltd, drawing on EPA WFD status data, www.catchments.ie water-quality data, and GSI/EPA spatial datasets (subsoils, soil drainage, bedrock, aquifer, groundwater vulnerability, PIP-P and PIP-N rankings). Reproduced in summary at ATTACHMENT B.2 below.
- WFD Chemistry Monitoring Dataset — Lemanaghan Stream_010 (Waterbody Code IE_SH_25L040890, Monitoring Station RS25L040890), Offaly County Council statutory monitoring data, 28 March 2023 to 12 November 2025 (12 sample dates; 156 individual analytical results). Tabulated and discussed at ATTACHMENT B.3 below.
- Lalor, C., Smirnova, K., Daly, L., Duffy, B., Gallagher M.C., Crushell, P. (2025). FarmPEAT European Innovation Partnership 2021–2024. End of Project Report. Wetland Surveys Ireland for the Department of Agriculture, Food and the Marine (DAFM) under the Rural Development Programme 2014–2022, December 2025. Reproduced in summary at ATTACHMENT B.4 below.
- Water Framework Directive 2000/60/EC; S.I. No. 272/2009; S.I. No. 9/2010; Water Action Plan 2024 (3rd River Basin Management Plan).

- Council Directive 92/43/EEC (Habitats Directive); Directive 2009/147/EC (Birds Directive); S.I. No. 477/2011.
- CJEU Case C-461/13 (Weser); CJEU Case C-258/11 (Sweetman); CJEU Case C-535/18.
- Met Éireann Translate Project (https://www.met.ie/science/translate), climate projections for County Offaly.
- OPW indicative river and coastal flood mapping (www.floodinfo.ie); EPA Hydrotool dataset (www.catchments.ie).
- Published reporting on archaeological discoveries at St Mella's Cell, Lemanaghan, January 2026 (RTÉ News; Offaly Live / Midland Tribune).
- Environmental Protection Agency – Catchments.ie Waterbody Data: Lemanaghan Stream (IE_SH_25L040890) Available at: https://www.catchments.ie/data/#/waterbody/IE_SH_25L040890

ATTACHMENT A

Prepared by Donal Daly Catchment Scientist

Drained Peaty Soils are a Wasting Asset for Farmers



Briefing Note prepared by Donal Daly, Catchment Scientist

September 2023

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Drained Peaty Soils are a Wasting Asset for Farmers

1. Introduction

"Rewetting" of farmed peaty soils is a controversial topic at present, with fears among the farming community that it has the potential to cause significant socio-economic impacts. Raising the water level in drained peatlands has a major role in achieving Ireland's climate, water quality and biodiversity obligations, as well improving our environment generally. Engagement with farmers and achieving agreement and collaboration will be critical to achieving the progress needed. While factors such as incentivisation and payments for environmental services are likely to be essential to achieving this progress, the engagement will also need to be based on a clear understanding of all the factors involved. One factor is that drained peaty soils overlying peat, with a maintained water table several tens centimetres below ground level, will result in subsidence and an inevitable and eventual reduction in the productivity of these soils. This Briefing Note describes the critical role of water in peatlands and peaty soils and draws attention to the situation that drained peaty soils are a 'wasting asset' for farmers.

2. Water and Peat

Peat is an extraordinary geological material. A striking characteristic is its high water content – 5 m of undisturbed peat may contain 4.7 m of water and as little as 0.3 m of solid plant material (as often mentioned, "there are more solids in milk than in peat"). Water in peat, as with other mineral soils/subsoils and bedrock, is present as free water in the pores and cracks, but unlike mineral soils/subsoils and bedrock, it contains a significant quantity of water bound physically, chemically, colloidally and osmotically such that water is an essential part of the structure of the peat. Only a small proportion of the water is mobile, although this varies with the hydraulic conditions. For hydrogeologists, an interesting consequence is that the Darcy equation[1] on flow of water in porous media probably does not apply to peat, particularly well decomposed peat.

Peat forms in water-logged conditions, which slows the decomposition of the dead plant matter due to the absence of oxygen. The mineral content of undisturbed raised and blanket bogs may be as low as 2% by weight, whereas fen peat generally has a somewhat higher mineral-matter content because mineral-enriched groundwater is an important water source (Lindsay, *et al.*, 2014).

The water level is a key environmental supporting condition for undisturbed and intact peatlands. The water level requirements are as follows:

- Raised bogs: within 10 cm of ground surface for approximately 90% of year (Gill *et al.* 2022).
- Blanket bogs: within 10 cm of surface in Winter and 20 cm in Summer (Flynn *et al.* 2021).
- Fens: 2.9 to 28 cm above ground level, sustained for at least 60% of the year, with the mean annual water level always above the surface (Gill *et al.* 2022).

3. Drainage and peat

Drainage of peat means a disturbance of the natural conditions. It removes the excess water, stops peat accumulation, causes peat subsidence and changes the physical properties, such as permeability, of the peat. The causes of peat subsidence are: i) shrinkage due to drying; ii) consolidation by loss of buoyant force; iii) contraction by capillary force; and iv) biochemical oxidation.

i) ***Shrinkage:*** Peat holds a relatively large volume of water, which, although it depends on the degree of decomposition (humification) of the peat, is greater than 80% and often 90% by volume. Drying or dewatering causes a loss of some of the water thereby reducing the volume

[1] Darcy's law is an equation that describes the flow of a fluid through a porous medium.

of the peat and a lowering of the peat surface. If drainage lowers the groundwater table to a relatively shallow depth, the shrinkage may be reversible, but if the lowering is appreciable and prolonged then the shrinkage will be irreversible.

ii) ***Consolidation by loss of buoyant force***: Peat is formed in and under water. As the specific weight of organic material is only slightly above 1.0, its weight under water is very low. The pressure of overlying layers on the underlying ones is only slight due to the buoyant force of the water. When the water table is lowered this buoyant force is lost and the effective pressure increases to a greater degree than for normal mineral soils. This causes compression of peat layers below the water table. The degree of compression depends on the thickness of these layers, their compressibility and the depth to which the water table is lowered. Thus, thicker peat areas will compress more than thin areas. This can change the surface topography of an area, and therefore the drainage pattern.

iii) ***Contraction by capillary force:*** Peat has a high pore volume, most of which is filled with water. After drainage, the peat dries out and the resulting capillary forces causes compression of the soil skeleton and a decrease in the pore volume. Vertical contraction leads to subsidence and horizontal contraction to crack formation. The importance of this factor will depend on the depth to which the water table is lowered.

iv) ***Biochemical oxidation:*** When the water table is lowered by drainage, oxidation of organic matter by aerobic soil micro-organisms converts this solid fraction into water, carbon dioxide (CO_2), nitrous oxide (NO_2) and ammonium (NH_4), thereby causing peat wastage. The rate of wastage due to oxidation depends on the depth of the water table, land use (grassland or arable), climate, fertilizer application and type of peat. Depth and intensity of drainage are the two most important factors because they allow air to enter the peat. Tilling increases aeration of the soil. Oxidation is greater in warmer climates. High pH values accelerate the oxidation process so liming of the soil has this effect. Fen peat is oxidised more readily than acid bog peat. The addition of nitrogen fertilizer aids oxidation.

Subsidence rates are positively correlated with the depth to the water table – the higher the water table, the lower the subsidence rate. **Lowering the water table by drainage is the single most important factor in causing subsidence.** Subsidence rates also depend on the thickness of the peat, climate, type of peat, land use and fertiliser, including lime, application:

- Thicker peats subside more than thinner peats.
- Higher temperatures increase the rate of oxidation, consequently climate is important.
- Fen peats subside more rapidly than bogs – they are more susceptible to oxidation.
- Peat under grassland and forestry subside at a lower rate than peat under arable crops.
- Fertiliser application, especially lime and nitrogen, can exacerbate subsidence by increasing oxidation and peat wastage.

In the 1970s, An Forás Talúntais researchers estimated that subsidence after drainage of intact peatlands would be 4 cm/yr in the first few years, 2.5 cm/yr or less over the next seven years and down to 0.9 cm/yr or less later on (Barry *et al.* 1973). Lindsay *et al.* (2014) quote that after the initial rapid effects of primary consolidation, long-term subsidence of bog peat is typically 1-2 cm/yr. Following drainage, average subsidence rates of 2 cm/yr are reported from the Netherlands and Canada. Two examples, in particular, illustrate the impact of drainage on peatlands:

- The Holme Post in East Anglia provides a unique record of peat subsidence. In 1851 a cast iron column was driven through 6.7 m of fen peat into the underlying clay, with the top of the column cut off at ground level. Due to successive stages of drainage since then (using windmills initially and then pumps), the post now rises over 4 m above the ground – a graphic (there are many photos of the Post) illustration of peat subsidence (Waltham, 2000).
- Clara Bog in County Offaly is one of the largest remaining relatively intact raised bogs in Ireland and is a natural heritage area of international importance. It formed as one dome. However,

a road with associated drainage channels on each side was constructed approximately 200 years ago. Since then, continuing drainage has caused subsidence of more than 8 m at the road as well as subsidence for several hundred metres on each side of the road, and has converted the original dome into two domes (Schouten, 2002).

Where do the peat components go following drainage? Water is drained to local watercourses, together with NH_4, dissolved organic carbon (DOC), particulate organic carbon (POC) and, in certain circumstances, sediment, phosphorus and heavy metals (Fe, Mn and Al), all of which can impact on aquatic ecosystems. DOC and POC are sources of colour in water and if high levels of organic matter enter drinking water treatment systems, chlorination can produce trichloromethane, which may pose a threat to human health and is costly to treat as colour needs to be removed. Biochemical oxidation causes emissions of NO_2 and CO_2 (both are greenhouse gases) to air.

4. Farming on peatlands

Approximately 28% of peatlands (420,000 ha) (or ~5% of the total land surface) in Ireland are used for agricultural activities (Pschenyckyj *et al.* 2021) and therefore potentially have a water table generally tens centimetres to over 1 m below ground level. Photo 1 shows a typical scenario where drainage channels in and alongside peatlands are usually >0.5 m and often >1 m deep. This is negatively impacting on water quality by releasing pollutants to watercourses, as well as NO_2 and CO_2 to the atmosphere[2], is leading to a reduction in both aquatic and terrestrial biodiversity and is reducing the capacity of peatlands to mitigate flooding in the Autumn and early Winter.

Farmed peaty soils[3], are mainly utilised as pasture in Ireland. In the Good Agricultural Practices Regulations (2022)[4], an organic matter content greater than 20% has implications for fertilisation rates. Irrespective of the percentage in the upper 20-30 cm of the soil, the underlying material is invariably a varying thickness of peat with a high organic matter content.

While farming on peaty soils may often be more challenging than on mineral soils, peaty soils are nevertheless a productive growing medium for grass and vegetables, and are therefore important economically for farmers with peaty soils areas. Therefore, they are a significant asset for these farmers.

A personal reflection

I grew up on a farm in County Offaly. A significant proportion of the farm was cut-over bog. Over a number of years in the 1960s and 1970s my parents, with my assistance at times, drained this land and converted it to productive pastureland. This was not only vital for the economic wellbeing of the family, but also a source of pride for my parents. Therefore, I know the importance both economically and psychologically of farmed peaty soils for farmers and rural communities.

[2] Estimates of the percentage of national GHG emissions from agricultural grassland on peat range from 5.9-14.8%. A recent paper by Tuohy *et al.* (2023) recommends the lower value as being more realistic due to the inefficiency of drainage in many grassland peat soils.

[3] 'Organic soils' are defined as having a high organic matter content (greater than 20%) and a depth >30 cm (Renou-Wilson *et al.*, 2018). As this definition may not be generally known and may be applied by some to all peatlands, I am using the term 'farmed peaty soils' for the circumstances I am describing.

[4] https://www.irishstatutebook.ie/eli/2022/si/113/made/en/print

5. Wastage of peaty soils

While farming on peaty soils has significant detrimental implications for water quality, biodiversity and climate, it is also not a viable medium- to long-term use of the soil in many circumstances. The lowering of the water table in these areas will already have resulted in subsidence by three of the processes mentioned above – shrinkage, consolidation by loss of buoyant force and contraction by capillary force. However, wastage by oxidation is occurring and will continue to occur. For instance, the area of peatlands in the Fens in East Anglia are less than half of what it was 400 years ago (Waltham, 2000). **Peat is a wasting asset** – it can be drained and farmed only at the cost of its inevitable destruction[5].

The implications of drainage of peatland are shown in Photo 2 and Photo 3. The fields were drained by open drainage channels and piped drainage in the late 1970s. The fields have been used for pasture and silage ground. Subsidence has occurred. Now the fields are somewhat uneven due to differential subsidence, probably caused by varying peat thicknesses overlying an undulating mineral subsoil. In addition, tree trunks are now protruding in many places above the ground surface (see photo 2 and photo 3). These fields can no longer be used as silage ground unless they are removed. More importantly, in the coming years the peaty soil will continue to waste way, and the land surface will continue to subside until the water table is within perhaps 10-20 cm of the surface, significantly lowering the productivity of the land for the farmer.

6. Looking to the future

1. In a country where approximately 20% of our land surface comprises peatlands and organic soils, raising the water table in substantial areas is an essential means of achieving not only a significant national reduction of CO_2 and NO_2 emissions (for every 10 cm that the water table is raised, a reported reduction in greenhouse gas emissions of 5 tonnes/ha/yr occurs), but also improvements in both water quality and biodiversity.

2. Currently, farmed peaty soils are emitting CO_2 and NO_2 to air, and NH_3, DOC and TOC to watercourses. While these soils are beneficial for farmers in terms, for instance, of grass production, and are an asset currently, they are a 'wasting' asset.

3. While the emphasis in the short-term may be on 'rewetting' areas of cut-over bogs owned by public bodies, such as Bord na Mona, raising the water table in farmed peaty soils should also be prioritised as a means of achieving rapid environmental benefits. This might also give time for reductions in GHG emissions to be achieved from farming measures in areas of mineral soils. The Teagasc Marginal Abatement Cost Curve (MACC) 2023 (https://www.teagasc.ie/publications/2023/macc-2023.php) highlights that water table management of agricultural peat soils can have a significant potential role in reducing GHG emissions.

4. **Even if there were no environmental benefits, there are significant advantages for farmers in raising the water level in the drainage ditches and the water table in the peat underlying the peaty soil while still maintaining farm production, for instance, to within 30-40 cm of the ground surface (further research may be needed to find a level that is optimum for both reducing peat oxidation while maintaining productivity). This will slow down subsidence and peat wastage,**

[5] This will occur in circumstances where the water level in nearby watercourses is already lowered or can continued to be lowered until it is below the bottom of the peat. Where this is not feasible, the water level in the peat underlying the peaty soil will gradually get higher and higher as the ground subsides until eventually the productivity of the soils will reduce as it becomes more and more saturated.



and will ensure an economic benefit from the land, probably for many decades depending on the circumstances.

5. In a competitive global context for marketing farm products, GHG emissions from and the carbon footprint of these products are likely to become more and more relevant to the economic well-being of farmers and rural communities. Prioritisation of measures based on the range of environmental benefits and costs is urgently needed, followed by establishment of the higher priority measures. Raising the water table in farmed peaty soils areas deserves consideration, in my view, as a high priority measure (see details on this measure in Waters of Life (2023)).

6. The environmental benefits of raising the water table in peatlands are so great that a payment scheme for the environmental services provided by farmers is justifiable. Payments could be based on the water levels achieved, with the highest payments for circumstances where the water level is close to ground level, enabling no or minimal carbon losses and perhaps peat formation. (The FarmPEAT Project (https://www.farmpeat.ie/)) uses the results-based approach to pay farmers for raising the water level in drainage ditches. The outcomes of this project and the experience gained provide an exemplar for consideration of how future progress can be made.) The payments should take account not only of GHG emission reductions, but also the significant co-benefits of both reductions in pollutants entering watercourses and enhanced biodiversity – there are few, if any, measures that provide such a range of environmental services.

7. The negative 'atmosphere' in which so-called 'rewetting' is being considered and communicated currently needs to change if the required progress is to be achieved. Constructive collaboration between policy makers, public bodies and the farming community is needed. This will require, in my view, i) clarity on policy goals, ii) an understanding of the scientific aspects, iii) a highlighting of the role of raising the water table in peatlands in achieving the reductions in GHG emissions from the agricultural sector with additional co-benefits for water quality and biodiversity, iv) changing the term 'rewetting' to, for instance, 'water table management'[6] and v) a well-funded, long-term and comprehensive results-based payments scheme that takes account of the long-term implications for farmers as well as the environmental services that raising the water table will provide.

8. An element of the future 'story' is the issue of **peat wastage** due to drainage; realisation and understanding of this, and then raising of water tables in peaty soils areas to a level that still allows productive farming would alone have major environmental benefits. Let this be a starting point.

7. References

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[6] This is proposed in an article by Molleman and McMilian entitled 'Moor Returns – A Community Peatland Code for Ireland: Part 1 – The Science' at this link: https://greenrestorationireland.coop/moor-returns-a-community-peatland-code-for-ireland-part-1/

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https://www.watersoflife.ie/app/uploads/2023/08/Measures_Agricultural_Activities.pdf



Photo 1



Photo-2¶



Photo-3¶

SUMMARY OF WATER BODIES – ATTACHMENT B

Prepared by Donal Dal, catchment Scientist

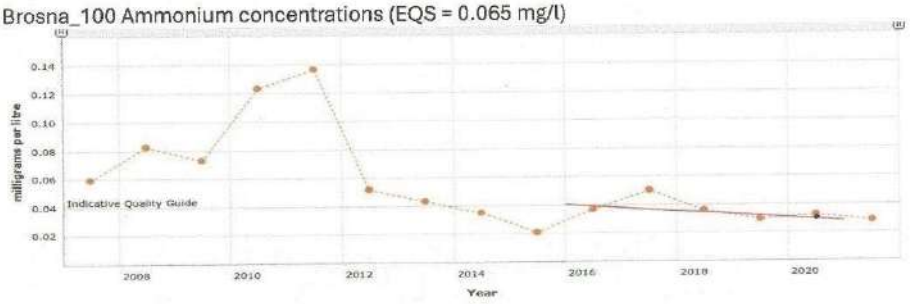
Lemanaghan Bog

Summary of waterbody details

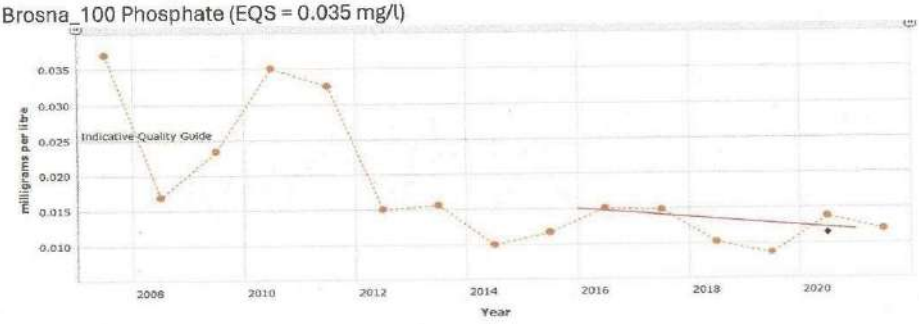
Surface waterbodies	WFD Status	WFD Risk	Significant Pressures	Targeting Agricultural Measures
Brosna_100	Moderate	At Risk	Agriculture	PO4 & sediment
Lemanaghan stream_010	Moderate	Review	- peat??	-(NH4??)
Brosna110	Moderate	At Risk	Agriculture Hydromorphology (arterial drainage?)	PO4 & sediment & point (NH4/BOD)
Boor_020	Good	Not at Risk	-	-

Water quality graphs downloaded from the www.catchments.ie website

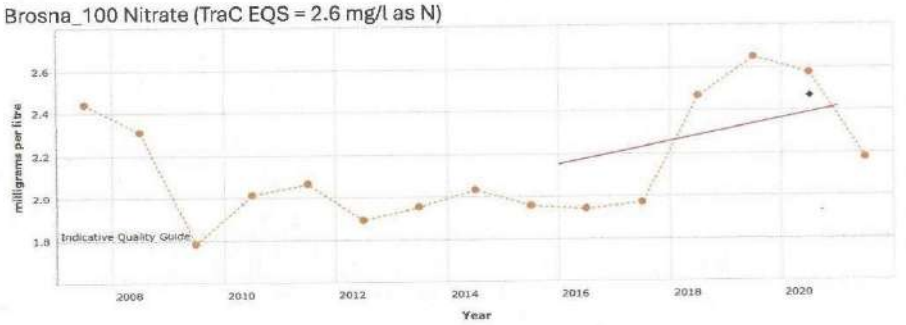
Brosna_100 Ammonium concentrations (EQS = 0.065 mg/l)



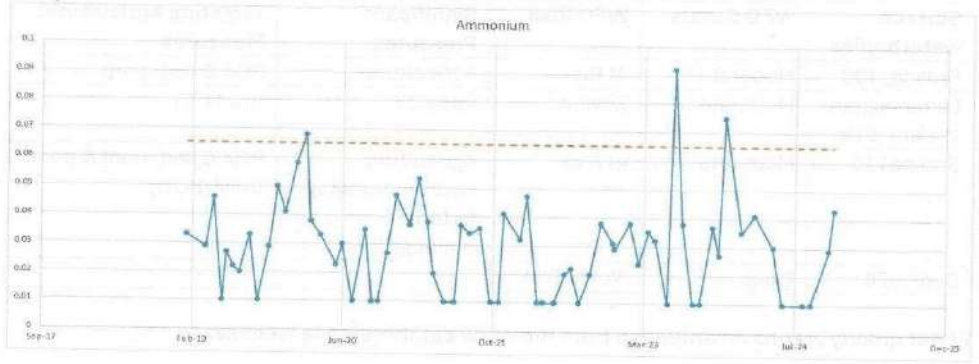
Brosna_100 Phosphate (EQS = 0.035 mg/l)

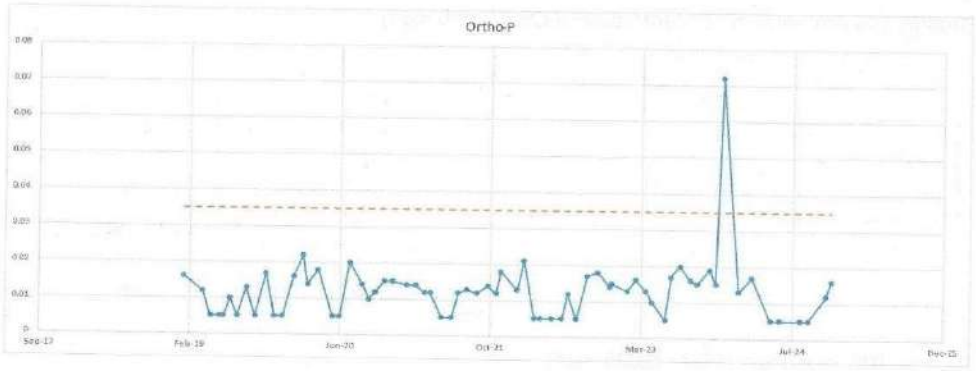


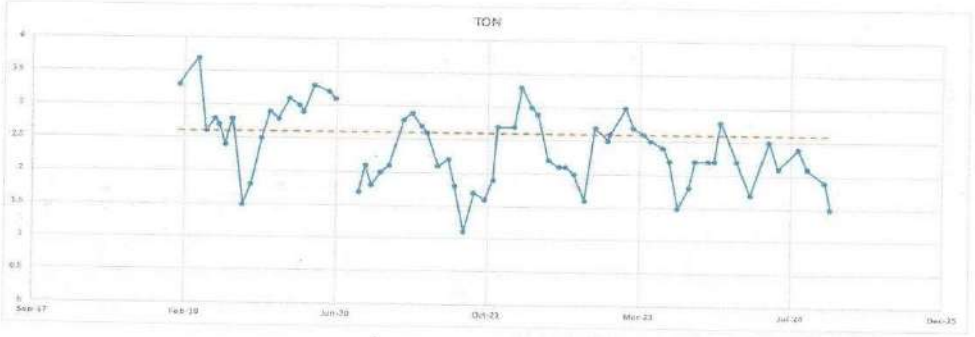
Brosna_100 Nitrate (TraC EQS = 2.6 mg/l as N)



Water quality graphs for Brosna_100 waterbody (from Sinéad Barrett, EPA Catchments Unit)

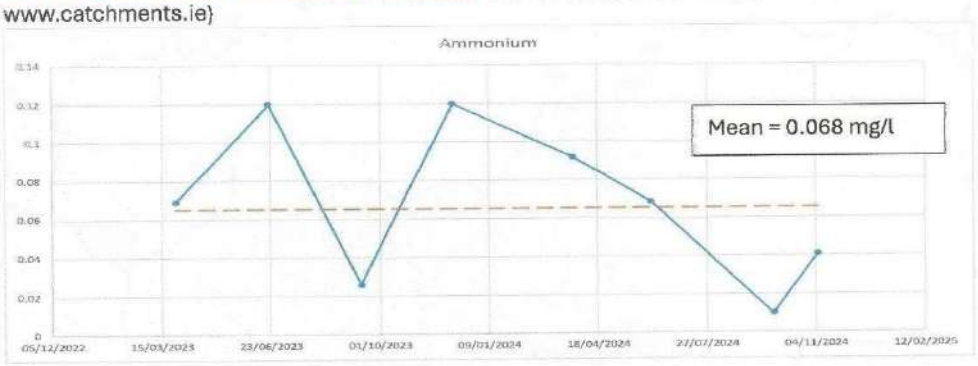




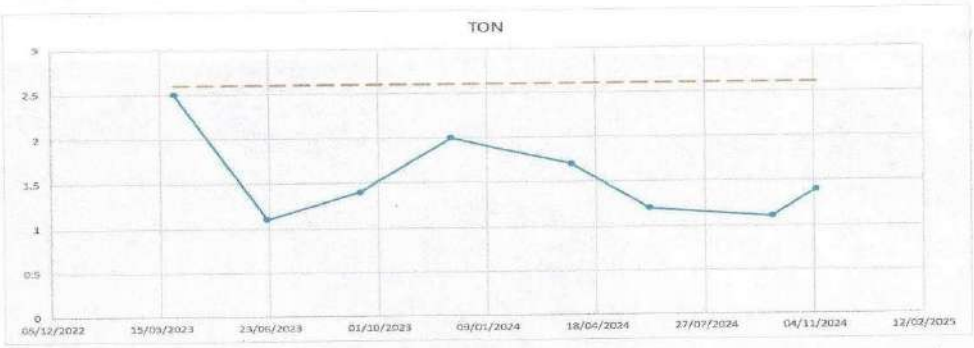


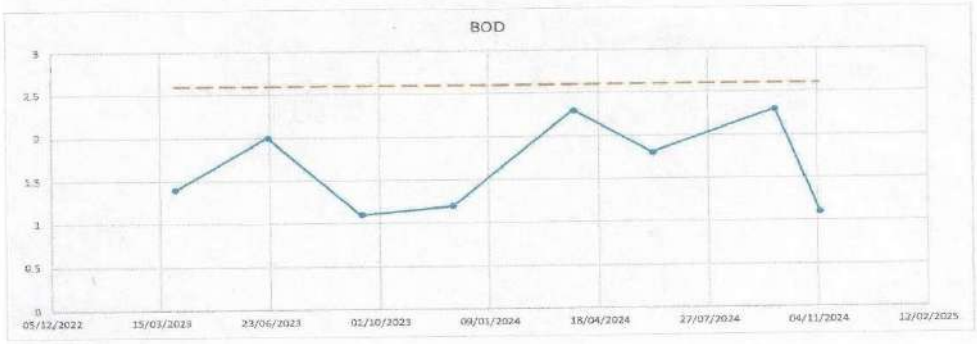


Lemanaghan Stream_010 Water quality data (Offaly Co Co data downloaded from www.catchments.ie)





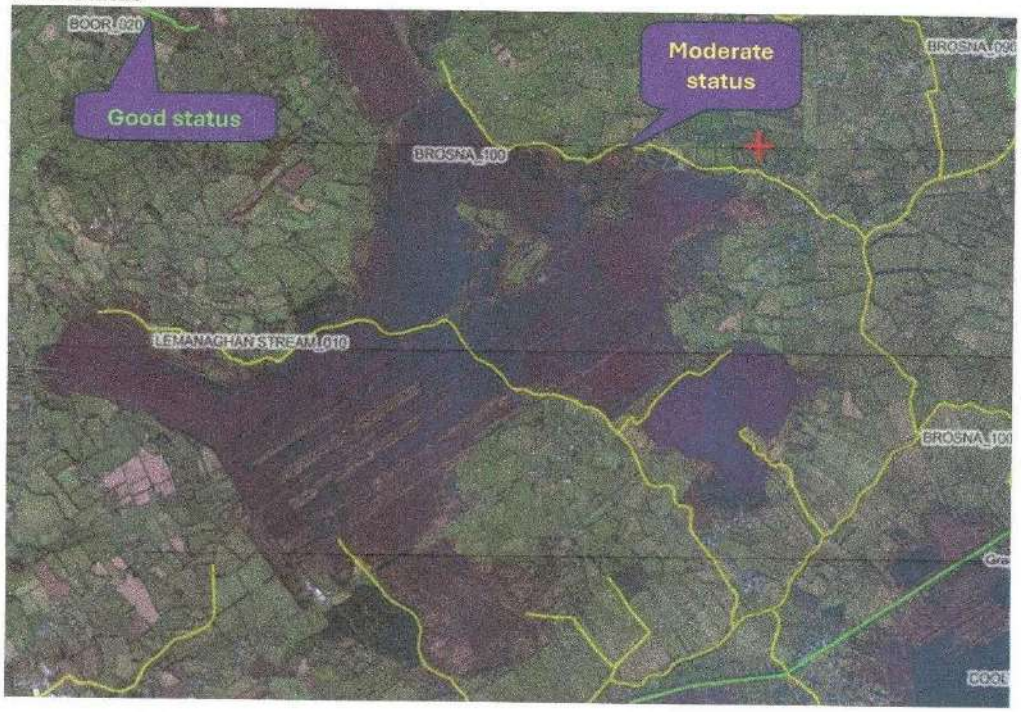




Location map showing the waterbodies in the vicinity of the bog



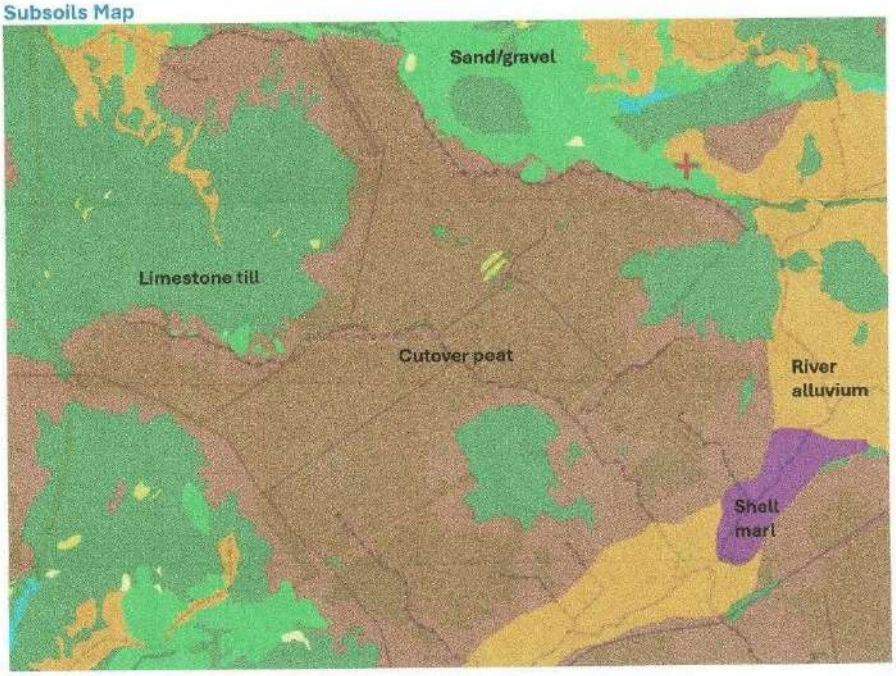
WFD Status



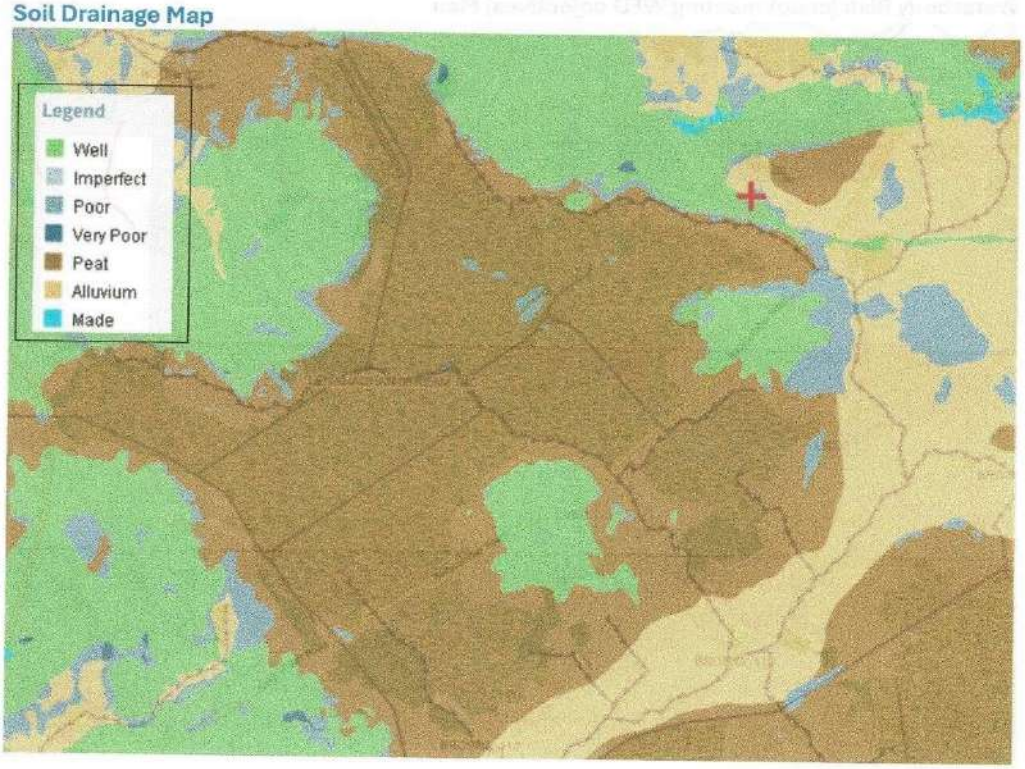
Waterbody Risk (of not meeting WFD objectives) Map



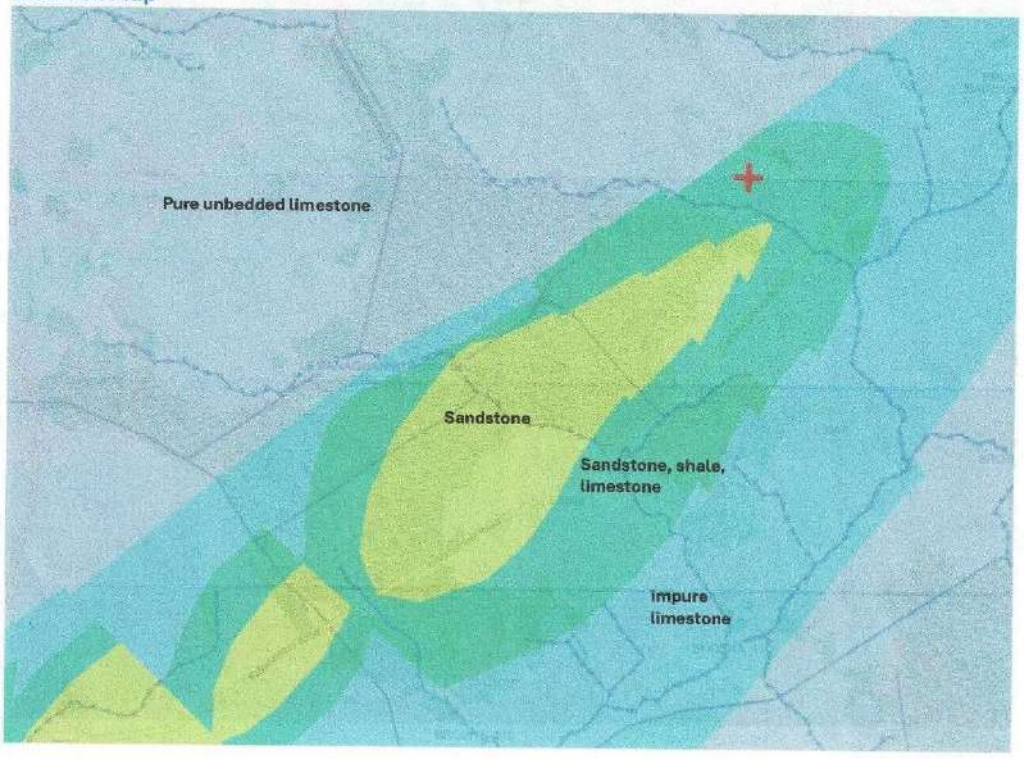
Subsoils Map



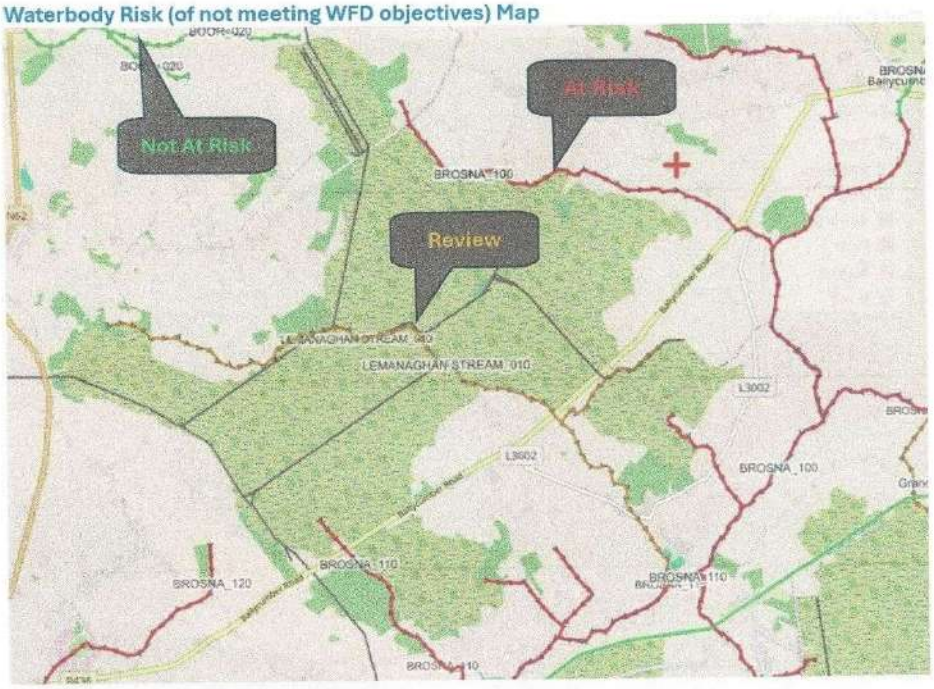
Soil Drainage Map



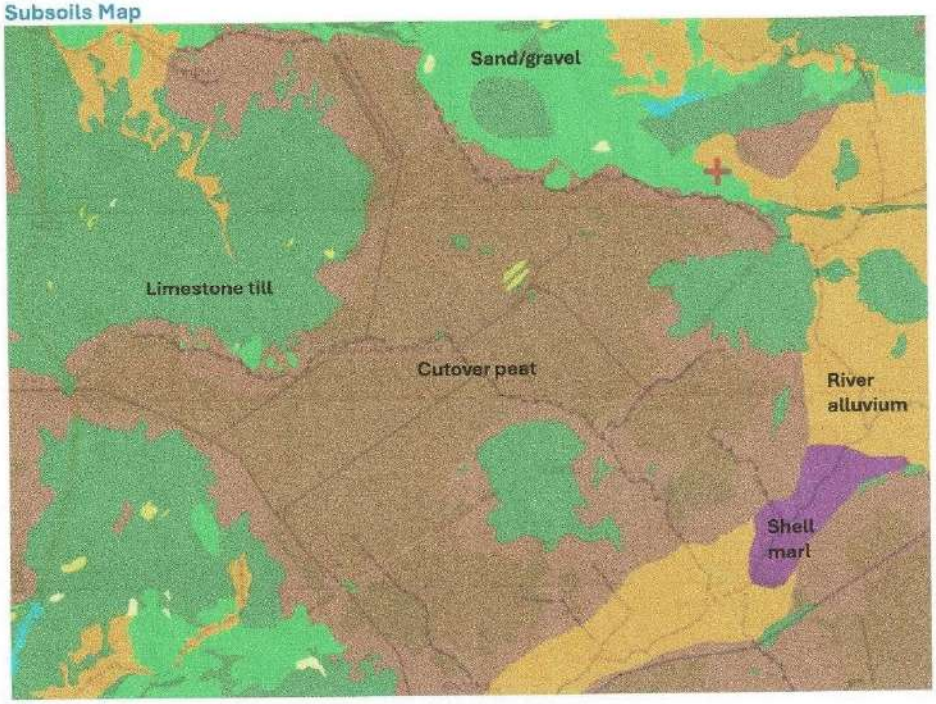
Bedrock Map



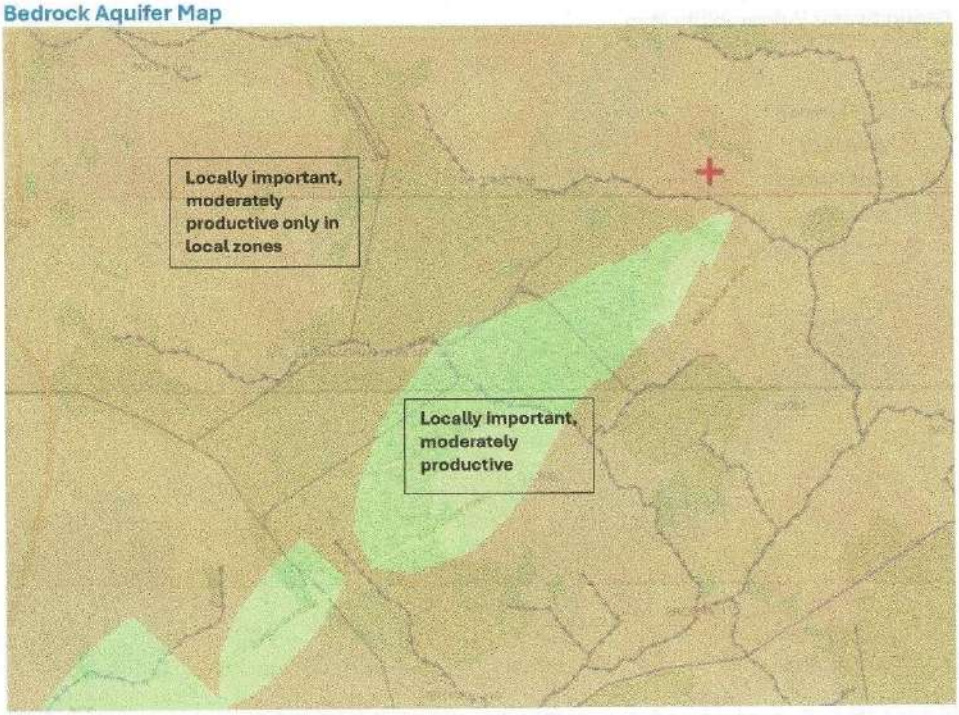
Waterbody Risk (of not meeting WFD objectives) Map



Subsoils Map



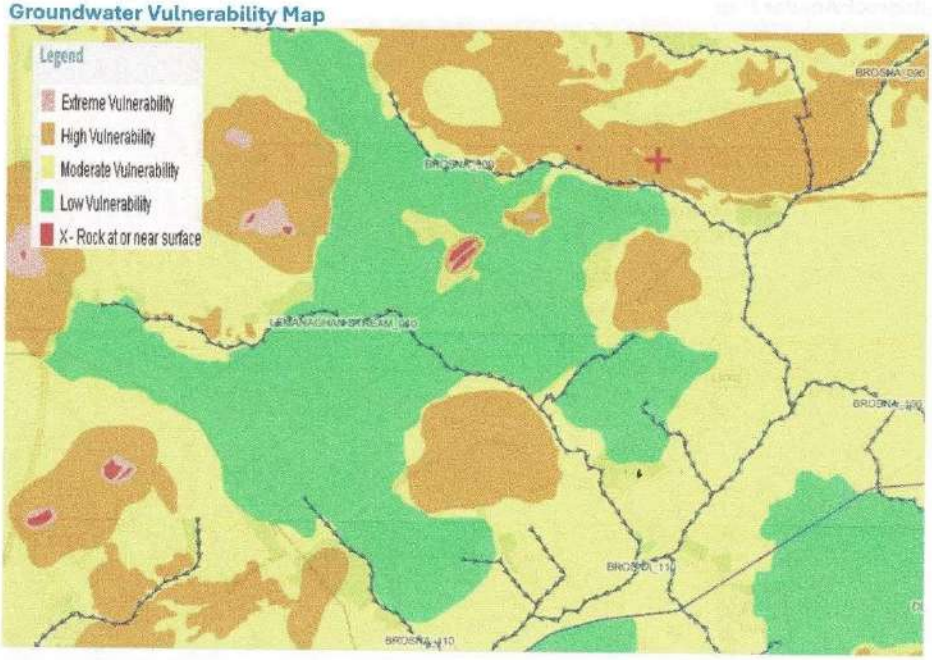
Bedrock Aquifer Map



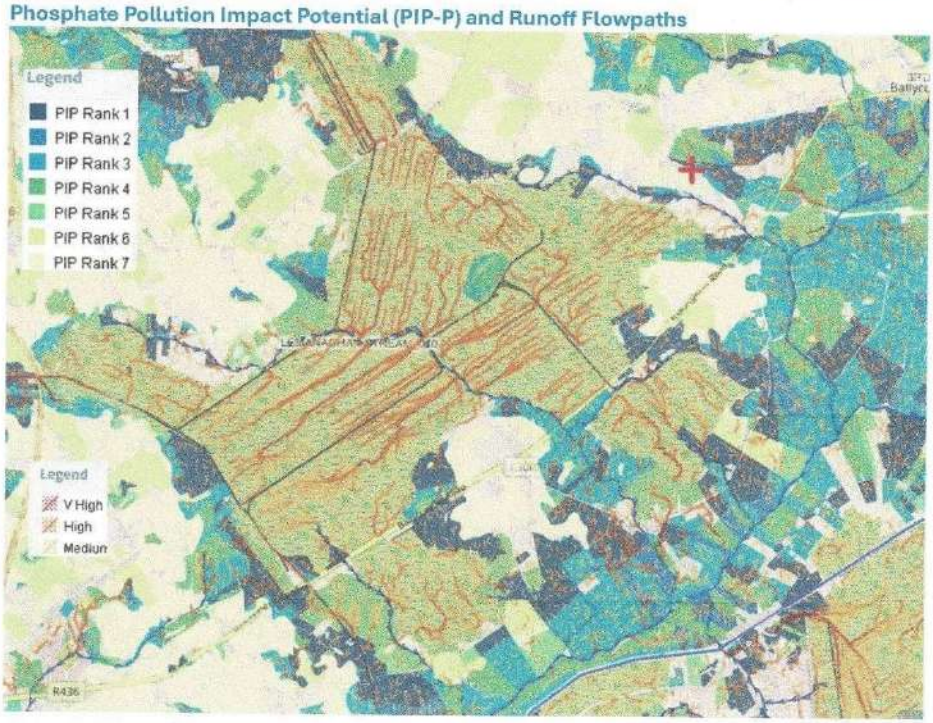
Sand & Gravel Aquifer Map



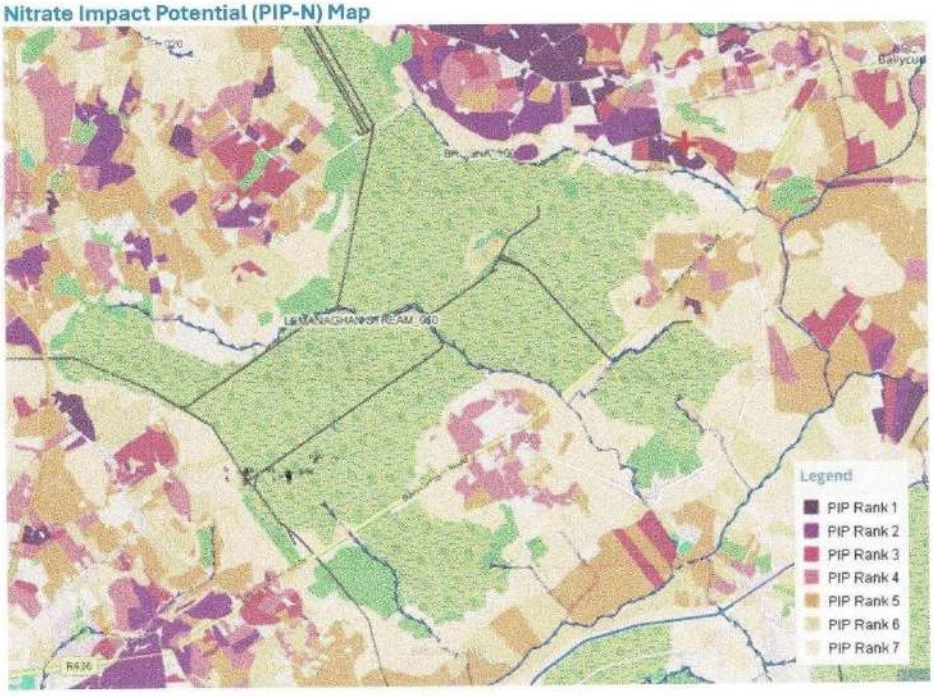
Groundwater Vulnerability Map



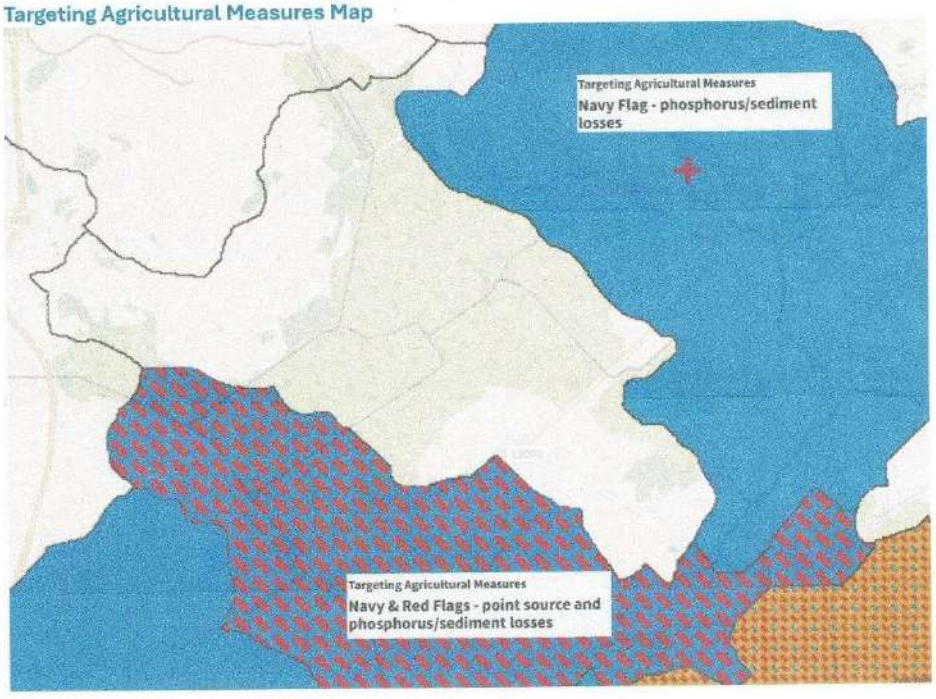
Phosphate Pollution Impact Potential (PIP-P) and Runoff Flowpaths



Nitrate Impact Potential (PIP-N) Map



Targeting Agricultural Measures Map



Section 10: EIAR Chapter 10 REVIEW

LEMANAGHAN WIND FARM — AIR QUALITY AND CLIMATE OBSERVATION

Chapter 10 (Air Quality & Climate) ·

1.0 Introduction

This observation is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. [hereafter "LHCG"] in respect of An Coimisiún Pleanála [hereafter "ACP"] RED III planning application – Case reference: PAX19.324161 – which pertains to proposed development comprising: "15 no. wind turbines, a permanent 220kV on-site substation, and associated infrastructure" at Lemanaghan and surrounding townlands, Co. Offaly (www.lemanaghanwindfarmplanning.ie).

This submission relates specifically to Chapter 10 of the Environmental Impact Assessment Report (EIAR), which addresses air quality and climate.

It is respectfully submitted that Chapter 10 is:

- scientifically incomplete;
- methodologically deficient; and
- not compliant with EU environmental law.

In particular, the assessment:

- fails to establish a robust and reliable baseline;
- relies on generalised assumptions rather than site-specific evidence;
- underestimates emissions associated with peat disturbance;
- fails to incorporate known historical air quality impacts;
- does not assess the interaction between air quality, hydrology and peat; and
- presents an incomplete and unbalanced climate assessment.

These deficiencies fundamentally undermine the reliability of the assessment and do not provide a lawful basis for decision-making.

2.0 Summary of Objection

It is submitted that the air quality and climate assessment is fundamentally flawed for the following reasons.

Issue	Planning Significance
Incomplete baseline	The baseline does not reflect the known condition of the site, including the history of peat extraction, drainage, disturbance and air quality impacts.
Failure to use best available information	The EIAR does not adequately incorporate findings from the Substitute Consent process, including documented dust exceedances and resident complaints.
Peat fires and smoke not assessed	Known and repeated peat fire events – including large-scale fires in 2011 and subsequent years – are not acknowledged or assessed as sources of air quality impact.
Underestimation of emissions from peat disturbance	The EIAR treats dust emissions as temporary and controllable without adequate site-specific analysis of peat soil behaviour during construction.
Hydrology–air quality interaction not assessed	Drainage and lowering of the water table increase peat drying, dust generation and emissions. This interaction is not assessed.

Climate impacts assessed selectively	Carbon release from peat disturbance, drainage emissions and long-term loss of carbon storage are not adequately quantified or assessed.
Cumulative impacts inadequate	The cumulative air quality burden arising from regional peat extraction, drainage, fires and ongoing land use pressure is not considered.
Precautionary principle not applied	Significant uncertainty exists regarding emissions, peat behaviour, dust generation and fire risk. The precautionary principle has not been properly applied.

Accordingly, the assessment does not provide a lawful or scientifically robust basis for decision-making. It is respectfully submitted that permission should be refused, or at minimum that significant further information should be required.

3.0 Legal and Policy Framework

The proposed development must be assessed having regard to the following legislative and policy instruments:

- Directive 2011/92/EU, as amended by Directive 2014/52/EU (EIA Directive);
- Directive (EU) 2024/2881 on ambient air quality;
- Article 191 TFEU (Precautionary Principle);
- Climate Action and Low Carbon Development Act 2015 (as amended by the Climate Action and Low Carbon Development (Amendment) Act 2021);
- Regulation (EU) 2021/1119 (EU Climate Law);
- EPA Guidelines on EIAR (2022); and
- WHO Air Quality Guidelines (2021).

These instruments collectively require:

- complete and accurate assessment of all likely significant environmental effects;
- use of best available scientific knowledge and site-specific information;
- protection of human health from air quality impacts;
- reduction of greenhouse gas emissions and protection of carbon sinks; and
- application of precaution where scientific uncertainty exists.

It is respectfully submitted that Chapter 10 of the EIAR does not satisfy these requirements. The Commission must be satisfied, before granting consent, that the EIAR provides a complete, precise and reliable basis for its reasoned conclusion on the significant environmental effects of the proposed development, as required by Article 8a of the EIA Directive and confirmed in Holohan v An Bord Pleanála (C-461/17).

4.0 Fundamental Defect – Inadequate Baseline Characterisation

The EIAR describes the receiving environment in Chapter 10 as rural, as generally having good air quality, and as not subject to significant existing emissions.

Objection

The lands at Lemanaghan Bog have been subject to:

- long-term peat extraction (circa 1960–2020);

- extensive drainage and hydrological modification; and
- repeated disturbance of peat soils.

This has resulted in an altered and non-natural peatland system with known sources of particulate emissions. A description of the receiving environment that fails to characterise these features does not represent an accurate or complete baseline.

Conclusion

It is submitted that the baseline is incomplete and does not reflect the actual environmental condition of the site. An EIAR that does not accurately establish baseline conditions cannot reliably assess the additional impact of the proposed development. This represents a fundamental deficiency going to the reliability of the assessment as a whole.

5.0 Failure to Use Available and Relevant Information

Substitute Consent Context

The Substitute Consent rEIAR prepared for the same lands at Lemanaghan Bog identifies:

- dust emissions associated with peat extraction;
- exceedances of dust deposition limits; and
- documented complaints from local residents regarding dust and air quality impacts.

Objection

This constitutes site-specific evidence of air quality impact arising from peat disturbance at the same location. It is submitted that the Wind Farm EIAR does not adequately incorporate or reflect these findings. The Commission should not be satisfied with an assessment that ignores material environmental information already on the planning record in respect of the same lands.

Conclusion

The failure to have regard to established environmental information from the Substitute Consent process represents a material omission in the assessment. The Commission is required to ensure that the EIAR reflects best available and site-specific information, as confirmed in O'Grianna and Others v An Bord Pleanála [2014] IEHC 632.

6.0 Established Site-Specific Air Quality Risk – Peat Fires and Smoke

Evidence confirms that the Lemanaghan peatlands have been subject to repeated peat fire events, including large-scale fires in 2011 and subsequent years. These events resulted in:

- significant particulate emissions over extended periods;
- impacts on residential amenity and public health; and
- emergency response interventions.

Objection

Notwithstanding this established history, the EIAR:

- does not acknowledge the history of peat fire events at the site;
- does not assess peat fire as a source of emissions; and
- assumes the absence of significant emission sources in the baseline.

Conclusion

Key Finding

The EIAR fails to assess a known and site-specific source of air quality risk. Peat fire is not a theoretical risk at Lemanaghan – it is an established and documented feature of the site's recent environmental history. The Commission cannot reach a reliable reasoned conclusion on air quality where this established risk pathway has not been acknowledged or assessed.

7.0 Dust and Particulate Emissions from Peat Disturbance

The EIAR concludes that dust emissions arising from construction will be temporary, controllable and not significant.

Objection

Peat soils are highly friable, easily mobilised and sensitive to disturbance. Construction activities including peat excavation, road construction, turbine foundation works, heavy plant movement and traffic management will expose and mobilise peat soils, increasing particulate emissions. The assessment does not provide adequate site-specific analysis of peat soil behaviour during construction.

Conclusion

The EIAR underestimates the nature and scale of dust emissions associated with peatland disturbance. The generalised conclusion of temporary and controllable impact is not supported by adequate site-specific evidence having regard to the depth of peat, the scale of excavation and the sensitivity of the receiving environment.

8.0 Air Quality, Carbon Emissions and Climate Law

Peatland disturbance is not solely an air quality issue but also a climate issue. Disturbance of peat soils results in:

- release of carbon dioxide through peat oxidation;
- release of methane in waterlogged or anaerobic conditions;
- mobilisation of particulate organic carbon through dust and erosion; and
- emissions from peat fire events.

These emissions contribute directly to atmospheric greenhouse gas concentrations, represent a loss of long-term carbon storage, and reduce the capacity of the peatland to function as a carbon sink.

Objection

The EIAR treats air quality impacts as temporary and localised, does not quantify carbon emissions arising from peat disturbance, and does not assess the contribution of particulate and gaseous emissions to climate forcing. Emissions arising from peat disturbance constitute both an air quality impact and a climate impact and cannot lawfully be assessed in isolation.

Conflict with Climate Law

Under the Climate Action and Low Carbon Development Act 2015 (as amended) and Regulation (EU) 2021/1119 (EU Climate Law), Ireland is required to reduce greenhouse gas emissions and protect and enhance natural carbon sinks. The failure to assess emissions arising from peat disturbance represents a failure to assess climate impact and undermines the legal basis on which renewable energy developments on peatland are justified.

Human Health Link

Fine particulate matter (PM2.5), arising from peat dust and combustion, is recognised as harmful to human health under WHO Air Quality Guidelines (2021). The EIAR does not adequately assess the human health implications of PM2.5 exposure arising from construction-phase peat disturbance and the increased risk of peat fire events during an extended construction period.

9.0 Failure to Assess Hydrology–Air Quality Interaction

Peatlands are hydrologically controlled systems. Drainage and lowering of the water table:

- increase peat drying and exposure of peat surfaces;
- increase susceptibility to dust generation and particulate mobilisation; and
- increase the frequency and severity of peat fire events.

Objection

The EIAR assesses air quality in isolation from the hydrological assessment in Chapter 9. It does not consider the consequences of drainage alteration on peat drying, dust generation or emissions. This is contrary to the requirements of Article 3 of the EIA Directive, which requires assessment of interactions between environmental factors, and is directly inconsistent with the CJEU's requirements as confirmed in Holohan v An Bord Pleanála (C-461/17).

Conclusion

The separation of air quality assessment from hydrological assessment does not reflect the functioning of peatland systems and represents a material deficiency in the EIAR. Where drainage alteration and peat disturbance interact to produce air quality effects, those interactions must be identified, described and assessed.

10.0 Failure to Assess Cumulative Air Quality Impact

The Midlands region has experienced extensive peat extraction over several decades, long-term drainage modification, repeated peat fire events and ongoing land use pressure. This cumulative history of peatland disturbance creates a context in which any additional development must be assessed against an already-impacted baseline.

Objection

The EIAR does not adequately assess cumulative air quality impacts arising from:

- the existing concentration of peat-related activities and renewable energy developments in the region;
- the history of dust exceedances and peat fires at the site; and
- the combined effect of ongoing peatland degradation and the proposed construction activity.

Conclusion

Cumulative air quality impacts are not adequately assessed. This is contrary to the EIA Directive, which requires assessment of cumulative effects including those arising in combination with other plans and projects.

11.0 Climate Assessment – Selective and Incomplete

The EIAR presents the proposed development as having a positive climate impact by reference to renewable energy generation. The Commission is respectfully requested to note that this is only one side of the climate equation.

Objection

The assessment does not adequately consider:

- the carbon emissions arising from peat excavation and handling;
- the release of stored carbon through peat drying, oxidation and drainage;
- the long-term loss of peat carbon storage and sequestration capacity; and
- the carbon emissions arising from the increased risk of peat fire events during and after construction.

Key Conclusion

In the absence of a full and transparent carbon balance, it cannot be concluded that the proposed development contributes to climate mitigation. On the contrary, disturbance of peatland may result in a net increase in carbon emissions, thereby undermining the climate objectives relied upon to justify the development. The Commission must be satisfied on the basis of complete and reliable information that the development delivers a genuine and demonstrable net climate benefit before consent can lawfully be granted.

12.0 Sensitive Receptors and Human Health

The EIAR does not provide a sufficiently detailed assessment of air quality impacts on sensitive receptors within the receiving environment, including:

- nearby residential dwellings;
- the long-term cumulative exposure of residents to particulate matter; and
- the specific human health implications of PM2.5 emissions arising from peat dust and potential peat fire events.

Conclusion

The assessment of human health impacts in Chapter 10 is incomplete. It does not identify sensitive receptors in a manner that enables the Commission to assess whether the proposed development is acceptable in public health terms. This is contrary to the EIA Directive and the WHO Air Quality Guidelines, both of which require protection of human health as a primary consideration in environmental assessment.

13.0 Failure to Apply the Precautionary Principle

Significant uncertainty exists in relation to:

- the nature and scale of dust and particulate emissions from peat disturbance;
- the behaviour of disturbed peat soils under construction conditions;
- the frequency and extent of peat fire risk following drainage alteration; and
- the cumulative and long-term air quality and climate effects of the development.

Conclusion

The precautionary principle, as embedded in Article 191 TFEU and the EIA Directive framework, has not been properly applied. Where scientific uncertainty exists regarding the significance of environmental effects, the Commission must be satisfied by complete and reliable information before granting consent. That standard has not been met in respect of the air quality and climate assessment in Chapter 10.

14.0 Peat Fires and Climate Emissions

Peat fires represent a significant and site-specific source of:

- particulate emissions (including PM10 and PM2.5);
- carbon dioxide and other greenhouse gases; and

- long-term loss of stored peat carbon.

The proposed development involves drainage alteration, peat excavation and extensive surface disturbance. These activities increase the vulnerability of peat soils to drying and ignition. It is submitted that the EIAR does not assess the climate and air quality implications of increased peat fire risk arising from construction-related drainage and disturbance.

Furthermore, it is submitted that the EIAR fails to recognise that peat disturbance and degradation give rise to both greenhouse gas emissions (relevant to Chapter 11) and particulate emissions and air quality impacts (relevant to Chapter 10). These are not separate effects but arise from the same physical processes, including:

- peat excavation and handling;
- drainage and drying of peat surfaces; and
- increased susceptibility to peat fire events.

The failure to assess these interactions represents a fragmentation of the environmental assessment, contrary to Directive 2014/52/EU and the requirements confirmed in Holohan (C-461/17).

Peatland degradation also contributes to climate change through greenhouse gas emissions, which in turn is recognised as a driver of increased wildfire frequency and associated particulate air quality events. The failure to assess this interaction undermines the EIAR's compliance with both climate obligations under the Climate Action and Low Carbon Development Act 2021 and air quality obligations under Directive (EU) 2024/2881.

15.0 Grounds for Refusal – Chapter 10

It is submitted that the proposed development should be refused on the following grounds in respect of Chapter 10 of the EIAR:

• Deficient and unreliable environmental baseline, which does not reflect the known condition of the site including the history of peat extraction, drainage, disturbance and air quality impacts.
• Failure to use best available and site-specific information, including findings from the Substitute Consent process documenting dust exceedances and resident complaints.
• Failure to assess known air quality impacts, including the documented history of peat fire events and associated smoke and particulate emissions.
• Underestimation of emissions from peat disturbance, having regard to the friable nature of peat soils and the scale of excavation, road construction and heavy infrastructure proposed.
• Failure to assess the climate impacts of air emissions arising from peat disturbance, including carbon dioxide and methane release and the contribution to greenhouse gas concentrations.
• Failure to assess the interaction between hydrology, drainage and air quality, contrary to the requirements of Article 3 of the EIA Directive and Holohan (C-461/17).
• Failure to assess cumulative air quality impacts arising from the existing concentration of peat-related and renewable energy activity in the Midlands region.
• Incomplete and unbalanced climate assessment, which does not quantify net carbon balance or adequately account for peat carbon loss and lost sequestration potential.

- Failure to adequately assess impacts on sensitive human health receptors, including residential dwellings in the receiving environment.

- Failure to apply the precautionary principle, contrary to Article 191 TFEU and the EIA Directive framework, where significant uncertainty exists regarding emissions, peat behaviour, fire risk and cumulative effects.

16.0 Final Conclusion

It is submitted that:

- the air quality assessment in Chapter 10 of the EIAR is incomplete and does not reflect the known environmental condition of the site;
- the climate assessment is selective and does not address the carbon implications of peat disturbance in an integrated or precautionary manner;
- known environmental risks, including peat fires, dust exceedances and hydrology–air quality interactions, are not adequately assessed; and
- the EIAR does not comply with EU environmental law, including the EIA Directive, the EU Climate Law and the ambient air quality directive.

Accordingly, there are clear, evidence-based and legally grounded reasons to refuse permission in respect of Chapter 10. At minimum, the Commission should require significant further information and independent expert review before any positive decision is made.

17.0 Final Statement

The community supports renewable energy and climate action. LHCG does not oppose renewable energy in principle. It is opposed to the selection of Lemanaghan Bog for a development of this scale where significant environmental, air quality, climate and cumulative concerns have not been resolved.

Air quality protection is a legal obligation. Peatlands are sensitive, carbon-rich and hydrologically complex systems. The site has a known and documented history of disturbance, dust exceedances and peat fire events.

Submission

The proposed development presents an unacceptable and inadequately assessed risk to air quality, climate, and human health. The EIAR does not provide a lawful, complete or reliable basis for the grant of consent. It is respectfully submitted that An Coimisiún Pleanála should refuse permission, or at minimum require the Applicant to provide complete, precise, receptor-specific and independently reviewable further information addressing all of the deficiencies identified in this submission before any positive decision is made.

Section 11: EIAR Chapter 11 REVIEW

LEMANAGHAN WIND FARM — CARBON ASSESSMENT OBSERVATION

Chapter 11 (Climate) · Appendix 11-2 (Carbon Calculations) · Attachment: Observer's Illustrative Scenarios

1.0 Introduction

This document is a formal third-party planning observation submitted to An Coimisiún Pleanála in respect of the planning application for the Lemanaghan Wind Farm, Co. Offaly (Case Reference: PAX19.324161). It addresses the carbon assessment in Chapter 11 (Climate) of the EIAR and its supporting Appendix 11-2 (Carbon Calculations), as prepared by MKO Planning and Environmental Consultants on behalf of Bord na Móna.

The observation identifies specific matters arising directly from the submitted documents that are not adequately explained or reconciled within the EIAR. Each matter is grounded in material contained in the submitted EIAR itself or in publicly available and verified information. Where this observer has applied independent analytical work — such as sensitivity scenarios for grid emission factors or operational timelines — that material is presented separately in the attachment to this observation, clearly labelled as the observer's own illustrative analysis, and is not presented as a definitive correction.

The observation asks the planning authority to require the applicant to resolve identified inconsistencies and provide additional information before determining the application. It does not contend that the Proposed Project is necessarily incapable of demonstrating an adequate carbon balance.

1.1 Author Qualifications and Basis of Analysis

The author holds a Master of Science in Data Analytics and a Master's degree in Business, and has worked as a professional data analyst since 2012 across the insurance, logistics, medical device manufacturing and health service sectors. This background provides expertise in the critical evaluation of quantitative models, the identification of inconsistencies in structured datasets, and the interpretation of outputs from computational tools.

Where analytical work has been applied independently in this observation, it is clearly identified as such and presented as illustrative rather than definitive. The findings of this observation — including the static grid emission factor issue, the discrepancy between calculator payback outputs and the Chapter 11 figure, the no-restoration model input contradiction, and the unaccounted construction emission categories — arise from reading the applicant's own submitted documents and comparing the figures within them. This observation does not dispute the engineering design. It disputes the completeness and internal consistency of the carbon assessment applied to that design.

1.2 Background — The Proposed Project

The Proposed Project comprises the construction and operation of a 90 MW wind farm on former industrial cutaway peatland at Lemanaghan Bog, Co. Offaly, consisting of 15 wind turbines each rated at 6 MW, with an associated 220 kV grid connection and onsite substation. The wind farm is proposed to operate for 35 years. The site has been subject to industrial peat extraction over several decades; active extraction ceased in June 2020. Ongoing rehabilitation is required under IPC Licence P0500-01 irrespective of whether planning permission is granted for the Proposed Project.

It is the accepted position in Irish and UK planning guidance that a wind farm on peatland must demonstrate that its construction and operation saves more carbon than is released. Chapter 11 and Appendix 11-2 of the EIAR constitute the applicant's attempt to make that demonstration. This observation raises specific matters from those documents that prevent the planning authority from being fully satisfied on that question as currently presented.

1.3 Validation

Validation matters have been addressed in the covering letter and associated documentation accompanying this observation.

2.0 Part 1 — Executive Carbon Assessment Case

2.1 Overarching Carbon Objection

The proposed development is advanced and justified primarily as a climate mitigation project, delivering carbon savings through the displacement of fossil fuel generation on the Irish electricity grid. Chapter 11 of the EIAR presents a carbon payback period of approximately 4.6 years against total expected losses of 261,360 tCO_2, and a lifetime carbon saving of 1,973,125 tCO_2 over 35 years.

This observation submits that those figures are not reliable as presented because:

1. The lifetime carbon savings figure is calculated using the 2024 grid emission factor of 204.3 gCO_2/kWh applied as a constant across a 35-year period during which the EIAR's own Appendix 11-1 documents Ireland's statutory obligation to achieve a 75% reduction in electricity sector emissions by 2030 — an obligation which, if met, will reduce the emission factor to a small fraction of the 2024 figure within six years of the present date.

- The Appendix 11-2 Macauley Institute Carbon Calculator generates its own payback periods of 61.5 years, 147.2 years and 310.7 years against different generation baselines, all of which exceed the proposed 35-year operational lifetime. The EIAR does not explain the discrepancy between these figures and the 4.6-year figure in Chapter 11.
- The model inputs in Appendix 11-2 record that hydrological restoration will not occur on decommissioning — triggering the calculator's own 100% carbon loss assumption for drained peat — while Chapter 11 simultaneously argues that losses will be lower than the model outputs due to rehabilitation proposals. These positions are not reconciled.
- Multiple categories of construction-phase carbon emissions — on-site plant fuel, workforce transport, borrow pit excavation machinery, the Kennedy's Cross temporary access track, and road upgrade works on the abnormal load route — do not appear as named categories in either calculation tool in Appendix 11-2.
- The EIAR does not quantify the carbon benefit of the peatland restoration alternative over the same 35-year period, despite restoration already being legally required under the IPC licence and despite Irish emission factor data being cited within the EIAR itself that would enable such a comparison.

2.2 The Derrinlough Precedent and the Operational Timeline Issue

A directly comparable precedent exists and is publicly available. Derrinlough Wind Farm is a Bord na Móna project on the Boora bog complex in Co. Offaly, planned and delivered by the same applicant and the same planning consultant (MKO). MKO's own published case study records planning permission in August 2021, construction commencing in February 2023 (18 months later), and the wind farm officially opened on 27 April 2026 (38 months after construction start) — a total of approximately 56 months from permission to first generation.

Applying the Derrinlough intervals as a reference point to Lemanaghan, with a planning decision in late 2027, first generation would not commence until late 2032 to early 2033. By that date, Ireland will have been legally required to achieve 80% renewable electricity for approximately two to three years. A grid at 80% renewables would be expected to have a carbon intensity in the range of approximately 20–40 gCO_2/kWh. The EIAR applies 204.3 gCO_2/kWh — a figure between five and ten times higher than the factor that will realistically apply when the turbines begin generating electricity. The carbon savings calculation has not been conducted against the emission factor that will apply at the relevant time.

2.3 Detailed Carbon Assessment Concerns

The detailed assessment concerns raised in this observation are not matters of engineering opinion. They arise from reading the applicant's own submitted documents and comparing the figures within them. In particular:

- The EIAR cites its own Appendix 11-1 for the statutory decarbonisation commitments that make the static emission factor assumption untenable, yet does not address the contradiction.
- The Appendix 11-2 calculator output records a carbon intensity of 1,838 gCO_2/kWh against a referenced 2030 target of <50 gCO_2/kWh — a figure that appears in the applicant's own submitted appendix without explanation.
- The maximum peat carbon losses (400,038 tCO_2 total; 173,231 tCO_2 soil organic matter alone) are respectively 1.53 and 4.6 times the expected figures. The maximum drainage loss (51,725 tCO_2) is eight times the expected figure (6,456 tCO_2). Chapter 11 does not discuss the maximum loss scenario.
- The model answer to "Will the hydrology of the site be restored on decommissioning?" is "No" — yet the 220kV substation is explicitly confirmed as permanently retained national grid infrastructure. Even if the model answer were changed to "Yes" for all other infrastructure, it cannot be "Yes" for the substation.

3.0 Executive Summary and Core Request

3.1 Observations on Chapter 11 of the EIAR

This submission draws An Coimisiún Pleanála's attention to nine specific and verifiable matters arising from Chapter 11 and Appendix 11-2 of the EIAR. In each case the matter is identified by reference to the applicant's own submitted documents, and a corresponding request is made for further information or reconciliation before the application is determined. This observation does not contend that the project is necessarily incapable of demonstrating an adequate carbon balance. It contends that it has not yet done so in a form that allows the planning authority to be properly satisfied.

It is respectfully submitted that the application should not be determined until the applicant has addressed each of the matters identified below, and that the carbon calculations should be subject to independent expert review before any determination is made, given the internal inconsistencies identified in this observation and the absence of in-built quality control mechanisms in the Macauley Institute Carbon Calculator as noted in the Scottish Government's own 2024 evidence assessment of that tool.

3.2 Executive Summary Table

Matter	Issue Identified	Request to Planning Authority
Matter 1	Static 2024 grid emission factor (204.3 gCO_2/kWh) applied uniformly across a 35-year period during which the EIAR's own Appendix 11-1 documents Ireland's statutory obligation to achieve a 75% reduction in electricity sector emissions by 2030. No sensitivity analysis. No clarification of average versus marginal emission factor methodology.	Require the applicant to explain the static factor approach, provide sensitivity analysis using declining emission factors consistent with statutory targets, and clarify whether average or marginal methodology is used.
Matter 1(b)	Carbon savings calculation does not account for the realistic project timeline. Derrinlough (same developer, same planning consultant, same bog system) took 56 months from planning permission to first generation. By the realistic operational start (late 2032), the grid emission factor will be substantially lower than 204.3 gCO_2/kWh.	Require the applicant to recalculate carbon savings using a realistic operational start date and the grid emission factor that will apply at that time.
Matter 2	Maximum peat losses (173,231 tCO_2 soil; 400,038 tCO_2 total) are 4.6× and 1.53× expected figures. Maximum drainage loss (51,725 tCO_2) is 8× the expected figure (6,456 tCO_2). Range not discussed in Chapter 11 narrative. Payback calculated from expected figures only.	Require the applicant to address the maximum loss scenario and calculate the carbon payback period under those conditions.
Matter 3	Appendix 11-2 calculator outputs show payback periods of 61.5 years (coal baseline), 147.2 years (fossil mix), and 310.7 years (grid mix). Chapter 11 presents 4.6 years. Discrepancy is not explained. Calculator also records 1,838 gCO_2/kWh output against a referenced 50 gCO_2/kWh target — unexplained.	Require a transparent reconciliation of the discrepancy and clarification of whether the 1,838 gCO_2/kWh figure is a relevant metric or a tool artefact.
Matter 4	Model input: "Will the hydrology of the site be restored on decommissioning? No" — triggering 100% carbon loss from all drained peat under the Macauley methodology. Chapter 11 narrative: rehabilitation will reduce actual losses. Positions are irreconcilable as presented. 220kV substation is permanently retained — rehabilitation argument cannot apply to it in any scenario.	Require the applicant to clarify which assumptions govern the assessment; provide a model run consistent with the decommissioning proposals; separately address the permanent, non-restorable peat loss associated with the retained substation.
Matter 5.1	Turbine lifecycle rate (856 tCO_2/MW) used without explanation; published range is 394–8,147 tCO_2/MW. Concrete volume (640 m^3/turbine, 9,600 m^3 total) not explained. Boundary between Macauley Calculator and TII Carbon Tool not documented — potential overlap or gap.	Require the applicant to justify the turbine rate, confirm the concrete volume derivation and scope, and document what each tool covers to demonstrate no overlap or omission.
Matter 5.2	220kV substation is permanently retained as national grid infrastructure. Embodied carbon not clearly identified in TII Carbon Tool output. Permanent peat footprint not separately itemised.	Require the applicant to confirm substation embodied carbon is accounted for; confirm its peat footprint is captured; and provide a figure

	The rehabilitation narrative applied elsewhere in the EIAR cannot apply to permanently retained infrastructure.	isolating permanent, non-restorable losses associated with the substation.
Matter 5.3	EIAR does not quantify the carbon benefit of full peatland restoration over the same 35-year period, despite restoration already being legally required under the IPC Licence and despite Irish emission factor data cited within the EIAR itself being sufficient to enable such a comparison.	Require the applicant to provide a quantified 35-year carbon comparison of the wind farm scenario against a full peatland restoration scenario, using Irish emission factors already cited in the EIAR, before determination.
Matter 5.4	On-site construction plant fuel, workforce transport, borrow pit excavation machinery, the Kennedy's Cross temporary access track (confirmed in planning notice), road upgrade works on the abnormal load route, and dewatering do not appear as named categories in either Appendix 11-2 tool.	Require the applicant to confirm all construction emission sources are captured; identify where each appears.

3.3 Legal and Planning Framework

The following legal frameworks are directly relevant to the matters raised. This observer is not a lawyer; this section is provided to assist the planning authority in identifying relevant frameworks and should be subject to separate legal verification before being relied upon.

- Section 15(1) of the Climate Action and Low Carbon Development (Amendment) Act 2021 imposes a binding statutory obligation on An Coimisiún Pleanála to perform its functions in a manner consistent with Ireland's approved climate action plans, carbon budgets, sectoral emission ceilings and the national climate objective. This provision has been confirmed as creating a real, justiciable obligation by the Supreme Court in Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5. If the carbon assessment contains internal inconsistencies that prevent the Board from being properly informed of the project's actual climate benefit, the Board may not be in a position to discharge this obligation adequately.
- EIA Directive (2011/92/EU as amended by 2014/52/EU), Article 5(1) and Annex IV — the developer is required to provide information that is complete, precise and reliable, including a description of the likely significant effects of the project on climate and of the measures envisaged to avoid or reduce those effects. The unreconciled discrepancy between the Appendix 11-2 calculator outputs and the Chapter 11 payback narrative raises a question as to whether the Chapter 11 assessment meets the standard of completeness and reliability required by Article 5(1) and its transposition into Irish law under the Planning and Development Act 2000 (as amended). This observer notes that the EIA Directive is a minimum-harmonisation instrument and that Member States may impose more stringent requirements. The specific standard applicable here is a matter for legal verification.
- Appropriate Assessment — CJEU Case C-127/02 (Waddenzee): where an Appropriate Assessment is required, the competent authority may grant consent only after establishing that there is no reasonable scientific doubt as to the absence of adverse effects on the integrity of the relevant Natura 2000 sites. CJEU Case C-461/17 (Holohan v An Bord Pleanála) confirmed that the Appropriate Assessment must be based on complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects on the site concerned. Where the carbon assessment is relied upon as part of the information base for Appropriate Assessment in respect of the relevant SPAs, an assessment containing unreconciled internal discrepancies of the scale identified in this observation raises a question as to whether the Holohan standard can be met. This observer notes that Holohan (C-461/17) also confirmed that an EIA under the EIA Directive must cover all environmental effects including interactions between factors — meaning that the carbon assessment cannot be treated in isolation from other environmental effects addressed in the EIAR.
- The Derrybrien Precedent (Case C-215/06, Commission v Ireland): the Derrybrien wind farm was built on industrial peatland without an EIA meeting EU standards. A peat landslide during construction disturbed 450,000 tonnes of peat and caused the death of approximately 50,000 fish. The Court of Justice ruled that Ireland had failed to carry out an adequate EIA. Ireland was subsequently the subject of penalty proceedings (Case C-261/18). Published accounts in Irish planning and legal commentary refer to Ireland accruing in the region of €20 million in associated fines and costs — however this observer has not

independently verified this figure and the planning authority should do so. An Bord Pleanála refused substitute consent for the 71-turbine Derrybrien development (this observer notes the commonly cited figure of 70 turbines; the installed capacity was 59.5 MW across 71 machines and the planning authority should verify the exact number) and the wind farm is being decommissioned. The precedent illustrates that an inadequate assessment of peatland impacts carries potentially serious legal, financial and environmental consequences.

3.4 Key Point: The EIAR's Own Evidence Contradicts Its Carbon Case

The most striking feature of the Chapter 11 carbon assessment is that the EIAR's own documents contain the evidence required to challenge its central conclusion. Appendix 11-1 documents Ireland's statutory obligation to achieve 80% renewable electricity by 2030 — an obligation that necessarily implies a substantial reduction in the grid emission factor on which the lifetime savings calculation rests. Appendix 11-2 records payback periods exceeding the operational lifetime of the wind farm. The same appendix records a carbon intensity figure of 1,838 gCO_2/kWh against a 2030 target of 50 gCO_2/kWh. The model inputs confirm that hydrological restoration will not occur, triggering 100% peat loss under the calculator's own methodology. None of these matters is explained or reconciled in Chapter 11.

This observation does not require the planning authority to adopt any of the observer's illustrative calculations in the attachment. It asks only that the planning authority require the applicant to address the questions that arise from the applicant's own submitted documents before determining the application.

4.0 Part 2 — Core Objection Themes

CORE OBJECTION THEME 1: CARBON SAVINGS METHODOLOGY — STATIC GRID FACTOR AND UNREALISTIC OPERATIONAL TIMELINE

4.1.1 Matter 1: Static 2024 Grid Emission Factor Applied Across 35 Years of Statutory Decarbonisation

Chapter 11, Section 11.4.3.2 calculates the Proposed Project's lifetime carbon savings by applying the SEAI 2024 Irish grid emission factor of 204.3 gCO_2/kWh uniformly across the entire 35-year operational period, producing a lifetime saving of 1,973,125 tCO_2 and a 4.6-year payback period. This calculation methodology has a fundamental deficiency: the same EIAR — in Appendix 11-1 and Chapter 11 itself — documents Ireland's statutory decarbonisation commitments, each of which requires the carbon intensity of grid electricity to fall substantially over the project's lifetime:

- Climate Action Plan 2025 (cited in Appendix 11-1, Section 1.1.2.7): 80% renewable electricity and a 75% reduction in electricity sector emissions by 2030.
- Climate Action and Low Carbon Development (Amendment) Act 2021 (cited in Appendix 11-1, Section 1.1.2.3): net-zero emissions no later than 2050; legally binding five-year carbon budgets.
- Sectoral Emissions Ceilings 2022 (cited in Appendix 11-1, Section 1.1.2.6): electricity sector ceiling falling from 40 $MtCO_2eq$ (2021–2025) to 20 $MtCO_2eq$ (2026–2030).
- EPA Greenhouse Gas Emissions Projections 2024–2055 (cited in Appendix 11-1, Section 1.1.2.5): renewable electricity generation projected at 69–80% of the national total by 2030.

The 2024 grid emission factor of 204.3 gCO_2/kWh already reflects approximately 40% renewable electricity. As Ireland moves toward the statutory targets documented in the EIAR's own Appendix 11-1, the carbon intensity of grid electricity will fall substantially over the project's operational lifetime. A wind farm's carbon savings are the product of the volume of electricity generated and the emission intensity of what that electricity displaces. As the grid decarbonises, each unit of wind generation displaces progressively less carbon. The EIAR does not discuss this dynamic or consider its implications for the savings figure.

A critical distinction must be made clear. The statutory targets cited above — 80% renewable electricity by 2030, net-zero by 2050, binding sectoral emissions ceilings — are genuine legal obligations. However, no official Irish regulatory document prescribes what the grid emission factor will be in any given future year. SEAI publishes an annual emission factor for the current year; it does not publish a legally binding future schedule of grid emission intensities. What those targets imply for the future emission factor depends on how they are achieved — the actual generation mix, the role of gas backup, interconnection, demand growth from data centres, curtailment, and a range of other variables that are inherently uncertain. The sensitivity scenario in Attachment A.3 (Attachment A3 Declining Grid Emission Factor Sensitivity Scenario) to this chapter uses the observer's own estimated emission factor values derived from those statutory targets; those specific values (165/90/50/20 gCO_2/kWh) are not themselves

mandated by any law or regulation and should be treated accordingly. The underlying analytical point — that applying a static 2024 factor across 35 years of acknowledged statutory decarbonisation materially overstates lifetime savings — does not depend on those specific figures; it holds for any plausible declining trajectory.

A further unaddressed question concerns the EIAR's choice of emission factor type. The EIAR does not clarify whether the 204.3 gCO_2/kWh figure is an average grid emission factor or a marginal emission factor — that is, whether it represents the average carbon intensity of all electricity on the grid, or the carbon intensity of the marginal generator that wind energy actually displaces at any given moment. These two approaches can produce materially different results, and the distinction becomes increasingly significant as the grid decarbonises and the composition of marginal generation changes.

Observer's Illustrative Sensitivity (Attachment A.3 Declining Grid Emission Factor Sensitivity Scenario) — Important Caveat:

The specific emission factor values used in this sensitivity scenario (165 gCO_2/kWh 2025–2030; 90 gCO_2/kWh 2030–2035; 50 gCO_2/kWh 2035–2045; 20 gCO_2/kWh 2045–2060) are this observer's own estimates. They are derived by reasoning from the statutory decarbonisation targets documented in the EIAR's Appendix 11-1, but they are not themselves prescribed by any statute, regulation or official projection. No Irish regulatory body has published a schedule of future grid emission intensities with these values. Actual future grid carbon intensity will depend on factors — generation mix, interconnection, data centre demand, gas backup requirements, curtailment — that cannot be predicted with precision. Applying these declining factors produces a 35-year lifetime saving of approximately 572,573 tCO_2, compared to 1,973,125 tCO_2 under the EIAR's flat 2024 factor. These figures illustrate the sensitivity of the payback conclusion to the emission factor trajectory. The planning authority is asked to require the applicant to provide its own sensitivity analysis using declining emission factors — not to adopt this observer's specific values.

The planning authority is asked to require the applicant to explain the static factor approach, provide sensitivity analysis using declining emission factors consistent with the statutory decarbonisation trajectory documented in the EIAR's own Appendix 11-1, and clarify whether average or marginal emission factor methodology has been applied.

4.1.2 Matter 1(b): The Carbon Savings Calculation Does Not Account for the Realistic Operational Timeline

The EIAR's carbon savings calculation does not identify the date from which electricity generation is assumed to commence. This matters because the emission factor applied — 204.3 gCO_2/kWh — is the 2024 figure, and the grid will decarbonise materially between now and the realistic date of first generation.

A directly comparable precedent exists and is publicly available. Derrinlough Wind Farm is a Bord na Móna project on the Boora bog complex in Co. Offaly, planned and delivered by the same applicant and the same planning consultant (MKO). MKO's own published case study records the following verified milestones:

Milestone	Date	Interval
Planning permission granted	August 2021	—
Construction commenced	February 2023	18 months after permission
Officially opened by Minister for Climate	27 April 2026	38 months after construction start
Total: permission to first generation	August 2021 → April 2026	~56 months / 4 years 8 months

Applying the Derrinlough intervals as a reference point, a planning decision in late 2027 would suggest a construction start in approximately mid-to-late 2029 and first generation in approximately late 2032 to early 2033. By that date, the Climate Action Plan 2025 80% renewable electricity target — underpinned by the Climate Action and Low Carbon Development (Amendment) Act 2021 — will be approximately two to three years past its target date. This observer notes that the legal enforceability of specific technology-mix targets within a Climate Action Plan, as distinct from the Act's binding obligations regarding carbon budgets and the national climate objective itself, is a matter for legal

verification. However, even on a more cautious interpretation, Ireland's binding sectoral emissions ceilings for 2026–2030 make a substantial reduction in grid emission intensity by 2032 legally necessary. The grid emission factor at the realistic operational start will on any reasonable analysis be substantially lower than 204.3 gCO_2/kWh.

The observer acknowledges that each project has its own characteristics and timelines can vary based on grid connection complexity, planning conditions, supply chain timing, and contractor strategy. Derrinlough is offered as a relevant comparator from the same developer and consultant on the same bog system, not as a definitive benchmark.

Observer's Illustrative Sensitivity (Annex A.5):

At a conservative grid emission factor of 40 gCO_2/kWh from late 2032 (the upper end of what a grid three years past its 80% renewables target would be expected to achieve), the expected losses payback period extends to approximately 23.7 years from first generation. At 20 gCO_2/kWh (still a conservative post-2030 estimate), expected losses payback extends to 47.4 years — exceeding the 35-year operational lifespan. Under the maximum losses scenario at 20 gCO_2/kWh, payback extends to 72.5 years. The planning authority is asked to require the applicant to conduct this calculation, not to adopt these figures.

4.1.3 Core Objection Theme 1 — Conclusion

The carbon savings figure of 1,973,125 tCO_2 and the 4.6-year payback period in Chapter 11 are the products of two assumptions — a static 2024 emission factor and an implied 2025 operational start — each of which is contradicted by evidence in the EIAR's own appendices. The statutory decarbonisation commitments documented in Appendix 11-1 make a declining emission factor trajectory legally necessary over the operational period, even if the specific values of that trajectory cannot be prescribed in advance. The Derrinlough comparator, from the same developer and consultant on the same bog system, makes a pre-2033 operational start implausible. The combination of a declining grid emission factor consistent with binding statutory decarbonisation obligations and a realistic operational start date consistent with the Derrinlough precedent produces materially different payback results than those presented in Chapter 11. The observer emphasises that the specific factor values used in the illustrative scenario in Annex A.3 are the observer's own estimates and are not legally mandated numbers. The analytical point they illustrate — that the choice of emission factor trajectory is material to the payback conclusion — does not require those specific values to be accepted. An Coimisiún Pleanála is asked to require the applicant to conduct and submit its own sensitivity analysis addressing these parameters before the application is determined.

CORE OBJECTION THEME 2: INTERNAL INCONSISTENCIES IN THE EIAR CARBON MODEL

4.2.1 Matter 2: The Wide Uncertainty Range in Peat Carbon Losses Is Not Addressed

Table 11-5 in Chapter 11 and the results pages of Appendix 11-2 record both expected and maximum carbon loss figures. The following table reproduces these figures from the submitted documents:

Category of Loss	Expected (tCO_2)	Maximum (tCO_2)	Ratio
Turbine lifecycle	77,078	78,480	1.02×
Backup generation	60,293	61,298	1.02×
Reduced carbon fixing (bog plants)	1,985	2,646	1.33×
Soil organic matter — removed peat (net)	31,167	121,506	3.90×
Soil organic matter — drainage	6,456	51,725	8.01×
TOTAL soil organic matter	37,622	173,231	4.60×

Embodied carbon	82,933	82,933	1.00×
Construction transport	1,450	1,450	1.00×
TOTAL all losses	261,360	400,038	1.53×

The maximum drainage loss (51,725 tCO_2) is eight times the expected figure (6,456 tCO_2). The maximum total soil organic matter loss (173,231 tCO_2) is 4.6 times the expected figure. Appendix 11-2 additionally records that at minimum values, soil organic matter loss is minus 19,135 tCO_2 — a net gain. This produces a range of nearly 192,000 tCO_2 for soil losses alone, reflecting genuine difficulty in predicting peat carbon emissions with precision.

Chapter 11 presents the expected figures prominently and derives the 4.6-year payback figure from those figures. It does not discuss the implications of the maximum loss scenario for the overall carbon balance, nor explain the basis for relying on expected rather than maximum figures for a development on peatland. Given that peatland carbon emissions represent a permanent release of stored carbon, this degree of uncertainty is material and should be expressly addressed.

The planning authority is asked to require the applicant to address the maximum credible loss scenario and to calculate the carbon payback period under those conditions.

4.2.2 Matter 3: The Appendix 11-2 Outputs Are Not Reconciled with the Chapter 11 Payback Figure

Chapter 11, Section 11.4.3.2 presents a carbon payback period of approximately 4.6 years. Appendix 11-2 contains the outputs of the Macauley Institute Carbon Calculator, which generates its own payback periods. The calculator notes that "carbon payback for Lemanaghan Wind Farm has been calculated separately and is contained in Section 11.4.3.2 of Chapter 11." However, the calculator-generated figures are as follows:

Baseline	Calculator Payback Period	Comparison
Against coal-fired generation	61.5 years (expected)	Exceeds 35-year operational lifetime
Against fossil fuel mix	147.2 years (expected)	Exceeds 35-year operational lifetime
Against grid mix	310.7 years (expected)	Exceeds 35-year operational lifetime
Chapter 11 SEAI-factor approach	4.6 years	Chapter 11 presented figure

All three calculator-generated payback periods exceed the proposed 35-year operational lifetime. The EIAR does not explain the basis for the discrepancy between these figures and the 4.6-year figure. In the absence of such explanation, the reliability of the carbon payback conclusion cannot be verified by the planning authority.

Appendix 11-2 additionally records the following calculator output:

> **From Appendix 11-2, Macauley Calculator Output — Reproduced Verbatim:**
>
> *"Ratio of CO_2 eq. emissions to power generation (g/kWh) (TARGET ratio by 2030 (electricity generation) < 50 g/kWh): 1,838"*

This figure — 1,838 gCO_2/kWh against a referenced 2030 target of <50 gCO_2/kWh — appears in the applicant's own submitted appendix without explanation. This observer acknowledges that the figure may be a tool artefact or may relate to construction-phase intensity only, and does not assert that it reflects the project's operational performance. However, since it appears in the submitted documents without explanation, the planning authority should require the applicant to clarify whether it is a relevant output or an artefact, and to explain its relationship to the Chapter 11 payback figure.

4.2.3 Matter 4: The No-Restoration Model Input Contradicts the Rehabilitation Narrative

The core input data in the Macauley Calculator (Appendix 11-2) records:

> **From Appendix 11-2, Macauley Calculator Input — Reproduced Verbatim:**
> *"Will the hydrology of the site be restored on decommissioning? No"*

Under the Macauley methodology, this response triggers the assumption of 100% carbon loss from all drained peat, as the calculator's own Technical Guidance states: "100% carbon loss from drained peats is assumed if the site is not restored after decommissioning."

However, Chapter 11, Section 11.4.3.1 states: "Taking into account the proposals incorporated in the Decommissioning Plan, the actual CO_2 losses are expected to be lower than the values detailed in Table 11-5." The Decommissioning Plan (Appendix 4-8) proposes that turbine foundations be covered with peat and allowed to revegetate, and that drainage management will be re-established. The Chapter 11 narrative relies on these measures to argue that real-world losses will be lower than the model outputs. However, if those measures are genuine and substantial, they would normally be reflected in the model input — the hydrology restoration question would have been answered "Yes" rather than "No."

These positions are not reconciled. The model produces losses on a no-restoration assumption. The narrative argues for lower losses based on partial restoration. The inconsistency directly affects the calculation of peat-related carbon losses, which are a key component of the overall climate assessment.

A specific and permanent example is the proposed 220kV substation. Chapter 11, Section 11.5.4 states explicitly that the substation "will remain in place as it will be part of the National Electricity Grid network under the ownership and control of the ESB Networks and/or EirGrid." The substation is therefore permanently retained in all scenarios. The peatland beneath and around it will not be restored under any circumstances. The rehabilitation argument applied elsewhere in the EIAR cannot apply to the substation footprint, which represents a category of permanent and irreversible carbon loss.

The planning authority is asked to require the applicant to clarify which set of assumptions governs the assessment and to provide a model run consistent with the decommissioning proposals in Appendix 4-8, or to explain why a no-restoration input is appropriate given those proposals. Separately, the applicant should provide a carbon figure isolating the permanent, non-restorable losses associated with the retained substation.

4.2.4 Core Objection Theme 2 — Conclusion

The three internal inconsistencies identified in this theme — the unexplained discrepancy between the Appendix 11-2 calculator payback outputs and the Chapter 11 figure, the unexplained 1,838 gCO_2/kWh intensity figure, and the contradiction between the no-restoration model input and the rehabilitation narrative — are not matters of analytical opinion. They arise from comparing entries within the applicant's own submitted documents. They cannot be resolved without a substantive response from the applicant, and they are material to the planning authority's ability to determine whether the project's carbon case is reliable.

CORE OBJECTION THEME 3: CONSTRUCTION CARBON — INCOMPLETE ACCOUNTING

4.3.1 Matter 5.1: Questions Arising from the Construction Carbon Figures

Table 11-5 presents construction carbon under two separate line items: turbine lifecycle (77,078 tCO_2, from the Macauley Calculator at a rate of 856 tCO_2/MW) and embodied carbon in construction materials (82,933 tCO_2, from the TII Carbon Tool). Together these represent approximately 61% of total expected losses. Three specific questions arise.

Turbine Lifecycle Rate

The Macauley Calculator's own guidance note in Appendix 11-2 states: "The normal range of CO_2 emissions is 394 to 8,147 tCO_2 per MW (White and Kulcinski, 2000; White, 2007)." At 6 MW per turbine, this published range translates to a per-turbine range of approximately 2,364 to 48,882 tCO_2. The figure applied is 5,139 tCO_2 per turbine (856 tCO_2/MW), which sits in the lower portion of the published range. The EIAR does not explain the basis for selecting this rate, whether it is derived from manufacturer-specific lifecycle assessment data for the proposed turbine model, or why it is appropriate for this project.

Concrete Volume

The TII Carbon Tool assumptions sheet states that approximately 9,600 m^3 of concrete will be required, based on 1,200 truckloads at 8 m^3 per load — equating to approximately 640 m^3 per turbine. The EIAR does not explain how the 1,200-truckload figure was derived, whether it covers all concrete across the entire site (including the substation, hardstands, and cable infrastructure as well as turbine foundations), or whether it is based on a preliminary engineering estimate or a confirmed design specification.

Boundary Between the Two Carbon Accounting Tools

The assumptions sheet states that embodied carbon of the turbine lifecycle is included in the Macauley Calculator and not in the TII Carbon Tool. However, the EIAR does not define precisely what the Macauley turbine lifecycle rate covers — specifically whether it includes the concrete foundations and civil works or only the turbine machinery and tower. Published lifecycle assessment studies vary on this boundary. If the Macauley rate already includes foundation concrete and the TII tool also separately counts 9,600 m^3 of concrete, a question of overlap arises. The planning authority should require the applicant to confirm that together the two tools account for all relevant construction carbon without overlap or omission.

4.3.2 Matter 5.2: Questions Arising in Relation to the Permanent 220kV Substation

Chapter 11, Section 11.5.4 confirms that the 220kV substation "will remain in place as it will be part of the National Electricity Grid network under the ownership and control of the ESB Networks and/or EirGrid." Three specific concerns follow.

First, the TII Carbon Tool table in Appendix 11-2 includes a substation line item recording transport emissions of 26.17 tCO_2 from 1,000 truck movements, but does not appear to include a corresponding entry for the embodied carbon of the substation structure itself — no material type, quantity and unit emission factor for the concrete, structural steel, transformer units, high-voltage switchgear and associated civil works of a 220kV onsite substation.

Second, the Macauley Calculator inputs itemise peat removal for borrow pits, turbine foundations, hardstands, access tracks and cable trenches. The substation is not separately identified. It is possible that its footprint is captured within the "additional peat excavated" figure of 27,281 m^3 or the additional area figure of 78,998 m^2, but the submitted documents do not confirm this.

Third, and most significantly: the substation is permanently retained. The peat beneath and around it will not be restored under any scenario. The rehabilitation narrative applied elsewhere in the EIAR cannot apply to permanently retained national grid infrastructure. This represents a category of irreversible carbon loss that requires separate accounting.

4.3.3 Matter 5.4: Unaccounted Construction Emission Categories

It is submitted that the climate assessment does not clearly demonstrate that all emissions arising from construction operations have been integrated into the overall carbon balance. The following specific categories do not appear to be accounted for in the submitted documents:

- On-site construction plant fuel: The TII Carbon Tool accounts for HGV transport to site but not for fuel consumed by construction machinery operating on site — excavators, bulldozers, compactors, cranes, concrete pumps and other heavy plant. A project comprising 15 turbine foundations, 23.2 km of access track, 4 borrow pits, crane hardstands, a 220kV substation, and extensive drainage works will involve substantial on-site plant hours over a multi-year construction period.
- Workforce transport: A construction project of this scale will require a significant workforce travelling to and from the site on a daily basis throughout the build. CO_2 generated by that commuting does not appear as a named category in either tool in Appendix 11-2.
- Borrow pit excavation machinery: The EIAR proposes four on-site borrow pits. The volume of peat removed is captured in the Macauley peat loss calculations. However, the diesel consumed by excavation machinery operating within the pits is operational fuel consumption during construction that does not appear to be separately accounted for.
- Kennedy's Cross temporary access track: The planning notice confirms that a temporary access track connecting the N52 to the N62 national road at Kennedy's Cross is being constructed to facilitate turbine component delivery. Chapter 11 refers to this as the "TDR works at Kennedy's Cross." Examining the TII Carbon Tool output table in Appendix 11-2, there is no line item for road upgrade materials, abnormal load route preparation, or the construction of this temporary access track. The Derrinlough comparator records civil works including 28 km of access roads and a 4.5m × 4.5m underpass under a national primary route for a comparable project on the same bog system.
- Port distance of 238.45 km: The TII Carbon Tool in Appendix 11-2 records a port distance of 238.45 km. This

observer has been unable to identify an Irish port on a typical turbine delivery route from which Lemanaghan Bog is approximately 238 km distant. The planning authority should require the applicant to confirm the port assumed, the route, and the derivation of this figure.

4.3.4 Core Objection Theme 3 — Conclusion

The construction carbon assessment uses unexplained rates at the lower end of published ranges, does not document the boundary between its two accounting tools, and does not appear to account for several significant categories of construction-phase emissions that are confirmed in the planning notice and in the applicant's own comparable project documentation. An Coimisiún Pleanála is asked to require the applicant to confirm that the construction carbon balance is complete, and to identify where each unaccounted category appears in the calculations or confirm that it is not captured.

CORE OBJECTION THEME 4: ABSENCE OF QUANTIFIED PEATLAND RESTORATION ALTERNATIVE

4.4.1 Matter 5.3: The EIAR Does Not Quantify the Carbon Benefit of Full Restoration

Chapter 11, Section 11.5.1 acknowledges that, in the absence of the Proposed Project, natural revegetation would continue and the site would transition toward regenerating bog habitats, and that IPC Licence rehabilitation would proceed regardless of planning permission. It does not quantify the carbon sequestration benefit of this trajectory or compare it to the wind farm's net carbon contribution over the same period.

This observer acknowledges that the EIA Directive does not in all cases require full quantitative modelling of alternatives, and that both wind energy and peatland restoration deliver genuine climate benefits by different mechanisms. However, in a project where the carbon balance is the primary justification for development on peatland, and where restoration is already a legally mandated baseline under the IPC Licence, best practice requires a quantified comparison to materially assist the planning authority in reaching a properly informed determination. The comparison need not be framed as wind farm versus restoration being mutually exclusive — but the carbon value of the restoration trajectory must be quantified and considered alongside the wind farm's net carbon contribution.

The EPA's NEROS research programme — cited by the applicant itself in Table 11-6 of Chapter 11 — records measured sequestration rates for rewetted cutaway peatland directly applicable to this site. Active peat extraction ceased in June 2020; the site has therefore been recovering for approximately six years at the date of this observation. By the realistic operational start date of the wind farm (late 2032 on the Derrinlough comparator), the site will have been naturally recovering for approximately twelve years. The carbon benefit of that recovery period, and its trajectory beyond, is quantifiable using the Irish emission factors already cited in the EIAR.

4.4.2 The Lough Boora Context

Lough Boora Discovery Park — part of the same Boora bog group as Lemanaghan, managed by the same applicant (Bord na Móna) — provides a directly observable precedent for what rehabilitated cutaway peatland becomes when allowed to recover. BirdWatch Ireland has been conducting long-term ecological surveys at Lough Boora in partnership with Bord na Móna's own ecology team, documenting biodiversity recovery on rehabilitated cutaway bog. The Fifth Mid-Shannon Bird Report documented how wildlife populations expanded as the cutaway recovered. Bord na Móna's own published material describes Lough Boora as a demonstration of how large-scale ecological restoration creates high-value natural habitat.

Lemanaghan Bog and Lough Boora are part of the same landscape, the same bog group, and managed by the same company. The recovery trajectory already observable at Lough Boora — and already beginning at Lemanaghan since extraction ceased in 2020 — represents a genuine, quantifiable climate benefit that the EIAR has not assessed. The planning authority cannot determine whether the wind farm's carbon case is superior to the restoration alternative without that quantification.

4.4.3 Core Objection Theme 4 — Conclusion

The planning authority is asked to require the applicant to provide a quantified 35-year comparison of the wind farm scenario against a full peatland restoration scenario, using Irish emission factors already cited in the EIAR, before determining this application. The data required for that comparison is available within the applicant's own submitted documents and in the NPWS and EPA research cited by the EIAR. Its absence from the current submission represents a material gap in the alternatives assessment for a project whose primary justification is its climate benefit.

5.0 Conclusion

The matters identified in this observation demonstrate that the carbon assessment, as currently presented in Chapter 11 and Appendix 11-2, contains unresolved uncertainties and internal inconsistencies that are material to the planning authority's ability to determine whether the proposed development is consistent with national climate obligations. These are not matters of opinion. They arise from comparing figures within the applicant's own submitted documents.

The core issue is this: Chapter 11 presents a carbon payback period of 4.6 years and a lifetime saving of 1,973,125 tCO_2. These figures rest on two assumptions — a static 2024 grid emission factor and an implied 2025 operational start — each of which is contradicted by evidence in the EIAR's own appendices. The 2024 emission factor will fall substantially over the operational lifetime of the project because the EIAR's own Appendix 11-1 documents Ireland's statutory obligation to reduce electricity sector emissions by 75% by 2030. The implied 2025 operational start is inconsistent with the timeline of the applicant's own comparable project on the same bog system.

Separately, the Appendix 11-2 calculator produces payback periods of 61.5 to 310.7 years — all exceeding the 35-year operational lifetime. The model inputs record that hydrological restoration will not occur on decommissioning, while the Chapter 11 narrative argues that losses will be lower due to rehabilitation. Multiple categories of construction-phase emissions appear not to be captured. The EIAR does not quantify the carbon benefit of the peatland restoration alternative that is already legally required under the IPC Licence.

In circumstances where the climate benefit of the Proposed Development is central to its justification — and where the principal environmental argument for building 15 wind turbines of 220 metres on a recovering peatland is that the carbon savings outweigh the carbon costs — these issues are material. An Coimisiún Pleanála cannot be properly satisfied that the project is consistent with the State's climate obligations under the Climate Action and Low Carbon Development (Amendment) Act 2021 and EU climate law without receiving satisfactory answers to each of the matters identified in this observation.

6.0 Recommendation and Formal Requests to An Coimisiún Pleanála

For the reasons set out in this observation, An Coimisiún Pleanála is respectfully requested to require the following before determining this application. These requests are presented in the form of recommended reasons for requiring further information, structured to correspond to the matters set out in Section 3.2 above.

6.1 Recommended Requirements for Further Information

Request No.	Formal Request to An Coimisiún Pleanála
Request 1	Require the applicant to submit a revised carbon savings assessment addressing the application of a static 2024 emission factor over a 35-year period of statutory grid decarbonisation; providing sensitivity analysis using declining emission factors consistent with the statutory decarbonisation targets documented in the applicant's own Appendix 11-1; and clarifying whether average or marginal emission factor methodology has been applied. The revised assessment should be subject to independent expert review.
Request 2	Require the applicant to recalculate the carbon savings figure and payback period using a realistic operational start date consistent with the Derrinlough comparator (or an alternative comparator identified by the applicant) and applying the grid emission factor that will realistically apply at the time operations commence. The revised calculation should address the sensitivity of the payback period to both expected and maximum loss scenarios at the realistic operational start date.
Request 3	Require the applicant to address the maximum credible peat carbon loss scenario (400,038 tCO_2 total; 173,231 tCO_2 soil; 51,725 tCO_2 drainage) and to calculate the carbon payback period under those conditions, using both the current emission factor assumption and the declining emission factor scenario, to confirm whether the project remains carbon-positive over its operational lifetime under those conditions.
Request 4	Require the applicant to provide a clear and transparent reconciliation of the discrepancy between the Appendix 11-2 calculator payback outputs (61.5 to 310.7 years) and the Chapter 11 payback figure (4.6

	years), and to clarify whether the carbon intensity figure of 1,838 gCO_2/kWh in Appendix 11-2 is a relevant project metric or a tool artefact, and what its relationship is to the Chapter 11 payback calculation.
Request 5	Require the applicant to reconcile the "no hydrological restoration on decommissioning" model input with the narrative argument in Chapter 11 that rehabilitation will reduce actual losses; to provide a model run consistent with the decommissioning and restoration proposals in Appendix 4-8; and separately to provide a carbon assessment figure isolating the permanent, non-restorable carbon losses associated with the retained 220kV substation, acknowledging that the rehabilitation argument cannot apply to permanently retained national grid infrastructure.
Request 6	Require the applicant to explain the basis for the turbine lifecycle emission rate of 856 tCO_2/MW; to confirm the derivation and scope of the concrete volume figure; and to clearly document what carbon costs are covered by the Macauley Calculator and what by the TII Carbon Tool, to demonstrate that there is no overlap or omission in the construction carbon accounting.
Request 7	Require the applicant to confirm that the embodied carbon of the 220kV substation structure is fully accounted for in the TII Carbon Tool; to confirm that its permanent peat footprint is captured in the Macauley Calculator loss calculations; and to confirm the minimum separation between the substation footprint and any area proposed for hydrological restoration.
Request 8	Require the applicant to provide a quantified 35-year carbon comparison of the wind farm scenario against a full peatland restoration scenario, using Irish emission factors already cited in the EIAR, before determining this application. The comparison should use the NEROS and EPA emission factor data cited in Table 11-6 of Chapter 11 and should account for the recovery period already underway since extraction ceased in June 2020.
Request 9	Require the applicant to confirm that on-site construction plant fuel, workforce transport, borrow pit excavation machinery, dewatering, the Kennedy's Cross temporary access track, and all other road upgrade works on the abnormal load route are fully accounted for in the carbon balance; to identify where each category appears in the submitted calculations; and to confirm and explain the port distance of 238.45 km recorded in the TII Carbon Tool.
Request 10	Require that the carbon calculations be subject to independent expert review before the application is determined, given the internal inconsistencies identified in this observation and the absence of in-built quality control mechanisms in the Macauley Institute Carbon Calculator as noted in the Scottish Government's own 2024 evidence assessment of that tool.

Submitted by:

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Application Reference: Lemanaghan Wind Farm, Co. Offaly (EIAR Ref: 200804)

May 2026

Additional Comments:

Peat Carbon

Double-counting: is a fundamental problem: the mandatory IPC Licence rehabilitation plan (drain-blocking, rewetting, peat stabilisation) *will proceed regardless* of whether the wind farm is built. Yet it appears the EIAR attributes the carbon sequestration benefits of this mandatory work to the wind farm's carbon balance. Strip that out, and the 4.6-year payback claim is an underestimate. The Macauley 2008 Scottish tool is designed for Scottish upland blanket and raised bog in intact or near-intact condition, not for Irish cutover raised bog, no Irish EPA/Teagasc GHG inventory factors have been used, and the ongoing aerobic CO_2 emissions from the 207,527 m^3 of peat deposited in open mounds over 35 years are omitted from calculations.

Required Actions:

1. A revised carbon balance should be prepared in which: (1) the 'Do-Nothing' baseline includes the full effects of mandatory IPC rehabilitation; (2) the wind farm scenario is compared against that baseline, not against a degraded un-rehabilitated baseline; and (3) the net carbon contribution of the wind farm itself is assessed independently of the rehabilitation carbon trajectory.

2. A hydraulic modelling exercise should estimate the extent of peat drainage influence from all Type A roads. The carbon balance should include ongoing annual CO_2 flux from this indirectly affected area using appropriate Irish peat drainage emission factors.

Peat Restoration Conflicts

The EIAR's botanical surveys highlight that the site supports **no Annex I peatland habitats**, no significant Sphagnum cover, and NPWS work indicates that meaningful active raised bog development would require >30 years on cutover i.e. at least the working lifetime of the propose project. However restoration of the bog is presented as a core benefit. The critical structural conflict is that 9.3 km of Type A excavated roads — which function as drainage features that the site into multiple separate hydrologies — are incompatible with rewetting. The plan's stated key objective of the Draft Rehabilitation Plan is **environmental stabilisation** — not ecological restoration to any particular designated habitat status. BnM defines rehabilitation as:

- Stabilisation of bare peat areas through targeted active management (principally drain-blocking and rewetting), slowing water movement across the site and encouraging development of naturally functioning cutaway peatland habitats; and
- Mitigation of key emissions to surface water, principally suspended solids and ammonia runoff.

The plan explicitly acknowledges that it will take a "longer timeframe than the implementation of this rehabilitation plan" for stable, naturally functioning habitats to fully develop.

The Draft Rehabilitation Plan has **not been reconciled with the wind farm layout** at application stage. There is no ambition expressed in the plan to achieve Annex I habitat status within any defined timeframe. Planning permission should not be granted on the basis of a post-consent undertaking to resolve this conflict.

The Biodiversity Management and Enhancement Plan (BMEP, Appendix 6-5) provides for a 10 ha flooded area, 7.8 ha of native woodland planting, 6.5 km of hedgerow, and 6.7 ha of marsh fritillary habitat management. Upon flooding, anaerobic decomposition of submerged peat generates substantial CH_4 emissions.

Required Actions:

1. The EIAR should present a realistic, evidence-based assessment of what restoration outcomes can actually be achieved within the 35-year operational period. Any carbon sequestration credit claimed from 'restoration' must correspond only to achievable outcomes within the project timeframe, validated against the site's own botanical evidence base.

2. The 10 ha flooded area should be removed from the carbon balance or assessed accurately including its full CH_4/CO_2 emission profile. The BMEP should clearly distinguish between habitat creation measures and actual peat restoration measures.

3. The Draft Rehabilitation Plan must be fully updated to incorporate the wind farm layout and demonstrate through hydrological modelling that rewetting targets can be achieved around infrastructure. This should be submitted as a revised and finalised document, not a future undertaking.

4. The BMEP should be revised to include specific, measurable outcome indicators for each proposed restoration measure, a monitoring protocol with defined survey methodology, adaptive management triggers, and a timeframe for each target. These targets should be agreed e.g. with NPWS in advance.

Substitute Consent Application and Baseline Distortion

The EIAR acknowledges that substitute consent was submitted (ACP Ref: SU19.323676) for peat extraction carried out without planning permission from July 1988 onwards. The degraded state of the bog — upon which the wind farm's relatively low environmental impact is predicated — is in substantial part the result of decades of unauthorised peat extraction.

The EIAR repeatedly uses the degraded state of the bog as justification for reduced environmental impact thresholds. This reasoning effectively rewards the applicant for environmental damage caused by historical unauthorised activity by using the resulting degraded baseline to justify lower environmental standards for a new project.

Required Action:

The ACP should direct assessment of the wind farm application against the pre-extraction baseline as an alternative scenario, at least in the carbon balance. In particular, what assurances are there that the current proposals will be implemented subsequent to completion of work? The interaction between the substitute consent and wind farm application should be explicitly assessed, including whether grant of substitute consent should be conditional on enhanced environmental standards for subsequent development and guarantees that planning conditions will be adhered to.

10-Year Permission vs. 35-Year Operation: Regulatory Gap

The application seeks a 10-year planning permission for a project with a 35-year operational life. The majority of the project's environmental impacts — bird and bat mortality, operational water quality effects, peat deposition area carbon emissions, and deferred restoration outcomes — will occur outside the initial permission period. It is unclear whether renewal applications will be subject to a full EIA review against conditions applicable at that future date.

Required Action:

Clarification is needed on how environmental monitoring data from Years 1–10 will inform any Year 10 retention application, whether a Year 10 review will include a full EIA, and whether planning conditions from the initial permission will bind all subsequent retention permissions.

SECTION 11 ATTACHMENT : Observer's Illustrative Analytical Scenarios

Note on the Status of this attachment:

This attachment contains all independent analytical work carried out by this observer. Every figure presented here is the observer's own estimate. These scenarios are presented as illustrative sensitivity tests to assist the planning authority in understanding the potential scale of the issues raised in the main body of this observation. They are not definitive projections. The planning authority is asked only to require the applicant to address the underlying questions — not to adopt the figures in this attachment. All inputs are drawn either from the submitted EIAR documents, the statutory instruments cited within those documents, or verified public sources as identified.

A.1 Energy Output Verification

The annual energy output is calculated from the applicant's own core input data in Appendix 11-2:

- Turbines: 15 | Capacity: 6 MW | Capacity factor: 0.35 | Hours per year: 8,760
- Annual output = 15 × 6 × 0.35 × 8,760 = 275,940 MWh/yr
- 35-year total = 9,657,900 MWh

Cross-check against Chapter 11, Section 11.4.3.2: 90 MW × 0.35 × 8,760 × 204.3 gCO_2/kWh ÷ 1,000 = 56,375 tCO_2/yr, implying 275,944 MWh/yr. Consistent to within rounding. The energy output figure is not in dispute.

A.2 EIAR Carbon Savings Calculation Reproduced

Chapter 11 calculation, reproduced for reference:

- Annual saving = 275,940 MWh × 204.3 gCO_2/kWh ÷ 1,000 = 56,375 tCO_2/yr
- 35-year total = 56,375 × 35 = 1,973,125 tCO_2

This arithmetic is correct given the flat-factor assumption. The question raised in Matter 1 concerns the appropriateness of the flat-factor assumption, not the arithmetic.

A.3 Declining Grid Emission Factor Sensitivity Scenario

Status of this Scenario — Must Be Read Before the Table:

The specific emission factor values in the table below (165, 90, 50 and 20 gCO_2/kWh) are this observer's own estimates. They are not legally binding. They are not published by SEAI, the EPA, the CRU, or any Irish regulatory body. No official Irish document prescribes what the grid emission factor will be in any future year. SEAI publishes only the current-year factor annually. The observer has derived these estimates by reasoning from the statutory targets described in the EIAR's own Appendix 11-1 — specifically the 80% renewable electricity target by 2030 and the net-zero obligation by 2050. The statutory targets themselves are legally grounded (see Section 3.3); the specific factor values assigned to each phase are the observer's own estimates of what meeting those targets would imply for grid carbon intensity. Actual future values will depend on many factors the observer cannot predict. An applicant's expert, a Board inspector or a court would be correct to observe that these specific numbers are not official projections. The purpose of the scenario is not to establish the correct future emission factor. It is to demonstrate that the choice of emission factor trajectory is material to the payback conclusion — a point that does not depend on these specific numbers being correct.

The following table sets out the observer's own illustrative scenario. The column headed "Observer's Estimated Factor" makes explicit that these values are the observer's own estimates, not regulatory outputs. The column headed "Statutory Target Relied Upon" identifies the legal basis that motivates each phase of the trajectory.

Phase	Period	Years	Observer's Estimated Factor (gCO_2/kWh)	Statutory Target Relied Upon (factor is observer's estimate of what achieving this target implies)	Observer's Phase Total (tCO_2)

1	2025–2030	5	165	CAP 2025: 80% renewable electricity by 2030, cited in Appendix 11-1 §1.1.2.7. Grid currently ~40% renewable. This estimate reflects a trajectory toward 80% but is not derived from any official projection.	227,648
2	2030–2035	5	90	Post-80%-renewable grid. Sectoral Emissions Ceiling 2026–2030 cited in Appendix 11-1 §1.1.2.6 makes further decarbonisation legally necessary. Gas balancing likely still present. This estimate is the observer's own.	124,173
3	2035–2045	10	50	Climate Action and Low Carbon Development (Amendment) Act 2021: net-zero no later than 2050, cited in Appendix 11-1 §1.1.2.3. Grid approaching near-zero carbon. This estimate is the observer's own.	137,970
4	2045–2060	15	20	Post-net-zero. Residual system balancing emissions. This estimate is the observer's own.	82,782
TOTAL	2025–2060	35	—	—	572,573
EIAR flat factor (for comparison)	2025–2060	35	204.3 (static — SEAI 2024)	—	1,973,125

Caveats: (1) These factor values are the observer's own estimates and should not be quoted as regulatory figures. (2) Electricity systems do not decarbonise smoothly or predictably; curtailment, demand growth from data centres, gas backup requirements, interconnection availability and variability all affect actual grid carbon intensity in ways the observer cannot model. (3) The appropriate methodology for projecting future emission factors is a matter for expert assessment, not for this observer. (4) The underlying analytical point — that a flat 2024 factor materially overstates savings under any plausible decarbonisation trajectory — holds regardless of what specific values are substituted. (5) This scenario does not account for the operational timeline issue in A.5 below, which further compounds the results when both effects are combined.

A.4 Carbon Payback Under Maximum Losses

Using the EIAR's own flat 2024 factor:

- Expected losses (261,360 tCO_2) ÷ 56,375 tCO_2/yr = 4.6 years — matches Chapter 11.
- Maximum losses (400,038 tCO_2) ÷ 56,375 tCO_2/yr = 7.1 years.

Using the observer's declining-factor scenario (A.3 above):

- Expected losses (261,360 tCO_2): payback falls within Phase 1–2 transition at approximately 6.5 years from assumed 2025 start.
- Maximum losses (400,038 tCO_2): payback falls approximately 13.5 years from assumed 2025 start.

These figures assume operations commence in 2025. The operational timeline issue in A.5 compounds these results significantly.

A.5 Realistic Operational Start Scenario Based on Derrinlough Comparator

Verified Derrinlough timeline (from MKO's own published case study, confirmed by Irish media 27 April 2026): Permission August 2021; construction start February 2023 (18 months later); opening April 2026 (38 months after construction start). Total permission to operational: ~56 months.

Milestone	Estimated Date	Basis
Planning decision	Late 2027	RED III statutory target 18 weeks; complex applications routinely longer
Construction start	Mid-to-late 2029	Derrinlough interval: 18 months post-permission
First generation	Late 2032 to early 2033	Derrinlough interval: 38 months construction
Operational period ends	Late 2067 to early 2068	35-year design life from first generation

This observer acknowledges that project timelines vary and that Derrinlough is a comparator, not a definitive benchmark. The table above is illustrative.

Grid carbon intensity at realistic operational start (late 2032): By that date, the Climate Action Plan 2025 80% renewable electricity target will be approximately two to three years past its target date. As noted in Section 4.1.2, the legal enforceability of specific CAP technology-mix targets, as distinct from the binding carbon budgets and national climate objective under the Act, is a matter for legal verification. However, on any reasonable interpretation, Ireland's binding sectoral emissions ceilings make a substantial reduction in grid emission intensity by 2032 legally necessary. The observer's own estimates for what a post-2030 Irish grid emission factor might be range from approximately 20–40 gCO_2/kWh — these are not official projections; they are the observer's own reasoning from the statutory targets. The EIAR applies 204.3 gCO_2/kWh.

Illustrative payback from first generation (late 2032), using 40 gCO_2/kWh as a conservative upper estimate for that period:

- Annual saving = 275,940 × 0.040 = 11,038 tCO_2/yr
- Expected losses payback: 261,360 ÷ 11,038 = 23.7 years → approximately 2056–2057
- Maximum losses payback: 400,038 ÷ 11,038 = 36.2 years → approximately 2069–2070 (beyond 35-year operational life)

At a lower factor of 20 gCO_2/kWh (consistent with a grid three years past its 80% renewables target):

- Annual saving = 275,940 × 0.020 = 5,519 tCO_2/yr
- Expected losses payback: 261,360 ÷ 5,519 = 47.4 years → exceeds 35-year operational life
- Maximum losses payback: 400,038 ÷ 5,519 = 72.5 years → exceeds 35-year operational life

These figures are illustrative sensitivity tests only. They demonstrate that the choice of operational start date and grid emission factor are material to the payback conclusion. The planning authority is asked only to require the applicant to address these questions, not to adopt these specific figures.

Section 12: EIAR CHAPTER 12 – REVIEW Noise and Vibration

Third Party Observer — An Coimisiún Pleanála RED III Application

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Planning Observation Report

This Planning Observation Report (Chapter 12 – Noise and Vibration) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction and Fundamental Legal Position

This submission relates to Chapter 12 – Noise and Vibration and Appendices 12.1 to 12.6 of the EIAR submitted in support of the proposed Lemanaghan Wind Farm.

This submission does not purport to make legal determinations. It is submitted to assist An Coimisiún Pleanála in its statutory assessment by identifying material concerns, omissions and deficiencies which may prevent the competent authority from reaching a fully informed and lawful reasoned conclusion on the likely significant effects of the proposed development.

Noise and vibration are central issues in the assessment of a wind energy development of this scale. The proposed project comprises 15 turbines of approximately 220 metres tip height, together with associated infrastructure including access tracks, hardstands, an onsite 220kV substation, overhead line cabling, peat deposition areas, borrow pits, temporary construction compounds and ancillary works.

The assessment must therefore do more than demonstrate theoretical compliance with numerical limits. It must clearly explain the likely lived acoustic environment for nearby residents, particularly during evening and night-time periods when quiet enjoyment, rest and sleep are expected.

The Key Planning Question

What will it be like to live beside this development, day and night, over the operational lifetime of the turbines? It is submitted that Chapter 12 does not adequately answer that question. The assessment relies heavily on predictive modelling, selected representative monitoring locations, derived background assumptions, and post-consent monitoring or complaint procedures. It does not provide a sufficiently clear, receptor-specific or precautionary assessment of likely effects on sleep, indoor amenity, low-frequency noise, tonal noise, amplitude modulation or long-term residential wellbeing.

Under Directive 2011/92/EU, as amended, likely significant effects on population and human health must be identified, described and assessed before consent is granted. It is submitted that Chapter 12 may not provide a sufficiently complete, precise, project-specific and reliable evidential basis to enable the competent authority to reach a fully informed reasoned conclusion.

This Chapter 12 objection should be read together with the Chapter 5 submission, where combined residential effects including shadow flicker, visual dominance and human health are addressed.

1.1 Executive Summary

This submission identifies a series of material deficiencies in Chapter 12. These deficiencies are relied upon both individually and cumulatively.

1.1.1 Reliance on near-threshold modelling

The EIAR relies on predictive modelling to conclude that operational noise will comply with applicable limits. However, several predicted levels fall extremely close to the relevant thresholds, including values in the region of 39.4 dB to 39.7 dB where a 40 dB limit is relied upon. This does not represent a robust margin of safety. In real-world conditions, minor variations in meteorology, turbine operation, wind shear, background sound, propagation conditions or source characteristics may materially affect what is experienced at a dwelling.

Modelled compliance within fractions of a decibel does not demonstrate acceptable residential amenity.

1.1.2 Failure to assess lived residential experience

Chapter 12 does not provide a clear assessment of how turbine noise will be experienced by residents inside their homes, particularly at night. It does not adequately assess whether residents may experience audible turbine noise in bedrooms, sleep disturbance, inability to open windows, persistent or pulsing sound, tonal or low-frequency characteristics, or cumulative disturbance over months and years.

1.1.3 Inadequate baseline characterisation

The Applicant relies on baseline monitoring at eight representative noise-sensitive locations. While representative monitoring may form part of a technical assessment, it does not remove the need to ensure that the receiving

environment is accurately characterised at all relevant receptors. In a quiet rural area, small errors or assumptions in baseline sound levels can have significant consequences.

1.1.4 Failure to assess low-frequency noise and infrasound precautionarily

Chapter 12 discusses low-frequency noise and infrasound by reference to general literature and concludes that significant effects are not likely. However, the EIAR also states that no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR. Where residents may be exposed to large turbines in a quiet rural environment, low-frequency noise and infrasound concerns require careful and transparent assessment. Their omission as assessed criteria leaves a material gap.

1.1.5 Failure to properly assess amplitude modulation

Chapter 12 acknowledges amplitude modulation as a recognised feature of wind turbine noise and describes it as periodic audible fluctuation related to blade-pass frequency. It also recognises that "Other" or "Excessive" amplitude modulation may occur in some circumstances. However, the assessment does not provide a project-specific conclusion that such effects will not occur at Lemanaghan. It relies instead on general literature, general probability and post-consent complaint mechanisms.

1.1.6 Improper reliance on post-consent mitigation and complaint procedures

Appendix 12.6 and related mitigation provisions indicate that operational issues may be addressed after commencement through monitoring, complaints procedures and possible operational controls.

> **Post-consent complaint procedures are not a substitute for pre-consent assessment. They operate only after residents have already experienced harm. They should not be treated as curing an incomplete assessment at application stage.**

1.1.7 Failure to integrate Chapter 12 with Chapter 5 human health assessment

Chapter 5 relies on Chapter 12 to support conclusions that noise-related human health effects are not significant. However, if Chapter 12 is incomplete, uncertain or overly reliant on post-consent mechanisms, then the Chapter 5 conclusion is also undermined. Noise is not merely an amenity issue. It is a recognised pathway affecting sleep, stress, annoyance, quality of life and human wellbeing.

1.1.8 Failure to address real-world Offaly evidence

The FOI complaint records included at ATTACHMENT 5-A demonstrate that turbine noise, shadow flicker, sleep disturbance, impacts on children and unresolved enforcement concerns have already arisen in County Offaly in connection with operational wind turbines. Those records are directly relevant to Chapter 12 because they show that the risks are real, foreseeable and locally evidenced.

1.1.9 Failure to demonstrate full compliance with technical guidance

The Applicant's Chapter 12 identifies the IOA Good Practice Guide to ETSU-R-97 and EPA NG3 as guidance documents consulted. However, the EIAR does not clearly demonstrate, in an accessible and receptor-specific manner, how the assessment satisfies the key safeguards identified in those guidance documents, including background monitoring representativeness, exclusion of non-typical data, transparent reporting of modelling assumptions, cumulative assessment, tonal noise, worst-case modelling conditions and complaint and mitigation effectiveness.

1.2 Applicant's Own Material Confirming Key Matters Relied Upon

For clarity, this submission relies on the Applicant's own Chapter 12 and appendices for a number of key factual matters. The Applicant confirms that:

- the Proposed Project includes 15 wind turbines and associated infrastructure;
- baseline noise monitoring was carried out at eight representative noise-sensitive locations (NSLs);
- predicted operational turbine noise at the highest assessed receptors approaches the 40 dB daytime criterion;
- no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR;
- no tonal penalty has been applied to predicted noise levels; and
- AM and tonality issues are to be addressed through a complaint management protocol, monitoring and potential mitigation if issues arise after construction.

These matters are not speculative and arise from the Applicant's own assessment material.

1.3 Internal Inconsistencies and Apparent Errors in Chapter 12

Issue	Detail
Table 12-26 — decommissioning significance inconsistency	Table 12-26 appears to classify decommissioning noise effects as "Slight", whereas the body text refers to the same effects as "Not Significant". These terms are not identical in EIA terminology and the Applicant should clarify the actual significance conclusion relied upon.
Table 12-26 — incorrect mitigation cross-reference	Table 12-26 appears to refer to section 12.6.4 for decommissioning mitigation. However, section 12.6.4 appears to relate to monitoring rather than substantive mitigation. This should be corrected or explained.
Table 12-19 — apparent data error	Table 12-19 appears to contain an apparent numerical error in relation to a crane noise source, where the noise level appears as "7" rather than "76". This should be clarified by the Applicant.
Section 12.6.2.3 — apparent incorrect cross-reference	Section 12.6.2.3 appears to refer to section 12.3.2.6, which concerns vibration, as the fixed plant noise criterion. This appears to be an incorrect cross-reference and should be clarified.
Appendix 12-5 / Table 12-15 receptor criteria	Appendix 12-5 should be fully reconciled with Table 12-15 of Chapter 12. Clear consistency is essential because Appendix 12-5 contains receptor-specific operational noise predictions.

2.0 Legal and Policy Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. The legal framework directly relevant to this Chapter 12 objection includes:

EIA Directive — Articles 3, 5 and 8a

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires assessment of the direct and indirect significant effects of a project on population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, landscape and the interaction between those factors. This is highly relevant to Chapter 12. Noise interacts directly with population, human health, residential amenity, sleep, quiet enjoyment of the home and landscape experience.

Article 5 requires the developer to provide information sufficient to allow the competent authority to reach a reasoned conclusion on likely significant effects. In the present case, the EIAR does not provide adequate information on indoor noise, night-time audibility, sleep disturbance, low-frequency noise, infrasound, amplitude modulation, tonal noise, vulnerable residents, cumulative lived experience or the effectiveness of complaint procedures.

Article 8a requires the competent authority to reach a reasoned conclusion on significant environmental effects. A reasoned conclusion may be legally vulnerable where important effects remain uncertain, unassessed or deferred to post-consent procedures.

Wells v Secretary of State for Transport, Case C-201/02

The Court of Justice confirmed the fundamental principle that environmental effects must be assessed before consent is granted. This is directly relevant because Chapter 12 relies materially on post-consent monitoring,

complaint procedures and possible operational controls. Monitoring and complaint procedures cannot lawfully substitute for a complete pre-consent assessment. If key matters such as indoor audibility, sleep disturbance, low-frequency noise, amplitude modulation and tonal characteristics have not been adequately assessed before permission is granted, those omissions cannot be cured simply by requiring residents to complain after the turbines become operational.

Holohan and Others v An Bord Pleanála, Case C-461/17

Chapter 12 must not leave material questions unanswered. It must clearly explain the likely effects of the project on nearby residents and how those effects interact with human health, residential amenity and the wider receiving environment. A fragmented chapter-by-chapter assessment that treats noise in isolation from human health, shadow flicker, visual dominance and cumulative residential burden does not satisfy this requirement.

Precautionary Principle — Article 191 TFEU

Where there is scientific uncertainty and a plausible pathway of harm, the absence of full certainty is not a reason to avoid assessment. It is a reason to assess more carefully. This principle is directly engaged in relation to amplitude modulation, low-frequency noise, infrasound, sleep disturbance, long-term annoyance and cumulative rural soundscape impacts.

Recent Irish High Court Wind Turbine Noise Nuisance Authorities

In Webster & Anor v Meenacloghspar (Wind) Limited; Shorten & Anor v Meenacloghspar (Wind) Limited [2024] IEHC 136, the High Court considered amplitude modulation and recognised that wind turbine noise may be experienced as periodic "thumping" or "whoomphing" noise containing relatively low frequencies. This supports the submission that the character of turbine noise may be as important as the measured decibel level.

The later decision in Byrne & Anor v Abo Energy Ireland Limited & Ors [2025] IEHC 330 further reinforces the relevance of assessing the real-world effect of wind turbine noise on the use and enjoyment of residential property. Planning permission and technical compliance with numerical limits do not automatically mean that turbine noise will be acceptable in residential amenity terms. The Board should consider the character of noise, tonal or pulsing characteristics, low-frequency components, night-time audibility, sleep disturbance, duration of exposure and the ability of residents to enjoy their homes without persistent disturbance.

Article 8 ECHR and the Right to Respect for the Home

Article 8 of the European Convention on Human Rights protects the right to respect for private and family life and the home. In López Ostra v Spain, the European Court of Human Rights recognised that serious environmental nuisance may interfere with the enjoyment of the home. If turbine noise prevents residents from sleeping, opening windows, using their homes normally, or enjoying ordinary rural domestic life, that is not merely a technical planning inconvenience. It is capable of engaging fundamental rights relating to the home.

3.0 Core Planning Theme 1 — Operational Noise Predictions Within Narrow Compliance Margins

Appendix 12-5 confirms that several receptors are predicted to operate within extremely narrow margins of the applicable operational noise criterion. Approximately four dwellings are within approximately 1 dB of the applicable criterion, and approximately twenty dwellings are within 2 dB. Particular concern arises in respect of receptors H002, H012, H006 and H007, where predicted operational levels appear closest to the relevant criterion.

Objection

The concern is not that the EIAR necessarily predicts exceedance in all circumstances. The concern is that the compliance margins are so narrow that the conclusion depends heavily upon the accuracy and conservatism of the modelling assumptions, including:

- turbine sound power data and propagation assumptions;
- background sound and wind speed assumptions;
- wind shear, atmospheric stability, temperature inversions and ground absorption;

- receptor height, location and tonal or amplitude-modulated characteristics.

The Applicant's Appendix 12-3 confirms that the turbine noise predictions rely on modelling assumptions including receiver height, ground factor, ISO 9613 methodology and atmospheric attenuation assumptions. It also states that no meteorological corrections were applied to the calculations.

Key Finding

A predicted level marginally below a limit does not, of itself, demonstrate acceptable residential amenity. Residents do not experience a spreadsheet or acoustic model. They experience sound at a particular dwelling, under particular weather conditions, at particular times of day and night.

3.1 Worst-Case Noise Conditions

Although the EIAR describes its operational turbine noise model as precautionary, it does not clearly demonstrate, in a receptor-specific manner, that all relevant real-world worst-case conditions, uncertainty margins and night-time rural propagation scenarios have been fully addressed. A robust wind turbine noise assessment should clearly address, in a receptor-specific manner:

- downwind propagation conditions and night-time conditions;
- temperature inversions and stable atmospheric conditions;
- low ground-level wind with higher hub-height wind and wind shear;
- cumulative turbine noise and tonal or special audible characteristics;
- amplitude modulation and the sensitivity of quiet rural receptors.

4.0 Core Planning Theme 2 — Inadequate Baseline Noise Characterisation

The Applicant states that baseline noise levels were surveyed at eight representative noise-sensitive locations. Representative monitoring may be an accepted method in some circumstances, but it is not automatically sufficient in a quiet rural environment where individual dwellings may experience different sound conditions depending on distance, topography, exposure, wind direction and existing background sound.

> The IOA Good Practice Guide states that background monitoring locations should be selected with the objective of collecting sufficient data to enable background noise levels at each noise-sensitive receptor within the study area to be characterised.

Objection

The issue is not whether eight monitoring locations can ever be sufficient. The issue is whether the EIAR clearly demonstrates that those eight locations are genuinely representative of all relevant dwellings and sensitive receptors in this particular rural environment. Where baseline levels are low, introduced mechanical noise may be much more noticeable. In such a setting, the issue is not simply whether a numerical threshold is exceeded. The issue is whether the existing quiet rural soundscape will be materially altered.

5.0 Core Planning Theme 3 — Failure to Assess Indoor Noise, Bedroom Exposure and Sleep Disturbance

Chapter 12 does not provide a proper assessment of internal noise levels within dwellings or night-time bedroom exposure.

Most Serious Omission

Wind turbine noise is most likely to affect residents during evening and night-time periods, when background noise is lower, when residents are indoors, and when the ordinary expectation is sleep and rest. It is therefore insufficient to assess outdoor levels alone without explaining what those levels mean inside homes.

The assessment should have addressed:

- whether turbine noise will be audible in bedrooms;
- whether windows can remain open during warmer months;
- whether sleep disturbance may occur and whether repeated awakenings or difficulty falling asleep may arise;
- whether vulnerable persons, children, older persons or persons with sensory sensitivities may be more affected;
- whether a persistent mechanical sound may become more intrusive at night; and
- whether low-frequency or amplitude-modulated characteristics may be perceived indoors.

A noise assessment which does not properly assess the potential for sleep disturbance is materially incomplete in human health and residential amenity terms.

6.0 Core Planning Theme 4 — Low-Frequency Noise, Infrasound, Tonal Noise and Amplitude Modulation

6.1 Low-frequency noise and infrasound

Chapter 12 discusses low-frequency noise and infrasound by reference to general literature and concludes that significant effects are not likely. However, the EIAR also states that no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR. The legal question is not whether the omission is common practice. The legal question is whether the EIAR identifies, describes and assesses the likely significant effects of this particular project in this particular receiving environment.

In those circumstances, it is insufficient to dismiss low-frequency noise and infrasound on the basis of generalised literature. The Commission requires a project-specific assessment of whether such characteristics may arise at Lemanaghan and whether they may affect residents in a quiet rural area.

6.2 Tonal noise

The Applicant's own glossary defines tonal noise as sound containing a clearly audible tone, such as a whine, hiss, screech or hum. Tonal characteristics are often among the most intrusive forms of environmental noise. A sound may be numerically within a threshold but still be highly intrusive if it has a tonal, pulsing or identifiable mechanical character.

Chapter 12 does not adequately assess the possibility of tonal characteristics being experienced at receptors in real-world operating conditions. Chapter 12 states that no tonal penalty has been applied to the predicted noise levels. This does not remove the need for the Commission to understand, at the pre-consent stage, whether tonal or special audible characteristics may affect residential amenity in practice.

6.3 Amplitude modulation

Chapter 12 acknowledges amplitude modulation and distinguishes between "Normal" amplitude modulation and "Other" or "Excessive" amplitude modulation. The EIAR further acknowledges that "Other" amplitude modulation may be heard at relatively large distances and may be perceived as periodic thumping or whoomphing at low frequencies.

> Appendix 12-6 confirms that the proposed approach to AM and tonality is complaint-led. It requires the complainant to record details and complete a noise complaint log or diary, after which the operator reviews the complaint. This confirms that the mechanism is reactive rather than preventative.

If amplitude modulation is difficult to predict before operation, that uncertainty should not be used to minimise the issue. Rather, it should trigger a more precautionary assessment. Pulsing, thumping or whoomphing sound can be more intrusive than steady sound at the same decibel level. It can attract attention, disturb sleep and become difficult to ignore.

Chapter 12 does not adequately assess whether amplitude modulation may occur at Lemanaghan, whether the layout, turbine scale, terrain or meteorology may increase risk, how such noise would affect night-time receptors, whether mitigation would be available before harm occurs, or whether residents would have effective protection if it arises.

Conclusion

It is submitted that the assessment of amplitude modulation is materially deficient. The Webster / Shorten judgment [2024] IEHC 136 supports the submission that thumping, whoomphing or amplitude-modulated turbine noise may substantially interfere with the use and enjoyment of homes and should be assessed as a real-world impact pathway, not managed reactively through post-consent complaints.

6.4 Shadow flicker as part of combined residential disturbance

This Chapter 12 objection should be read together with the Chapter 5 submission, where combined residential effects including shadow flicker, visual dominance and human health are addressed. Residents do not experience environmental effects in isolated chapters.

6.5 Noise and vibration effects on ecological, livestock and agricultural receptors

Lemanaghan is a rural, agricultural and ecological landscape. Noise and vibration may therefore be relevant not only to dwellings, but also to livestock, horses, farmyards, breeding or foraging birds, bats, otters, badgers and other sensitive fauna. Construction and operational noise may interact with ecological, livestock and agricultural receptors within the rural receiving environment. This dimension of impact is not adequately addressed in Chapter 12.

7.0 Core Planning Theme 5 — Post-Consent Mitigation is Not a Substitute for Pre-Consent Assessment

The EIAR relies on mitigation, monitoring and complaint procedures to address potential operational issues. A complaint procedure is, by its nature, reactive. It begins only after residents have already experienced disturbance. It does not prevent harm. It does not guarantee resolution.

The purpose of EIA is to identify, describe and assess likely significant effects before consent is granted. In Wells v Secretary of State for Transport, Case C-201/02, the Court of Justice confirmed that assessment must occur before consent. The Commission should therefore treat reliance on complaint procedures as evidence of assessment uncertainty, not as a cure for that uncertainty.

Key Finding

The existence of an extensive complaint-response mechanism is itself indicative that the Applicant accepts the possibility of operational outcomes not fully resolved by the assessment presented at application stage. Monitoring and complaint procedures cannot lawfully substitute for a complete pre-consent assessment of likely significant effects.

8.0 Core Planning Theme 6 — Real-World Offaly Evidence of Wind Turbine Noise Impacts

The complaint records relied upon in this section were released under the Freedom of Information Act 2014 and are included at ATTACHMENT 5-A – Documented Noise, Shadow Flicker and Human Health Complaints. Personal data has been redacted where appropriate.

The FOI evidence demonstrates reported impacts including:

- persistent and intrusive turbine noise and low-frequency humming;
- tonal or mechanical noise described as "jet-like" or roaring;
- sleep disturbance and sleep deprivation affecting children and families;
- shadow flicker concerns and combined amenity impacts;
- anxiety, stress and loss of amenity;
- repeated complaints over time; and
- difficulties with enforcement, monitoring and resolution.

Significance

This evidence is directly relevant because Chapter 12 is largely predictive and model-based. It shows that turbine noise, sleep disturbance, shadow flicker and amenity impacts have already been reported in County Offaly and should therefore be carefully assessed before consent is granted. The comparison in turbine scale is also material. The proposed Lemanaghan turbines are approximately 220 metres in tip height — materially larger than turbines that have already generated complaints in the county. The Commission should approach the present proposal with particular caution.

9.0 Core Planning Theme 7 — Interaction with Chapter 5: Population and Human Health

Chapter 12 cannot be assessed in isolation. It directly informs the conclusions reached in Chapter 5 – Population and Human Health. Chapter 5 relies on the conclusions of the technical chapters, including Chapter 12, to conclude that human health effects will not be significant. If Chapter 12 is deficient, then the human health conclusion in Chapter 5 is also undermined.

Noise is not merely a technical environmental parameter. It is a human health pathway. It may affect:

- sleep, stress, concentration, mental wellbeing and family life;
- children's functioning, daily living conditions and quality of life; and
- residential amenity and the quiet enjoyment of the home.

Specific Chapter 5 Undermining

In particular, Chapter 5 is undermined by the following Chapter 12 deficiencies:

- no proper indoor noise assessment;
- no proper sleep disturbance assessment;
- no receptor-specific assessment of vulnerable residents;
- no project-specific low-frequency noise assessment;
- no precautionary assessment of amplitude modulation;
- reliance on post-consent complaint procedures; and
- failure to engage with real-world Offaly FOI evidence.

10.0 Core Planning Theme 8 — Cumulative Noise and Combined Effects

The Applicant refers to cumulative noise and indicates that limits are to relate to the contribution of all operational wind turbines. That wording is important, but it is not sufficient.

> The IOA Good Practice Guide states that where a proposed wind farm produces noise levels within 10 dB of an existing wind farm at the same receptor, cumulative noise impact assessment is necessary.

Objection

In the present case, the EIAR does not adequately assess cumulative effects in terms of combined turbine noise, noise character, night-time audibility, low-frequency components, amplitude modulation, interaction with other nearby wind farms, interaction with shadow flicker, or combined effect on sleep, stress and amenity.

Residents do not experience environmental effects in isolated chapters. The EIA Directive requires assessment of the interaction between environmental factors. A fragmented assessment which considers each topic separately may underestimate the true impact on the receiving community.

11.0 Core Planning Theme 9 — Construction, Decommissioning Noise and Vibration

Chapter 12 assesses construction and decommissioning noise by reference to guidance including BS 5228 and other standards. Construction at Lemanaghan would involve extensive works including access tracks, hardstands, borrow pits, compounds, internal roads and ancillary infrastructure. The Commission should be cautious in accepting conclusions of non-significance where the assessment relies on generalised thresholds and does not fully explain the lived effect of prolonged construction activity in a quiet rural environment.

11.1 Vibration Assessment

Chapter 12 is titled "Noise and Vibration", but the substance of the assessment appears to focus primarily on airborne noise. Vibration is addressed only to a limited extent. This is material because construction and decommissioning works may involve heavy plant, haulage, access track construction, borrow pit activity, foundation works, hardstand construction and movement of abnormal loads. These activities may give rise to vibration or ground-borne disturbance, particularly where works occur near dwellings, farmyards, livestock areas, older structures, roads, drains or sensitive peatland ground conditions.

The issue is also material in ecological terms. Lemanaghan Bog is identified as supporting sensitive bird species, including Curlew, which is critically endangered in Ireland and is recognised as highly disturbance-sensitive during breeding and nesting periods.

The Applicant should be required to clarify:

- the vibration criteria applied and the nearest receptors assessed for construction vibration;
- whether any dwellings, farmyards, heritage structures or sensitive agricultural receptors are close enough to experience vibration effects;
- whether vibration from heavy plant, haulage, borrow pits, foundation works and road works has been assessed;
- whether cumulative vibration from construction phases has been assessed;
- whether vibration impacts on sensitive ecological receptors, including ground-nesting birds, have been considered;
- whether seasonal restrictions or exclusion measures are proposed in relation to sensitive nesting periods; and
- what monitoring or limits would apply if vibration complaints or ecological concerns arise.

12.0 Summary of Material Deficiencies

The following table provides a short summary of the principal defects. A fuller supporting defects schedule is included at ATTACHMENT 12-B.

Issue	Defect	Legal / Planning Relevance
Near-threshold modelling	Predicted levels are very close to limits at four or more dwellings.	Does not demonstrate robust compliance or acceptable amenity.
Baseline assessment	Only representative monitoring relied upon.	May not reflect actual conditions at all receptors.
Indoor noise	Not properly assessed.	Prevents assessment of real home conditions and night-time exposure.
Sleep disturbance	Not properly assessed.	Direct human health and amenity pathway under WHO guidelines.
Low-frequency noise / infrasound	No project-specific criteria-based or receptor-specific assessment.	Material omission in quiet rural setting with 220m turbines.
Amplitude modulation	Acknowledged but not properly predicted or assessed.	Potentially intrusive and sleep-disturbing characteristic per Webster / Shorten [2024] IEHC 136.
Tonal noise	Not sufficiently assessed; no tonal penalty applied.	May be intrusive despite numerical compliance.
Post-consent complaint procedures	Relied upon to address unresolved operational issues.	May amount to an impermissible deferral where used to cure gaps in the pre-consent EIAR.
FOI Offaly evidence	Not adequately engaged with.	Shows real, foreseeable and locally evidenced wind turbine noise and amenity impacts.
Chapter 5 interaction	Health conclusions depend on Chapter 12.	Human health conclusions are undermined if Chapter 12 is deficient.
Webster / Shorten v Meenacloghspar [2024] IEHC 136	EIAR treats modelled compliance as effectively sufficient.	Supports the need to assess real-world noise character including thumping and whoomphing.
Byrne & Anor v Abo Energy [2025] IEHC 330	EIAR treats modelled compliance as effectively sufficient.	Reinforces that turbine noise may require serious remedies where it substantially interferes with residential amenity.
WHO public health guidance	EIAR does not translate WHO guidance into a project-specific health assessment.	WHO 2018 identifies wind turbine noise as a public-health and quality-of-life issue.

Worst-case modelling	Not clearly demonstrated in receptor-specific manner.	Weakens confidence in near-threshold predictions.
IOA GPG compliance	EIAR refers to the IOA Good Practice Guide but does not clearly demonstrate compliance.	Relevant to baseline monitoring, reporting transparency, wind/rain data and cumulative assessment.
EPA NG3 guidance	EIAR refers to EPA NG3 but does not clearly address its warnings.	EPA NG3 is relevant Irish technical guidance requiring specific assessment and reliable data.
Cumulative threshold	Cumulative wind turbine noise not clearly assessed per IOA GPG.	IOA GPG requires cumulative assessment where turbine noise is within 10 dB of existing wind farm.
Noise-constrained operation	EIAR does not clearly state whether noise-reduced modes or curtailment are required.	If constraints are required, they should be assessed before consent and considered in the planning balance.
Vibration	Not assessed in clear receptor-specific detail.	Relevant to dwellings, farmyards, sensitive ground conditions and ecological receptors.

13.0 Recommended Reasons for Refusal — Chapter 12

The core planning grounds arising from this Chapter 12 submission are as follows. These grounds are relied upon both individually and cumulatively.

13.1 Failure to Demonstrate Acceptable Operational Noise in Real-World Residential Conditions

The EIAR does not demonstrate that operational turbine noise will be acceptable in real-world residential conditions. Several predicted levels fall within approximately 1–2 dB of the applicable criterion, leaving no meaningful margin for uncertainty in modelling assumptions, meteorological variability, propagation conditions or tonal and amplitude-modulated characteristics. Near-threshold modelling compliance within fractions of a decibel does not demonstrate acceptable residential amenity.

13.2 Failure to Assess Indoor Noise, Bedroom Exposure and Sleep Disturbance

The EIAR does not provide a proper assessment of indoor noise levels at affected dwellings or night-time bedroom exposure. Sleep disturbance is not assessed as a specific human health and amenity pathway. This is a material omission where the development involves 220 metre turbines in a quiet rural area. The absence of an indoor and sleep disturbance assessment is contrary to the requirement to assess the likely significant effects on population and human health under Article 3 of the EIA Directive.

13.3 Failure to Provide a Project-Specific Assessment of Low-Frequency Noise, Infrasound, Tonal Noise and Amplitude Modulation

The EIAR states that no criteria are proposed for assessing low-frequency noise or infrasound. No tonal penalty is applied. Amplitude modulation is acknowledged but not predicted on a project-specific basis. Instead, the EIAR relies on post-consent complaint-led procedures for AM and tonality. This is a material deficiency in a quiet rural environment where 220 metre turbines are proposed. The precautionary principle under Article 191 TFEU requires a more rigorous approach where uncertainty exists regarding intrusive acoustic characteristics.

13.4 Unlawful Reliance on Post-Consent Complaint Procedures

The EIAR relies on post-consent monitoring, complaint procedures and possible operational controls to address potential issues arising from amplitude modulation, tonality and other acoustic characteristics. Under Wells v Secretary of State for Transport, Case C-201/02, environmental effects must be assessed before consent is granted. Complaint-led procedures are reactive and do not prevent residents from experiencing harm. Their use as a substitute for pre-consent assessment is not consistent with the EIA Directive.

13.5 Failure to Engage with Real-World Offaly FOI Evidence

The FOI complaint records at ATTACHMENT 5-A demonstrate that persistent turbine noise, low-frequency humming, sleep disturbance, shadow flicker and unresolved complaint processes have already arisen in County Offaly from turbines materially smaller than those proposed at Lemanaghan. Chapter 12 does not meaningfully engage with this locally evidenced material. The Commission cannot be satisfied that the assessment reflects the real foreseeable risk profile for this particular receiving community.

13.6 Chapter 5 Human Health Conclusions Undermined

Chapter 5 relies on Chapter 12 to support conclusions that noise-related human health effects are not significant. To the extent that Chapter 12 is deficient in respect of indoor noise, sleep disturbance, low-frequency noise, amplitude modulation, tonal characteristics and real-world Offaly evidence, the Chapter 5 human health conclusions are also deficient. Noise is a recognised pathway affecting sleep, stress, annoyance, quality of life and residential wellbeing.

13.7 Inadequate Cumulative Noise Assessment

The EIAR does not adequately assess cumulative noise effects including combined turbine noise, noise character, amplitude modulation, interaction with other nearby wind farms and combined effect on sleep, stress and amenity. The IOA Good Practice Guide requires cumulative noise assessment where turbine noise from the proposed development is within 10 dB of that from an existing wind farm at the same receptor. Residents experience their acoustic environment cumulatively, not in isolated modelling compartments.

13.8 Vibration Assessment Insufficiently Receptor-Specific

Chapter 12 does not provide a clear, receptor-specific assessment of construction and decommissioning vibration impacts on dwellings, farmyards, heritage structures, sensitive agricultural receptors or ecological receptors. Lemanaghan Bog supports critically endangered species including Curlew, which is highly sensitive to ground disturbance during breeding. The absence of a vibration assessment in ecological terms is a material gap.

14.0 Relief Sought

An Coimisiún Pleanála is respectfully requested to require the Applicant to provide the following clarification and further information before any decision is made:

- correction and clarification of the apparent internal inconsistencies and cross-reference errors identified in Section 1.3 above;
- reconciliation of Appendix 12-5 with Table 12-15;
- receptor-specific explanation of all dwellings predicted within approximately 1–2 dB of the applicable criterion;
- confirmation of the uncertainty allowance used in operational noise modelling;
- clarification of how meteorological effects, wind shear, temperature inversions and night-time propagation have been addressed;
- project-specific assessment of amplitude modulation risk at Lemanaghan;
- assessment of tonal or special audible characteristics at affected receptors;
- clarification of whether noise-reduced modes, directional curtailment or operational constraints are required and assessed;
- independent acoustic review of the operational noise assessment;

- strict construction noise conditions, including hours, monitoring, resident notification and complaint-response timeframes; and
- receptor-specific clarification of construction and decommissioning vibration impacts, including criteria, nearest receptors, monitoring, mitigation and ecological seasonal restrictions.

15.0 Final Conclusion

It is respectfully submitted that Chapter 12 does not provide the competent authority with a sufficiently reliable basis for concluding that the proposed development will not give rise to significant adverse effects on residential amenity, human health and the peaceful enjoyment of the home.

The assessment relies heavily on predictive modelling and threshold compliance. It does not adequately explain the real-world experience of residents living near turbines of approximately 220 metres tip height in a quiet rural receiving environment.

In particular, Chapter 12 does not provide a sufficiently robust assessment of:

- narrow receptor-level compliance margins without adequate safety margin;
- indoor noise, bedroom exposure and sleep disturbance;
- construction and decommissioning vibration, including potential effects on dwellings, farmyards, sensitive peatland ground conditions and ecological receptors;
- low-frequency noise, tonal noise and amplitude modulation;
- cumulative lived experience; and
- real-world Offaly evidence.

The reliance on post-consent complaint procedures is particularly concerning. Such procedures do not prevent harm. They respond only after residents have reported disturbance. The Offaly FOI evidence demonstrates that turbine-related complaints may persist over time and may not be easily resolved through enforcement or monitoring.

Core Submission

The deficiencies in Chapter 12 also undermine the conclusions reached in Chapter 5 on population and human health. Noise is a human health pathway, not merely a technical acoustic issue. For these reasons, it is respectfully submitted that the competent authority may not be in a position, on the basis of Chapter 12 as submitted, to reach a fully informed and lawful reasoned conclusion that significant adverse effects will not arise. These deficiencies weigh strongly against the grant of permission unless fully clarified and resolved before any decision is made.

SECTION 12 ATTACHMENT Schedule

ATTACHMENT Reference	Title
ATTACHMENT 12-A	Cross-Reference to ATTACHMENT 5-A: Documented Noise, Shadow Flicker and Human Health Complaints (FOI Records). Evidence of reported turbine noise, sleep disturbance, shadow flicker and unresolved complaint processes from existing Offaly wind farms.
ATTACHMENT 12-B	Detailed Defects Schedule — full supporting schedule of defects in Chapter 12, including near-threshold modelling, indoor noise, sleep disturbance, low-frequency noise, amplitude modulation, tonal noise, post-consent procedures, real-world evidence and technical guidance compliance.
ATTACHMENT 12-C	Relevant Legal Framework and Case Law — Noise, Human Health, Residential Amenity and Wind Turbine Nuisance. Summarises the principal legal sources, case law and legal principles relied upon in this Chapter 12 submission.
ATTACHMENT 12-D	Technical Guidance Compliance Cross-Check: IOA GPG and EPA NG3. Focused cross-check of Chapter 12 against relevant technical guidance documents referred to in the Applicant's own assessment.

ATTACHMENT 12-B — Detailed Defects Schedule

This appendix provides a fuller supporting schedule of the principal defects identified in Chapter 12 of the EIAR.

Issue	Defect	Concern
Near-threshold modelling	Predicted levels extremely close to limits at four or more dwellings. Compliance within fractions of a dB.	Raises serious concerns about real-world compliance, particularly under adverse meteorological conditions not fully accounted for in the model.
Baseline assessment	Monitoring at only eight representative NSLs. No individual receptor-specific monitoring at all dwellings.	The actual baseline conditions at affected dwellings may not be accurately reflected.
Indoor noise	Chapter 12 provides no assessment of predicted indoor noise levels at affected dwellings.	Residents and the Commission cannot understand the likely acoustic experience inside homes, particularly at night.
Sleep disturbance	Chapter 12 does not assess sleep disturbance as a specific human health and amenity issue.	Sleep disturbance is a direct human health pathway. Its absence from the assessment is a material gap.
Low-frequency noise / infrasound	The EIAR states that no criteria are proposed for assessing low-frequency noise or infrasound.	Material omission in a quiet rural environment where 220m turbines are proposed.
Amplitude modulation	The EIAR acknowledges AM but does not provide a firm project-specific conclusion that excessive AM will not arise.	Pulsing or thumping sound may be intrusive and sleep-disturbing. The assessment is complaint-led rather than pre-consent.
Tonal noise	No tonal penalty applied to predicted levels. No receptor-specific assessment of potential tonal character.	Tonal noise may be more intrusive than broadband noise at the same dB level.
Worst-case noise conditions	Although described as precautionary, modelling does not clearly demonstrate assessment of all relevant worst-case conditions receptor-by-receptor.	Weakens confidence in near-threshold predictions.
Cumulative noise	Cumulative assessment is not adequately translated into real-world lived experience.	Residents experience the combined acoustic environment, not isolated model elements.
Post-consent complaint procedures	Complaint procedures are relied upon to address operational issues.	May amount to impermissible deferral where used to cure gaps in the pre-consent EIAR.

Real-world Offaly evidence	Local FOI complaints are not adequately engaged with in Chapter 12.	Shows turbine noise, shadow flicker and sleep disturbance are real, foreseeable and locally evidenced.
Chapter 5 interaction	Chapter 5 relies on Chapter 12 to conclude human health effects are not significant.	If Chapter 12 is deficient, the Chapter 5 human health conclusion is undermined.
Vulnerable receptors	Children, older persons and sensitive residents are not assessed in a sufficiently project-specific way.	Human health assessment must consider those most sensitive to disturbance.
Wildlife and livestock	Noise and vibration impacts on agricultural and ecological receptors are not adequately developed.	Lemanaghan is a rural, agricultural and ecological landscape.
Exceptional turbine scale	The EIAR does not adequately explain how 220m turbines will affect residents in a quiet rural area.	Scale and setting heighten the need for cautious, receptor-specific assessment.
Recent Irish nuisance case law	The EIAR treats modelled compliance as effectively sufficient.	Webster / Shorten and Byrne support the need to assess real-world interference with homes.
WHO public health guidance	The EIAR does not translate WHO guidance into a project-specific health assessment.	WHO 2018 identifies wind turbine noise as a public-health and quality-of-life issue.
IOA GPG compliance	The EIAR refers to the IOA Good Practice Guide but does not clearly demonstrate compliance.	Relevant to background monitoring, wind/rain data, calibration, excluded data, prediction assumptions, tonal content and cumulative issues.
EPA NG3 guidance	The EIAR refers to EPA NG3 but does not clearly address its warnings.	EPA NG3 is relevant Irish technical guidance requiring specific assessment and reliable, justifiable data.
Noise-constrained operation	The EIAR does not clearly state whether noise-reduced modes, directional curtailment or operational constraints are required.	If constraints are required, they should be assessed before consent and considered in the planning balance.

ATTACHMENT 12-C — Relevant Legal Framework and Case Law

Noise, Human Health, Residential Amenity and Wind Turbine Nuisance

This appendix summarises the principal legal sources, case law and legal principles relied upon in this Chapter 12 submission. It is provided to assist An Coimisiún Pleanála in identifying the legal basis for the objections raised.

Legal Source / Authority	Principle	Relevance to Chapter 12
Directive 2011/92/EU as amended by Directive 2014/52/EU	Requires likely significant environmental effects to be identified, described and assessed before development consent is granted.	Supports the objection that noise, vibration, human health and residential amenity effects must be fully assessed before permission is granted.
Article 3 of the EIA Directive	Requires assessment of direct and indirect significant effects on population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, landscape and the interaction between those factors.	Supports the argument that Chapter 12 cannot assess noise in isolation and must consider interaction with human health, residential amenity and biodiversity receptors.
Article 5 of the EIA Directive	Requires the developer to provide information necessary for assessment, including likely significant effects and mitigation measures.	Relevant where the EIAR does not provide adequate information on indoor noise, sleep disturbance, AM, low-frequency noise, tonal noise, vulnerable receptors and real-world lived impact.
Article 8a of the EIA Directive	Requires the competent authority to reach a reasoned conclusion on the significant effects of the project.	If key matters remain uncertain, unassessed or deferred to post-consent procedures, the competent authority may not be able to reach a lawful reasoned conclusion.
Wells v Secretary of State, Case C-201/02	Environmental effects must be assessed before consent is granted.	Supports the objection that monitoring, complaint procedures or future mitigation cannot substitute for complete pre-consent assessment.
Commission v Ireland, Case C-215/06	Reinforces the importance of proper and timely EIA compliance.	Relevant where the EIAR is said to be incomplete, deferred or insufficiently precise in relation to noise and human health effects.
Holohan v An Bord Pleanála, Case C-461/17	Supports the need for complete, precise and reliable information to enable lawful assessment.	Relevant to deficiencies in baseline data, receptor-specific assessment, cumulative effects and integration with Chapter 5 human health.
Article 191 TFEU — Precautionary Principle	Where there is scientific uncertainty and a plausible risk of harm, a precautionary approach is required.	Relevant to amplitude modulation, low-frequency noise, infrasound, sleep disturbance, long-term annoyance and vulnerable receptors.

Directive 2002/49/EC — Environmental Noise Directive	Recognises environmental noise as a matter affecting public health and quality of life.	Not relied upon as a direct wind-farm consent threshold, but supports the need for careful assessment of environmental noise, especially in quiet areas.
Planning and Development Act 2000, as amended	Requires proper planning and sustainable development, including consideration of residential amenity.	Supports the objection that numerical compliance does not automatically demonstrate acceptable residential amenity.
European Convention on Human Rights Act 2003 / Article 8 ECHR	Protects respect for private and family life and the home. López Ostra v Spain confirms environmental nuisance may engage Article 8 rights.	Relevant where turbine noise may affect sleep, rest and ordinary domestic life in the home.
Webster & Anor v Meenacloghspar (Wind) Limited; Shorten & Anor v Meenacloghspar (Wind) Limited [2024] IEHC 136	Wind turbine noise may substantially interfere with the use and enjoyment of homes; the character of noise including thumping and whoomphing may be important.	Supports the objection that modelled compliance alone is not enough. The Commission should assess real-world noise character, including thumping, whoomphing or amplitude modulation.
Byrne & Anor v Abo Energy Ireland Limited & Ors [2025] IEHC 330	Wind turbine noise may give rise to serious consequences where it substantially interferes with residential amenity.	Reinforces the importance of assessing actual lived impact, not merely predicted compliance with numerical thresholds.
IOA Good Practice Guide to ETSU-R-97	Provides technical good-practice guidance for wind turbine noise assessment.	Relevant to baseline monitoring, prediction methodology, cumulative noise, reporting transparency and AM considerations.
EPA NG3 Guidance	Provides Irish technical guidance relevant to wind turbine noise.	Relevant as Irish technical guidance recognising the specific character of wind turbine noise and the need for reliable, justifiable data.

Key Legal Principles Relied Upon

- **Assessment must occur before consent. Likely significant effects must be identified, described and assessed before permission is granted.**
- **Post-consent monitoring is not a substitute for assessment. Complaint procedures may assist enforcement, but they cannot cure an incomplete pre-consent EIAR.**
- **Noise is a human health and residential amenity pathway. Noise may affect sleep, stress, annoyance, quality of life and quiet enjoyment of the home.**
- **Numerical compliance is not the full planning test. Compliance with predicted limits does not automatically prove that residential amenity will be protected.**
- **Noise character matters. Tonal noise, low-frequency characteristics, pulsing, thumping and amplitude modulation may be more intrusive than steady broadband sound at the same measured level.**
- **A precautionary approach is required where uncertainty remains. Where predicted levels are close to limits or effects are difficult to predict, the assessment should be more robust, not less.**
- **The competent authority must be able to reach a reasoned conclusion. If material matters remain uncertain, unassessed or deferred, the Commission may not be in a position to reach a lawful reasoned conclusion.**

ATTACHMENT 12-D — Technical Guidance Compliance Cross-Check: IOA GPG and EPA NG3

This ATTACHMENT provides a focused cross-check of Chapter 12 against relevant technical guidance referred to in the Applicant's own assessment. The IOA Good Practice Guide to ETSU-R-97 and EPA NG3 are not relied upon as binding statutory law. They are relied upon as relevant technical guidance which assists in testing whether Chapter 12 provides sufficiently transparent, reliable and justifiable noise information for the purposes of EIA and planning assessment.

Technical Issue	Relevant Guidance Concern	Concern in Chapter 12
Representative baseline monitoring	Background monitoring should be sufficient to characterise receptors within the study area.	Monitoring at eight representative NSLs may not demonstrate actual baseline conditions at all affected dwellings.
Monitoring location transparency	Good practice supports clear reporting of monitoring locations, equipment, photographs, calibration and siting rationale.	The Commission and public should be able to understand why the chosen locations are representative.
Excluded data	Rain-affected, atypical or contaminated data should be clearly identified and excluded where appropriate.	The assessment should clearly show how excluded data were treated.
Wind speed and wind direction	Wind turbine noise varies with wind conditions and requires careful wind-related analysis.	Receptor-level predictions should clearly address wind speed, wind direction and wind shear.
Meteorological conditions	Modelling assumptions should address conditions relevant to propagation.	Appendix 12-3 states that no meteorological corrections were applied. This requires clarification where predictions are close to limits.
Worst-case propagation	Assessment should consider likely worst-case scenarios, especially where levels approach criteria.	Near-threshold results require clear explanation of modelling conservatism and uncertainty.
Receiver height and ground factor	Prediction assumptions should be transparent and justified.	The use of receiver height, ground factor and ISO 9613 assumptions should be clearly explained in relation to local conditions.
Cumulative noise	Cumulative assessment required where relevant wind turbine sources may contribute at the same receptor.	The EIAR should clearly demonstrate how cumulative turbine noise has been assessed at affected receptors.
Tonal noise	Tonal characteristics may make noise more intrusive and require assessment and control.	No tonal penalty appears to have been applied to predicted levels.
Amplitude modulation	AM is a recognised characteristic of wind turbine noise and may be difficult to predict or control.	The proposed approach appears substantially complaint-led rather

		than a complete pre-consent assessment.
Noise-reduced modes / curtailment	Constraints may be needed at certain wind speeds or directions.	The EIAR should clarify whether noise-reduced modes or directional curtailment are required and assessed.
Complaint procedures	Complaint systems may assist post-consent enforcement.	They should not be relied upon to cure unresolved assessment gaps before consent.
Reporting transparency	Technical assessment should be intelligible and capable of public participation.	Highly technical modelling should be presented clearly enough for the Commission and public to understand the basis of conclusions.

Conclusion to ATTACHMENT 12-D

The Applicant refers to technical guidance in support of Chapter 12. However, where guidance is relied upon to support conclusions of non-significance, the EIAR should clearly demonstrate compliance with the substance of that guidance. In particular, the Commission should require clarification regarding receptor-specific baseline representativeness, modelling uncertainty, meteorological assumptions, cumulative noise, tonal noise, amplitude modulation, complaint-led mitigation, noise-reduced modes or curtailment, and the treatment of receptors close to applicable criteria.

In the absence of such clarification, Chapter 12 may not provide sufficiently complete, precise and reliable technical information to support a fully informed reasoned conclusion on likely significant noise effects.

Section 13: EIAR CHAPTER 13 REVIEW

CULTURAL HERITAGE, ARCHAEOLOGY, HISTORIC LANDSCAPE AND WETLAND HERITAGE

Third Party Observer — An Coimisiún Pleanála RED III Application

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Planning Observation Report

This Planning Observation Report (Chapter 13 – Cultural Heritage, Archaeology, Historic Landscape and Wetland Heritage) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction

This Chapter 13 Planning Observation Report is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of the Environmental Impact Assessment Report (EIAR), Chapter 13 — Cultural Heritage, Archaeology, Historic Landscape and Wetland Heritage Concerns, prepared in support of the proposed Lemanaghan Wind Farm at Lemanaghan and surrounding townlands, Co. Offaly.

This submission raises serious concerns regarding the likely significant adverse effects of the proposed development on the archaeological, cultural heritage, historic landscape and wetland archaeological resource associated with Lemanaghan Bog and its wider monastic landscape.

The proposed development comprises:

- 15 wind turbines with a maximum tip height of approximately 220 metres;
- extensive access tracks and upgraded road infrastructure;
- hardstands, borrow pits and excavation works;
- underground cabling and construction compounds;
- a meteorological mast; and
- a substantial 220kV substation compound with associated electrical infrastructure.

The receiving environment is not an ordinary peatland landscape. The Applicant's own documentation repeatedly acknowledges that the wider Lemanaghan landscape contains an exceptional concentration of archaeological monuments, extensive wetland archaeology, historic routeway systems, monastic archaeology, toghers, preserved archaeological deposits and highly sensitive archaeological landscapes. The archaeological monitoring material prepared for the EIAR identifies approximately 669 SMR/RMP sites within the wider study area.

Defining Character of the Landscape

The significance of Lemanaghan derives not solely from individual protected monuments, but from the survival of an interconnected archaeological and historic landscape whose defining characteristics include bogland isolation, openness, routeway connectivity, monastic landscape setting, pilgrimage associations, and the surviving relationship between ecclesiastical settlement and wetland landscape. It is submitted that the proposed development would materially and adversely alter these defining characteristics through the industrialisation of the bog landscape at a very substantial scale.

Comments from Dr. Griffin Murray, Expert Early Medieval Ecclesiastical Objects.

"Lemanaghan is the only location where an early medieval crosier has been discovered since the 19th century (the fact that this was spread out over a considerable area indicates there may be other fragments present on this bog). Given its location, it clearly indicates that this area is associated with ecclesiastical activity at Lemanaghan and further ecclesiastical objects may be recovered. This object is on permanent display in the National Museum of Ireland, which highlights its national significance. It was discussed recently in an academic paper on Irish and Scottish medieval art (Murray 2025, 163, fig. 8.7).

Apart from excavations at Clonmacnoise, the bog is one of the only instances of the recovery of an ogham inscription on a portable object in the modern period – these are few and highly significant. This find from Leabeg was published in an academic journal (Sikora & Moore 2020)

The early medieval wooden staff from Lemanaghan featured in the largest international exhibition on the conversation to Christianity in recent years, Credo, in Paderborn, Germany. This illustrates the international importance of the finds from this area (Sikora 2013, 228-9). This object is also on permanent exhibition in the National Museum of Ireland."

2.0 Executive Planning Case and Core Request

It is respectfully submitted that permission should be refused.

In the alternative, the Commission should require significant further information, independent technical review and a revised, integrated and landscape-scale cultural heritage assessment before any positive decision could lawfully be contemplated.

The central objection is that Chapter 13 of the EIAR does not provide a complete, integrated or legally compliant assessment of the cultural heritage and archaeological impacts of the proposed development. The assessment approaches the archaeological landscape in a fragmented manner focused primarily upon mapped monument locations rather than integrated landscape integrity, monastic landscape setting, pilgrimage landscape character or cumulative industrialisation effects. In so doing, it fails to assess the significance of Lemanaghan as a nationally important interconnected archaeological and historic landscape.

2.1 Summary of Principal Chapter 13 Concerns

Issue	Planning Significance
Exceptional archaeological sensitivity	The Applicant's own documentation confirms approximately 669 SMR/RMP sites within the study area. The assessment does not reflect the integrated landscape significance of this exceptional archaeological density.
Newly discovered burials — Storm Éowyn	Excavation reports following the exposure of previously unknown burials at St Mella's Cell confirm radiocarbon dates between the 7th and 10th centuries AD, confirming continuing discovery of significant unknown archaeology within the landscape.
Wetland archaeology and bog bodies	The discovery of the Tumbeagh Bog Body and trackways at Derrynagun demonstrate the exceptional preservation conditions and continuing archaeological potential of the peatland. Proposed excavation, drainage and hydrological works pose serious irreversible risks to wetland archaeological material.
Conflict with the Conservation Plan	The Lemanaghan Conservation Plan identifies the landscape as of national significance and requires that future land use be sympathetic to that significance. Industrial-scale wind turbines and transmission infrastructure cannot reasonably be considered sympathetic to the significance of the site.
Slí Mhór Baseline Study	The Heritage Council's Slí Mhór study warned that even limited recreational access required careful assessment. Substantially greater concern must arise from industrial-scale development within the same landscape.
Community stewardship and heritage recognition	The landscape is actively managed and recognised as a heritage resource of wider public importance. The proposed development would introduce dominant industrial infrastructure fundamentally altering the character and setting of this recognised heritage landscape.
European and national obligations	The development engages obligations under the Valletta Convention, Granada Convention, European Landscape Convention and EIA Directive. The EIAR does not provide an adequate assessment of indirect effects, cumulative effects, setting impacts or cultural heritage significance at landscape scale.

Precautionary principle	Continuing discovery of unknown archaeology, exceptional archaeological density and irreversible nature of archaeological destruction require a precautionary approach that the EIAR does not apply.

3.0 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. That obligation arises under section 171A and Part XA of the Planning and Development Act 2000 (as amended), which transpose the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU into domestic Irish law.

EIA Directive

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires the likely significant effects of the project on cultural heritage and landscape to be identified, described and assessed. Article 5 and Annex IV require the EIAR to contain complete, precise, project-specific and reliable information. Article 8a requires the competent authority to reach a reasoned conclusion on the significant environmental effects of the project. That obligation is not satisfied by a monument-by-monument assessment that does not engage with integrated landscape significance, setting or cumulative effects.

Holohan and Others v An Bord Pleanála (C-461/17)

The principles in Holohan are directly relevant. The EIAR must contain complete, precise and definitive information sufficient to enable the competent authority to carry out its assessment. The assessment must also address interactions between environmental factors. In this case, the interaction between cultural heritage, archaeological landscape integrity, wetland preservation conditions, hydrological impacts and cumulative industrialisation has not been adequately assessed.

National Monuments Acts and Heritage Act 1995

The National Monuments Acts 1930–2014 provide legal protection for recorded monuments and their settings. Any development affecting the setting of a recorded monument engages the consent requirements of the legislation. The Heritage Act 1995 requires the Heritage Council to propose policies and priorities for the identification, protection, preservation and enhancement of the archaeological, architectural, cultural and natural heritage of Ireland. Both bodies of legislation are directly engaged by this application.

Valletta, Granada and European Landscape Conventions

The Valletta Convention (European Convention on the Protection of the Archaeological Heritage, 1992) requires integrated archaeological protection, preservation in situ where feasible, and integration of archaeology into planning policy. The Granada Convention (European Convention for the Protection of the Architectural Heritage, 1985) provides for the protection of architectural heritage and its settings. The European Landscape Convention requires protection of culturally significant landscapes and recognition of landscape as a component of cultural identity and heritage. These instruments are all directly relevant to the proposed development and require an assessment that goes beyond the physical footprint of individual monuments.

Lemanaghan Conservation Plan

The Lemanaghan Conservation Plan (Lotts Architecture & Urbanism Ltd., prepared for the Heritage Council and Offaly County Council, 2007) establishes conservation objectives for the Lemanaghan monastic and peatland landscape and expressly provides a framework for decision-making on future developments regarding infrastructure and land use. The Commission is respectfully requested to afford this document substantial weight in assessing the cultural heritage impacts of the proposed development. See ATTACHMENT 13A.

4.0 Core Planning Theme 1 — Applicant's Own Documentation Confirms Exceptional Archaeological Sensitivity

The Applicant's own EIAR and associated appendices repeatedly confirm the exceptional archaeological sensitivity of the receiving environment. The archaeological material identifies:

- extensive togher systems and preserved timber structures;
- gravel trackways and peatland archaeology;
- ecclesiastical remains and associated archaeological landscapes;
- Early Medieval radiocarbon dates associated with structures within the bog; and
- approximately 669 SMR/RMP sites within the wider study area.

Key Finding

The archaeological material repeatedly demonstrates that the monastic settlement, the bog landscape and the routeway systems formed an integrated archaeological and historic landscape. This is highly significant. The likely impact of the proposal cannot therefore be assessed solely by reference to isolated monuments or mapped exclusion zones. The archaeological significance of Lemanaghan derives substantially from landscape integrity, setting, connectivity and the survival of the wider bogland context.

Objection

Despite these admissions, the EIAR approaches the archaeological landscape in a fragmented manner focused primarily upon mapped monument locations and physical impact zones. This approach does not engage with the integrated significance of the landscape as confirmed by the Applicant's own archaeological material. It does not assess the effect of the proposed development on landscape integrity, monastic setting, routeway connectivity or the wider experience of the historic landscape. An assessment that acknowledges exceptional archaeological density without assessing its integrated landscape significance does not satisfy the requirements of the EIA Directive or the Holohan principles.

5.0 Core Planning Theme 2 — Newly Published Excavation Evidence: Storm Éowyn Burials at St Mella's Cell

Further significant concern arises from recently published archaeological excavation reports prepared following the exposure of previously unknown burials at St Mella's Cell after Storm Éowyn. The excavation report prepared under archaeological licence for the National Monuments Service confirms:

- multiple articulated burials;
- disarticulated human remains; and
- radiocarbon dates between the seventh and tenth centuries AD.

The report explicitly states that:

> "The monastery of Lemanaghan is itself set within a rich wetland archaeological landscape."

The report further states:

> "This important geomorphological fact meant Lemanaghan was a relatively secluded 'island monastery' historically."

Critical Significance

These findings are critically important. They confirm, after the submission of the EIAR, the continuing discovery of significant and previously unknown human remains and archaeological material within the Lemanaghan monastic

landscape. This post-submission evidence reinforces the submission that the EIAR does not adequately reflect the archaeological sensitivity and potential of the receiving environment.

The Applicant's landscape assessment must therefore be considered in the context of a landscape whose archaeological significance derives substantially from remoteness, bogland isolation, openness and the surviving relationship between the monastery and its bog landscape setting. The insertion of 220 metre turbines, substantial engineered infrastructure, major excavation works and a large electricity transmission compound would fundamentally alter those defining landscape characteristics.

Conservation Plan Framework

The excavation report also confirms that the Lemanaghan Conservation and Management Plan was intended to "provide a framework for decision-making on future developments regarding infrastructure and land use." This is highly relevant to the current application. The Conservation Plan was therefore intended to actively guide future infrastructural decisions affecting the landscape — a function that the current application does not appear to have engaged with adequately.

6.0 Core Planning Theme 3 — Bog Bodies, Human Remains and Wetland Archaeology

The wider Lemanaghan and Derrynagun bog landscape has produced nationally significant archaeological discoveries including:

- bog body remains and preserved human remains;
- toghers, trackways and associated wetland archaeological material.

The discovery of the Tumbeagh Bog Body within the wider bog complex demonstrates the exceptional preservation conditions surviving within the peatland environment. Excavations at Derrynagun identified substantial archaeological timber trackway construction and associated material. These discoveries demonstrate the continuing archaeological potential of the landscape, the existence of unknown buried archaeology and the exceptional sensitivity of the peatland environment.

Objection

Wetland archaeological resources are especially vulnerable to:

- hydrological disturbance and drainage;
- peat desiccation and changes to groundwater conditions; and
- excavation and physical disturbance.

The proposed development includes substantial excavation, road construction, drainage works, hardstands, borrow pits, peat disturbance and associated infrastructure. Substantial concern arises regarding indirect hydrological impacts, degradation of preservation conditions and the potential for irreversible loss of wetland archaeological material that remains unidentified and unmapped.

Irreversibility

Archaeological destruction is irreversible. Where the receiving environment contains an exceptional concentration of known archaeology and demonstrated continuing discovery of unknown material, the precautionary approach required by Article 191 TFEU and the Holohan principles demands that the Commission be satisfied by complete and reliable information before granting consent. That standard has not been met in respect of wetland archaeology and hydrological impact assessment in this case.

7.0 Core Planning Theme 4 — Conflict with the Lemanaghan Conservation Plan

The proposed development materially conflicts with the Heritage Council's Lemanaghan, County Offaly: Conservation Plan. The Conservation Plan repeatedly identifies the exceptional national significance of the monastic landscape, the surrounding bog, archaeological setting, routeway systems and wider historic landscape.

The Plan states:

> "the group of monuments at Lemanaghan within their setting is of national significance."

It further states:

> "The range and extent of survival of the monuments and their associated artefacts are practically unequalled in the country."

These are exceptionally strong heritage findings that have direct legal and planning implications for any proposed development in this landscape.

Importantly, the Conservation Plan specifically addresses future land use within the bog landscape and states:

> "It is important that the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."

Objection

The proposed development instead introduces industrial-scale turbines approximately 220 metres in height, extensive engineered infrastructure, substantial excavation works and a major electricity transmission compound within one of Ireland's most sensitive archaeological landscapes. It is submitted that this scale of industrial infrastructure cannot reasonably be considered "sympathetic to the significance of the site" within the meaning of the Conservation Plan. Prior industrial damage to the bog through peat extraction does not reduce the heritage significance of the landscape or justify further permanent industrialisation.

Conclusion

The EIAR does not provide a sufficient assessment of the compatibility of the proposed development with the conservation objectives established in the Lemanaghan Conservation Plan. The Commission is respectfully requested to consider the Conservation Plan in full — see ATTACHMENT 13A — when assessing the likely effects of the proposed development on this nationally significant landscape.

8.0 Core Planning Theme 5 — Slí Mhór Baseline Study and Pilgrimage Landscape

Further concern arises from the findings of the Heritage Council's Slí Mhór Baseline Study (Tubridy, M. and Associates, The Heritage Council Pilgrim Path Project, June 1999). The study identifies the exceptional archaeological and ecclesiastical sensitivity of the Lemanaghan landscape and specifically warns regarding potential impacts associated even with increased visitor access.

The consultants concluded that:

> "the spur to Lemanaghan should be omitted from the route until this study is carried out and its recommendations implemented."

Objection

This finding is highly significant. If substantial caution was considered necessary regarding limited recreational and pilgrimage access to this landscape, then substantially greater concern must arise regarding industrial-scale turbines, extensive excavation, engineered infrastructure and associated electricity transmission development within the same environment.

The Slí Mhór study repeatedly identifies:

- archaeological richness and bogland routeways;
- continuity of settlement; and
- the relationship between landscape and settlement history

as defining characteristics of Lemanaghan whose integrity is directly relevant to any assessment of the effects of the proposed development. The proposed development would materially alter these defining characteristics and has not been assessed against them in a receptor-specific or landscape-scale manner.

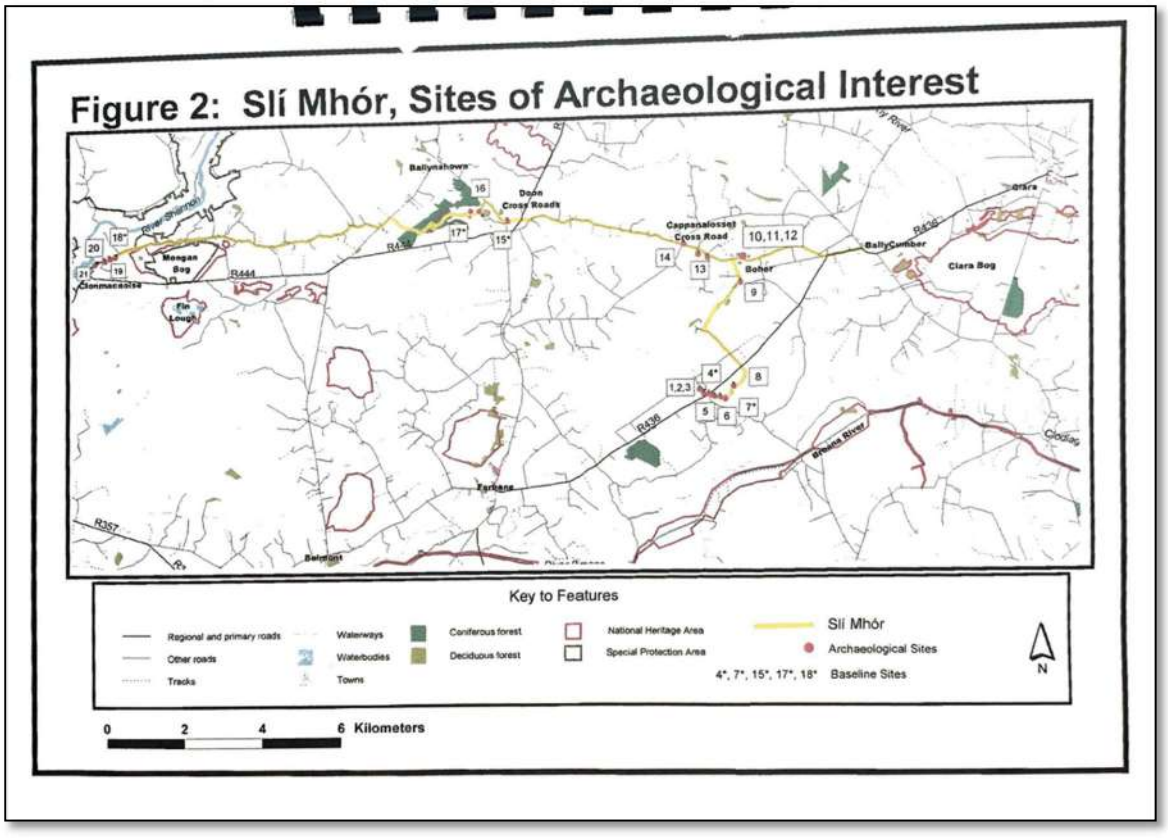


Image above: Tubridy, M. and Associates (1999) *Slí Mhór Baseline Study: The Heritage Council Pilgrim Path Project*. Dublin: Mary Tubridy and Associates, June 1999, p. 6. ***Notice*** how the path crosses the R436 and continues through Lemanaghan Bog. Copy of this study available upon request.



Image Above: Historic landscape corridor associated with the Slí Mhór Pilgrim Path linking Lemanaghan Monastic Site and Clonmacnoise. The image demonstrates the openness and landscape connectivity that contribute to the cultural and historic significance of the wider Lemanaghan monastic landscape. The pathway can be clearly seen with its stone lined causeway and vegetation growth in a straight line. in this ariel photo. Photograph: Kevin O'Dwyer (2025).

9.0 Core Planning Theme 6 — Heritage-Rich Landscape and Community Stewardship

The Heritage Council publication Best Practice in Community Management of Heritage-Rich Landscapes recognises the importance of protecting landscapes where archaeology, ecology, history, landscape character and community identity combine to create landscapes of exceptional significance. Lemanaghan clearly falls within this category.

The Heritage Council has described Lemanaghan as:

> "a sacred place of great antiquity"

and:

> "a place 'apart', possessing a strong sense of being untouched by the modern world."

Significance

The proposed development would introduce dominant industrial infrastructure into this landscape at a scale fundamentally altering its openness, remoteness, visual character and landscape setting — the very qualities identified by the Heritage Council as central to the significance of Lemanaghan.

The landscape is also the subject of ongoing community-led stewardship and conservation work. Lemanaghan Heritage and Conservation Group has received both National Heritage Week recognition and recognition through the Offaly Community and Voluntary Awards, demonstrating that the landscape is actively valued, interpreted, protected and managed as a heritage resource of wider public importance. The Commission must take account of this established community heritage role in assessing the cultural heritage significance of the landscape and the proportionality of the proposed development.

10.0 Core Planning Theme 7 — European and National Heritage Protection Obligations

The proposed development engages extensive obligations under:

- the National Monuments Acts 1930–2014;
- the Planning and Development Act 2000 (as amended);
- the Valletta Convention (European Convention on the Protection of the Archaeological Heritage, 1992);
- the Granada Convention (European Convention for the Protection of the Architectural Heritage, 1985);
- the European Landscape Convention; and
- the Environmental Impact Assessment Directive.

The Valletta Convention requires integrated archaeological protection, preservation in situ where feasible, and integration of archaeology into planning policy. The European Landscape Convention requires protection of culturally significant landscapes and recognition of landscape as a component of cultural identity and heritage. The EIA Directive requires assessment not only of direct physical effects but also indirect effects, cumulative effects, setting impacts and effects on cultural heritage significance.

Objection

A major concern arises that the EIAR approaches the archaeological landscape in a fragmented manner focused primarily upon mapped monument locations rather than:

- integrated landscape integrity;
- monastic landscape setting;
- pilgrimage landscape character; or
- cumulative industrialisation effects.

This approach does not satisfy the requirements of the Valletta and Granada Conventions, which require assessment of effects on the setting and significance of heritage assets as well as their physical fabric. Nor does it satisfy the European Landscape Convention requirement to protect landscapes where cultural identity and heritage significance derive from the landscape as a whole rather than from individual monuments. The fragmented, monument-by-monument approach adopted in Chapter 13 does not constitute a lawful and complete cultural heritage impact assessment for a landscape of this significance.

Conclusion

The EIAR does not provide an assessment that satisfies the requirements of European and national heritage protection obligations. The Commission must be satisfied by complete and reliable information that the proposed development is compatible with these obligations before consent can lawfully be granted. That satisfaction cannot be derived from an assessment that does not engage with integrated landscape significance, setting or cumulative effects.

11.0 Core Planning Theme 8 — Visual Impact and Landscape Integrity

The proposed turbines would be approximately 220 metres in height within an exceptionally flat and visually open raised bog landscape. As acknowledged throughout the heritage material, openness and bogland isolation form part of the significance of the landscape itself.

The proposed development would introduce:

- dominant moving structures of 220 metres;
- industrial aviation lighting;
- extensive engineered infrastructure; and
- a large-scale electricity transmission compound

across a landscape whose significance derives substantially from remoteness, openness and the absence of modern vertical development.

Objection

The issue is therefore not simply visibility. The issue is the fundamental alteration of landscape character and archaeological setting. The significance of the Lemanaghan monastic landscape derives from its character as a secluded island monastery within a wetland landscape. The insertion of highly visible industrial structures of exceptional height fundamentally conflicts with that defining character. The EIAR does not assess this dimension of impact in a manner that engages with the heritage significance of the landscape as described in the Conservation Plan, the Storm Éowyn excavation report or the Heritage Council's own characterisation of the site.

Key Finding

The Applicant's own LVIA acknowledges "primarily full theoretical visibility throughout the entirety" of the surrounding landscape character area. That admission, read alongside the heritage material confirming the landscape significance of openness and bogland isolation, demonstrates that the proposed development would fundamentally alter the defining characteristics of the Lemanaghan landscape. This is not a residual or minor impact. It is a direct and permanent alteration to the character and setting of a landscape of national archaeological and cultural significance.

12.0 Core Planning Theme 9 — The Precautionary Principle

The precautionary principle forms part of EU environmental law and is embedded in Article 191 TFEU and the EIA Directive framework. It is highly relevant in the context of Lemanaghan due to:

- continuing discovery of previously unknown archaeology within the landscape;
- exceptional archaeological density with approximately 669 recorded sites in the study area;
- sensitivity of wetland preservation conditions to hydrological disturbance; and
- the irreversible nature of archaeological destruction.

The recently discovered burials exposed following Storm Éowyn demonstrate that substantial archaeological resources remain undiscovered within the wider landscape. Where uncertainty exists regarding archaeological extent, preservation conditions, hydrological impacts or cumulative landscape effects, decision-makers are required to err on the side of heritage protection.

Application to This Case

In the context of Lemanaghan, the precautionary principle requires the Commission to be satisfied by complete and reliable information — not generalised assumptions or deferred survey — that the proposed development will not give rise to irreversible loss of archaeological or cultural heritage material before consent is granted. That standard has not been met. The proposed development involves substantial excavation, drainage works, borrow pits and road construction across a landscape containing an exceptional concentration of known and demonstrably undiscovered archaeology. The Commission should not grant consent in circumstances where irreversible archaeological damage cannot be excluded on the basis of objective information.

Sweetman v An Bord Pleanála (C-258/11)

The precautionary approach confirmed in Sweetman — that consent cannot be granted where reasonable scientific doubt remains as to the absence of adverse effects — is directly applicable to cultural heritage contexts where uncertainty regarding archaeological extent and preservation conditions exists. The Commission cannot be satisfied by post-consent archaeological monitoring as a substitute for a complete pre-consent assessment of likely significant effects on wetland archaeological material.

13.0 Recommended Reasons for Refusal — Chapter 13

It is respectfully submitted that permission should be refused for the following reasons, each of which is relied upon individually and cumulatively.

13.1 Failure to Assess Integrated Archaeological Landscape Significance

The EIAR does not provide an adequate assessment of the significance of Lemanaghan as an interconnected archaeological and historic landscape. The assessment is fragmented, monument-focused and does not engage with landscape integrity, setting, routeway connectivity or monastic landscape character as required by the EIA Directive, the Valletta Convention and the Holohan principles.

13.2 Post-Submission Evidence of Continuing Archaeological Discovery

The excavation reports prepared following Storm Éowyn confirm the discovery of previously unknown burials and human remains at St Mella's Cell, with radiocarbon dates between the 7th and 10th centuries AD. This post-submission evidence reinforces the submission that the EIAR does not adequately reflect the archaeological sensitivity and continuing discovery potential of the receiving environment. The Commission must take this evidence into account.

13.3 Irreversible Risk to Wetland Archaeological Material

The proposed development involves substantial excavation, road construction, drainage works, borrow pits and hydrological disturbance across a landscape containing an exceptional concentration of wetland archaeological material, including bog bodies, toghers and preserved timber structures. The EIAR does not provide an adequate assessment of the risk to wetland archaeological preservation conditions arising from hydrological impacts. This risk, once realised, would be irreversible.

13.4 Conflict with the Lemanaghan Conservation Plan

The proposed development conflicts with the conservation objectives established in the Lemanaghan Conservation Plan, which identifies the landscape as of national significance and requires that future land use be sympathetic to that significance. Industrial-scale turbines of 220 metres and associated transmission infrastructure cannot reasonably be considered sympathetic to the significance of this nationally important site.

13.5 Failure to Engage with Slí Mhór Baseline Study and Pilgrimage Landscape

The EIAR does not engage with the findings of the Heritage Council's Slí Mhór Baseline Study, which identified the exceptional sensitivity of the Lemanaghan pilgrimage landscape and recommended caution even in respect of limited recreational access. The proposed industrial-scale development is fundamentally incompatible with the pilgrimage landscape significance identified in that study.

13.6 Non-Compliance with European Heritage Protection Obligations

The proposed development engages obligations under the Valletta Convention, Granada Convention and European Landscape Convention that require assessment of effects on setting, significance and landscape

integrity rather than physical impact zones alone. The EIAR does not provide an assessment that satisfies these obligations.

13.7 Failure to Apply the Precautionary Principle

In circumstances of exceptional archaeological density, continuing discovery of unknown material and irreversible risk from hydrological disturbance, the precautionary principle requires the Commission to be satisfied by complete and reliable information before granting consent. That standard has not been met. The Commission should not grant consent where irreversible archaeological damage cannot be excluded on the basis of objective information, as required by the principles confirmed in Sweetman v An Bord Pleanála (C-258/11).

14.0 Final Conclusion

For the reasons set out above, it is respectfully submitted that Chapter 13 of the EIAR is materially deficient.

The Applicant's own documentation confirms approximately 669 SMR/RMP sites in the study area and repeated admissions of exceptional archaeological sensitivity. Newly published excavation reports confirm the continuing discovery of previously unknown burials within the monastic landscape. The Tumbeagh Bog Body and Derrynagun trackways demonstrate the exceptional preservation conditions and archaeological potential of the peatland environment. The Lemanaghan Conservation Plan identifies the landscape as of national significance and requires sympathetic future land use. The Slí Mhór Baseline Study warns of the sensitivity of the pilgrimage landscape to even limited interventions. The Heritage Council has described Lemanaghan as a sacred place of great antiquity with a strong sense of being untouched by the modern world. The EIAR does not assess the effects of the proposed development against any of these established heritage frameworks in a manner that is complete, integrated or landscape-specific.

These deficiencies are cumulative and mutually reinforcing. They affect the baseline, the impact assessment, the alternatives assessment and the heritage compliance demonstration. Taken together, they mean that Chapter 13 does not provide a complete, precise or reliable basis for An Coimisiún Pleanála to reach a lawful reasoned conclusion on the likely significant effects of the proposed development on cultural heritage, archaeological heritage, historic landscape and wetland archaeology.

Core Submission

An Coimisiún Pleanála is respectfully requested to refuse permission. In the alternative, no positive decision should be contemplated unless and until the Applicant provides a complete, integrated, landscape-scale cultural heritage assessment that engages with the conservation objectives of the Lemanaghan Conservation Plan, addresses the findings of the Storm Éowyn excavation reports, assesses the risk to wetland archaeological preservation conditions arising from hydrological disturbance, and demonstrates compatibility with the Valletta Convention, Granada Convention, European Landscape Convention and all other applicable heritage protection obligations.

15.0 Final Statement

The community is not opposed to renewable energy. It is opposed to the selection of Lemanaghan Bog for a development of this scale where significant cultural heritage, archaeological and landscape concerns have not been resolved.

Lemanaghan is not an ordinary peatland. It is a place of exceptional national archaeological significance, internationally important wetland archaeology, profound spiritual and pilgrimage heritage, and an actively stewarded community heritage landscape. Its significance derives from the integrated character of the monastic

landscape, its bogland isolation and openness, and the survival of a connected system of monuments, routeways and heritage features that together tell the story of over two thousand years of human presence in this landscape.

The proposed development would introduce dominant industrial infrastructure into this landscape at a scale that would fundamentally and permanently alter its character, integrity and significance. It is respectfully submitted that the proposed development should be refused permission for the reasons set out in this submission, individually and cumulatively.

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Note on Reference Availability

Where references to third-party publications include URLs, these were verified as accessible at the time of submission. Where printed or unpublished sources are cited, copies are available on request.

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SECTION 13 ATTACHMENT 13A — **Reference to the Lemanaghan Conservation Plan**

The observers respectfully invite An Coimisiún Pleanála to review in full the following document:

Lemanaghan, County Offaly: Conservation Plan
Prepared for The Heritage Council and Offaly County Council
By Lotts Architecture & Urbanism Ltd. (2007)
Available at:
https://www.heritagecouncil.ie/content/files/lemanaghan_county_offaly_conservation_plan_2007_2mb.pdf

This document is highly relevant to the proper assessment of the proposed development and should be afforded substantial weight in the consideration of likely impacts on:

- archaeological heritage and cultural heritage;
- historic landscape character and monastic landscape setting;
- pilgrimage landscape integrity; and
- wider bogland landscape character.

The Conservation Plan was prepared specifically to:

- identify the significance of the Lemanaghan landscape;
- establish appropriate conservation objectives; and
- provide guidance regarding future land use and infrastructural decision-making affecting the area.

Importantly, the Plan repeatedly recognises:

- the exceptional national significance of the Lemanaghan landscape;
- the inseparable relationship between the monastic complex and the surrounding bog;
- the archaeological importance of the wider bog landscape; and
- the importance of protecting the integrity and setting of the landscape as a whole.

The Plan states:

> "the group of monuments at Lemanaghan within their setting is of national significance."

It further states:

> "The range and extent of survival of the monuments and their associated artefacts are practically unequalled in the country."

The Plan also specifically addresses future land use within the bog landscape and states:

> "It is important that the options considered for the post-industrial use of the bog are sympathetic to the significance of the site."

The observers respectfully submit that these findings are directly relevant to the current application and should be carefully considered in assessing the appropriateness of large-scale industrial infrastructure within the landscape, the likely impacts on heritage significance and landscape integrity, and the compatibility of the proposed development with established conservation objectives for Lemanaghan.

The observers respectfully request that An Coimisiún Pleanála consider the Conservation Plan in full when assessing the likely effects of the proposed development on this nationally significant archaeological and historic landscape.

Section 14: EIAR CHAPTER 14 REVIEW

Landscape, Visual Amenity and Cultural Landscape Impacts

Planning Observation Report

This Planning Observation Report (Chapter 14 – Landscape, Visual Amenity and Cultural Landscape Impacts) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction

This Chapter 14 Planning Observation Report is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of the Environmental Impact Assessment Report (EIAR), Chapter 14 — Landscape, Visual Amenity and Cultural Landscape Impacts, prepared in support of the proposed Lemanaghan Wind Farm development at Lemanaghan and surrounding townlands, Co. Offaly.

The proposed development comprises 15 no. wind turbines of up to 220 metres tip height, a permanent 220kV on-site substation, internal access roads, turbine hardstands, borrow pits, peat deposition areas, grid connection infrastructure and associated works.

This submission raises serious concerns regarding the landscape, visual and cultural landscape impacts arising from the proposed development, particularly having regard to:

- the exceptional scale of the proposed turbines and associated electrical infrastructure;
- the open and low-lying character of the Midlands peatland landscape;
- the sensitivity of the wider Lemanaghan monastic and historic landscape;
- the cumulative industrialisation of the Boora peatland complex; and
- the objectives of the Lemanaghan Conservation Plan regarding preservation of the historic landscape setting and protection of important views and visual relationships.

The Applicant's own Landscape and Visual Impact Assessment (LVIA) expressly acknowledges that the proposed turbines constitute the "essential aspect" of the development from a landscape and visual perspective due to their "tall, vertical nature" and potential to give rise to significant landscape and visual effects.

2.0 Executive Planning Case and Core Request

It is respectfully submitted that permission should be refused.

In the alternative, the Commission should require significant further information, independent technical review and a revised, receptor-specific and integrated assessment before any positive decision could lawfully be contemplated.

The central objection is that Chapter 14 of the EIAR does not adequately assess or justify the landscape, visual and cultural landscape impacts of the proposed development. The LVIA acknowledges the openness of the receiving environment and the extensive theoretical visibility of the proposed turbines across the surrounding landscape, yet does not translate those findings into a complete, receptor-specific and integrated assessment of the effects on the historic and cultural landscape of Lemanaghan.

2.1 Summary of Principal Chapter 14 Concerns

Issue	Planning Significance
Exceptional turbine scale	The proposed turbines of 220 metres tip height are among the largest ever proposed in Ireland and would be located within one of the flattest and most open landscapes in the Midlands region. Their visual prominence over extensive distances is acknowledged by the Applicant's own LVIA.
Lemanaghan monastic landscape	The Lemanaghan Conservation Plan places considerable emphasis on preserving the setting, landscape context and important views associated with the monastic complex. The EIAR does not adequately demonstrate that the development is compatible with these conservation objectives.

220kV GIS substation scale	The proposed substation compound including a 21-metre GIS building, steel gantries, transmission towers and extensive hardstanding constitutes a major industrial installation within an open peatland landscape and has not been adequately assessed as a landscape feature in its own right.
Cumulative industrialisation	The development must be assessed against the existing, approved and proposed concentration of wind and energy infrastructure in County Offaly and the wider Midlands peatland landscape. The cumulative transformation of this landscape has not been adequately evaluated.
Mitigation inadequacy	Proposed mitigation planting cannot realistically achieve meaningful screening within exposed peatland conditions over the short to medium term for structures of this scale.
Archaeological and cultural landscape	The wider Lemanaghan landscape contains internationally significant archaeological and heritage assets. The EIAR does not adequately assess the impact of the development on the visual and cultural landscape context of these assets.

3.0 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. That obligation arises under section 171A and Part XA of the Planning and Development Act 2000 (as amended), which transpose the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU into domestic Irish law.

EIA Directive

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires the likely significant effects of the project on landscape and cultural heritage to be identified, described and assessed. Article 5 and Annex IV require the EIAR to contain complete, precise, project-specific and reliable information. Article 8a requires the competent authority to reach a reasoned conclusion on the significant environmental effects of the project. That obligation is not satisfied by generalised literature, non-site-specific comparisons, or unsupported conclusions of "not significant".

Holohan and Others v An Bord Pleanála (C-461/17)

The principles in Holohan are directly relevant. The EIAR must contain complete, precise and definitive information sufficient to enable the competent authority to carry out its assessment. The assessment must also address interactions between environmental factors. In this case, the interaction between landscape impact, cultural heritage, visual amenity, the Lemanaghan Conservation Plan, cumulative infrastructure concentration and community wellbeing is not adequately assessed.

Wind Energy Development Guidelines and Development Plan

The Wind Energy Development Guidelines 2006 remain the applicable national guidance on wind energy development. The Offaly County Development Plan 2021–2027 contains policies relevant to landscape character, visual amenity, cultural heritage, landscape sensitivity and wind-energy siting. The Applicant's own Appendix 13-5 records that the wind-energy zoning alteration around the Lemanaghan Monastic Site was introduced specifically to protect the character of the Lemanaghan Monastic Site. The development must be assessed against these policies.

Lemanaghan Conservation Plan

The Lemanaghan Conservation Plan, published by the Heritage Council in 2007, establishes conservation objectives for the Lemanaghan monastic and peatland landscape. It places particular emphasis on preserving the setting, landscape context, openness and important views associated with the monastic complex and surrounding bog environment. Any development in the vicinity of the site must be assessed against these conservation objectives. It is respectfully submitted that the EIAR does not provide a sufficiently detailed or receptor-specific assessment of impacts on the conservation values identified within the Conservation Plan.

4.0 Core Planning Theme 1 — Scale and Visual Prominence of the Proposed Turbines

The EIAR confirms that the development would comprise turbines with:

- a tip height of 220 metres;
- hub heights of 145 metres; and
- rotor diameters of 150 metres.

In the context of the exceptionally flat and open Midlands peatland landscape, structures of this scale are likely to remain highly visually prominent across extensive distances and from numerous sensitive receptors including the Lemanaghan monastic complex, pilgrimage routes, graveyards, heritage landscapes, recreational routes, rural settlements and surrounding peatland landscapes.

Applicant's Own Admission

The LVIA itself acknowledges that there is "primarily full theoretical visibility throughout the entirety" of the surrounding landscape character area. This is a significant admission. A development that dominates the theoretical field of view throughout an entire landscape character area cannot be characterised as having an acceptable visual impact.

Objection

The LVIA places significant reliance on theoretical screening through intermittent vegetation and distance attenuation, while underestimating the visual consequences of introducing structures of exceptional vertical scale into one of the flattest and most open landscapes within the Midlands region. The Applicant's own assessment confirms that the turbines constitute the "essential aspect" of the development due to their "tall, vertical nature" and potential to give rise to significant landscape and visual effects. That admission is not reflected in a sufficiently precautionary assessment of the receiving environment.

Conclusion

The proposed turbines would be among the largest ever proposed in Ireland. Their visual prominence over extensive distances within an open peatland landscape is acknowledged by the Applicant's own assessment. The EIAR does not provide a receptor-specific assessment of how this prominence would affect the experience of residents, visitors, pilgrims and those with connections to the historic landscape of Lemanaghan.

5.0 Core Planning Theme 2 — The Lemanaghan Conservation Plan and Monastic Landscape Setting

The Lemanaghan Conservation Plan places considerable emphasis on the importance of preserving the setting, landscape context and visual relationships associated with the monastic complex and surrounding peatland environment. The conservation strategy recognises that the significance of Lemanaghan extends beyond the immediate archaeological remains themselves and includes the wider bog landscape setting, openness and historic visual character of the area.

Particular emphasis is placed within the Conservation Plan on maintaining the integrity of important views and avoiding inappropriate visual intrusion within the historic monastic landscape. The Conservation Plan records, at

Land Use Policy 8, objectives relating to the protection of the setting, landscape context and important views associated with St Managhan's Church and the wider Lemanaghan monastic landscape.

The Conservation Plan further highlights the importance of sensitive landscape management, preservation of the natural and archaeological setting of Lemanaghan, protection of views towards St Managhan's Church, and the requirement that future land use and post-industrial bog reuse remain sympathetic to the significance of the site.

Objection

It is respectfully submitted that the insertion of 220 metre industrial wind turbines and extensive transmission infrastructure into this historically open peatland landscape has the potential to fundamentally alter the visual character, setting and experiential qualities of the wider Lemanaghan landscape in a manner not adequately reflected within the EIAR. The issue is not confined solely to direct visibility from individual monuments. Concern arises regarding:

- the cumulative industrialisation of the wider monastic landscape;
- the alteration of historically open views across the peatland landscape;
- the introduction of dominant moving vertical structures into a low-lying historic landscape; and
- the erosion of the visual relationship between the monastic complex and its surrounding bog environment.

Key Finding

Prior industrial damage to a landscape is not a planning justification for further permanent industrialisation. The cutaway history of Lemanaghan Bog does not diminish the significance of the monastic landscape or the conservation objectives that have been established for it. A recovering peatland, cultural landscape and rural residential setting can be sensitive precisely because it is open, flat and visually connected.

Conclusion

The EIAR does not provide a sufficiently detailed or receptor-specific assessment of the impact of the proposed development on the conservation values identified within the Lemanaghan Conservation Plan. The Commission cannot reach a reliable reasoned conclusion on landscape and cultural landscape impacts without a complete assessment that engages with the specific conservation objectives applicable to this site.

6.0 Core Planning Theme 3 — Scale and Impact of the 220kV GIS Substation and Transmission Infrastructure

The EIAR confirms that the proposed 220kV GIS substation would comprise:

- a substantial industrial compound;
- a GIS building with an above-ground height of approximately 21 metres;
- extensive gantry structures;
- ancillary electrical infrastructure; and
- associated 28 metre transmission towers.

The scale, bulk and massing of this infrastructure appear highly substantial within the context of an open peatland landscape characterised by very limited natural screening and minimal topographic containment.

Objection

The proposed 220kV GIS substation cannot reasonably be characterised as minor ancillary infrastructure. Rather, the EIAR confirms the development would introduce a large-scale permanent electrical compound of substantial industrial character into an historically open peatland and monastic landscape. The combination of the GIS building, extensive hardstanding, steel gantries, security infrastructure, lighting, fencing, transmission towers and associated electrical plant would create a visually prominent and highly engineered infrastructure complex within a landscape presently characterised by openness, low relief and relatively limited built form.

Particular concern also arises regarding the apparent scale and specification of the proposed transmission infrastructure relative to the scale of the proposed wind farm itself. It is notable that the proposed Lemanaghan development comprises 15 turbines, yet includes extensive 220kV GIS infrastructure, a substantial electrical compound, IPP Control Building, transmission towers and associated export infrastructure of a scale that appears materially greater than that associated with certain larger operational peatland wind farms in the Midlands region.

Comparative Analysis

The operational Derrinlough Wind Farm, comprising 21 turbines, utilised a 110kV grid connection arrangement. In contrast, the current proposal includes extensive 220kV transmission-scale infrastructure notwithstanding the smaller turbine number proposed at Lemanaghan. While grid connection design is influenced by multiple engineering and network considerations, the scale and permanence of the infrastructure now proposed raises legitimate planning questions regarding the proportionality of the electrical infrastructure and whether future renewable generation or export requirements may have informed the infrastructure design strategy.

Conclusion

Insufficient consideration has been given to whether infrastructure of this scale and industrial appearance can be appropriately assimilated into the receiving environment without materially altering the landscape character and setting of the wider Lemanaghan area. The EIAR does not provide an adequate landscape assessment of the substation and associated transmission infrastructure as standalone landscape features within the receiving environment.

7.0 Core Planning Theme 4 — Cumulative Industrialisation of the Wider Peatland Landscape

The development must be assessed against the existing, approved and proposed concentration of wind and energy infrastructure in County Offaly and the wider Midlands peatland landscape. The cumulative issue is not merely whether another wind farm appears in a photomontage. The issue is the cumulative transformation of the county's peatland and rural landscape into an energy infrastructure zone.

The Commission should examine cumulative effects on:

- landscape character and visual dominance;
- sequential views from roads, homes, settlements, heritage routes and elevated viewpoints;
- the setting of the monastic landscape and cultural heritage assets;
- community identity and sense of place;
- residential amenity, including combined visibility, noise, shadow flicker and stress; and
- peatland hydrology and fragmented restoration potential across bog systems.

Objection

The Applicant's approach appears to assess cumulative impacts in project-by-project technical compartments rather than as a regional planning and landscape-capacity question. That is inadequate. County Offaly's historic contribution to national energy production does not justify a continuing concentration of infrastructure without a clear assessment of environmental limits and community burden.

Strategic Concern

The cumulative transformation of the Midlands peatland landscape raises broader questions regarding whether the long-term objectives of the Just Transition process are being fully realised in practice. A genuinely balanced Just Transition should safeguard landscape quality, environmental sustainability, cultural heritage and community wellbeing — not solely facilitate the concentration of industrial-scale energy infrastructure. One

region should not carry a disproportionate concentration of national-scale infrastructure without equivalent strategic consideration of cumulative environmental and social effects.

Conclusion

The EIAR does not adequately assess the cumulative landscape and visual impact of the proposed development in the context of the wider pattern of existing, permitted and proposed energy infrastructure in the Midlands region. The Commission should require a full cumulative landscape capacity assessment at regional scale before any positive decision is made.

8.0 Core Planning Theme 5 — Inadequacy of Proposed Mitigation Measures

While mitigation planting is referenced within the EIAR, it is respectfully submitted that newly planted vegetation would require many years, if not decades, to establish meaningful screening within exposed peatland conditions and cannot realistically mitigate the visual prominence of structures of this scale within the short to medium term.

Objection

The LVIA places significant reliance on theoretical screening through intermittent vegetation and distance attenuation, while underestimating the visual consequences of introducing structures of exceptional vertical scale into one of the flattest and most open landscapes within the Midlands region. In a landscape characterised by very limited topographic containment and minimal existing vegetation structure, the effectiveness of planting-based mitigation for structures of 220 metres is not credibly demonstrated within the EIAR.

It is also noted that the commitment to establishing effective landscape mitigation within an actively managed peatland rehabilitation area raises additional practical questions regarding the compatibility of proposed planting with ongoing hydrological restoration and rewetting objectives. The EIAR does not address this potential incompatibility.

Conclusion

Post-consent mitigation cannot substitute for design-stage avoidance and minimisation. Where the assessment has not demonstrated that the landscape and visual impacts of a development are acceptable at design stage, reliance on future planting that may take decades to achieve meaningful effect does not provide an adequate basis for a positive planning decision. The Commission must be satisfied that the proposed development is acceptable in landscape terms in its proposed form, not in an aspirational future state.

9.0 Core Planning Theme 6 — Archaeological and Cultural Landscape Significance

The receiving environment is not an ordinary rural landscape. The wider Lemanaghan landscape is:

- historically significant;
- archaeologically sensitive;
- culturally important; and
- strongly associated with pilgrimage, monastic heritage and peatland identity.

The experiential quality of openness, remoteness and visual connection across the bog landscape forms part of the significance and character of the area. The archaeological record within the wider Lemanaghan bog landscape is extensive and spans thousands of years of human activity, including Neolithic artefacts, Bronze Age structures, Iron Age bog bodies, early medieval ecclesiastical remains, ancient trackways (toghers), ringforts, cashels and enclosures distributed across the wider peatland landscape.

Objection

Accordingly, serious concern arises that the proposed development would materially and permanently alter:

- the visual character of the wider peatland landscape;
- the setting of the Lemanaghan monastic landscape;
- protected and sensitive views;
- the perception of openness across the bog landscape; and
- the historic landscape context identified within the Lemanaghan Conservation Plan.

In circumstances where the Applicant proposes turbines of exceptional height, extensive transmission infrastructure, a large-scale 220kV substation compound and substantial industrial infrastructure within an open peatland landscape, the Commission must carefully consider whether the landscape, visual and cultural landscape impacts have been adequately assessed and whether the proposed mitigation measures are realistically capable of assimilating infrastructure of this scale into such a historically and visually sensitive receiving environment.

Conclusion

The EIAR does not provide a sufficiently complete, precise or reliable assessment of the cultural landscape impacts of the proposed development. The Commission cannot reach a reliable reasoned conclusion on the effects of the development on the archaeological and cultural landscape of Lemanaghan without a receptor-specific assessment that engages with the full range and significance of heritage assets within and around the receiving environment.

10.0 Archaeological Image Record — Supporting Evidence

The following image record is submitted in support of the objections raised in Section 9.0 above. These images are provided to illustrate the archaeological richness, cultural landscape significance and heritage sensitivity of the wider Lemanaghan peatland landscape. They are relied upon as contextual evidence supporting the submission that the EIAR does not provide an adequate assessment of the impact of the proposed development on this historic landscape.

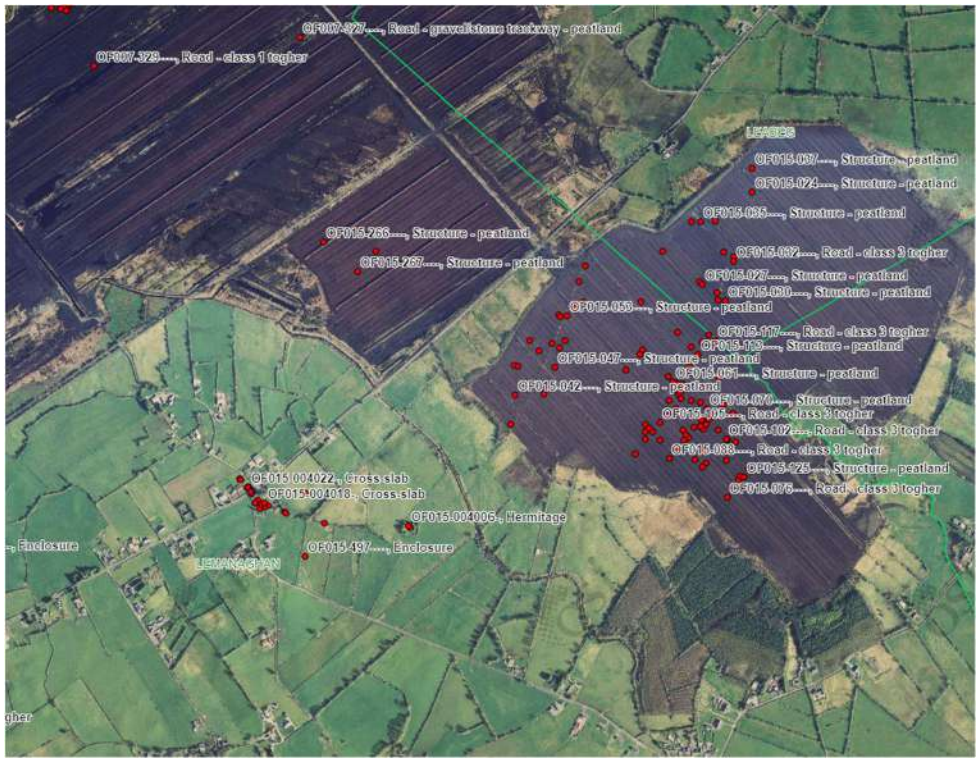


Image 1

Lemanaghan and Leabeg — Red dots show recorded sites and monuments across the peatlands, including ancient trackways, structures and enclosures. This area illustrates the archaeological richness of the Lemanaghan bog landscape.



Image 2

Lemanaghan village — The cluster of red dots marks important monuments such as the ecclesiastical enclosure, church, holy well and Saint Mellas Cell. These features highlight Lemanaghan's significance as a monastic site.

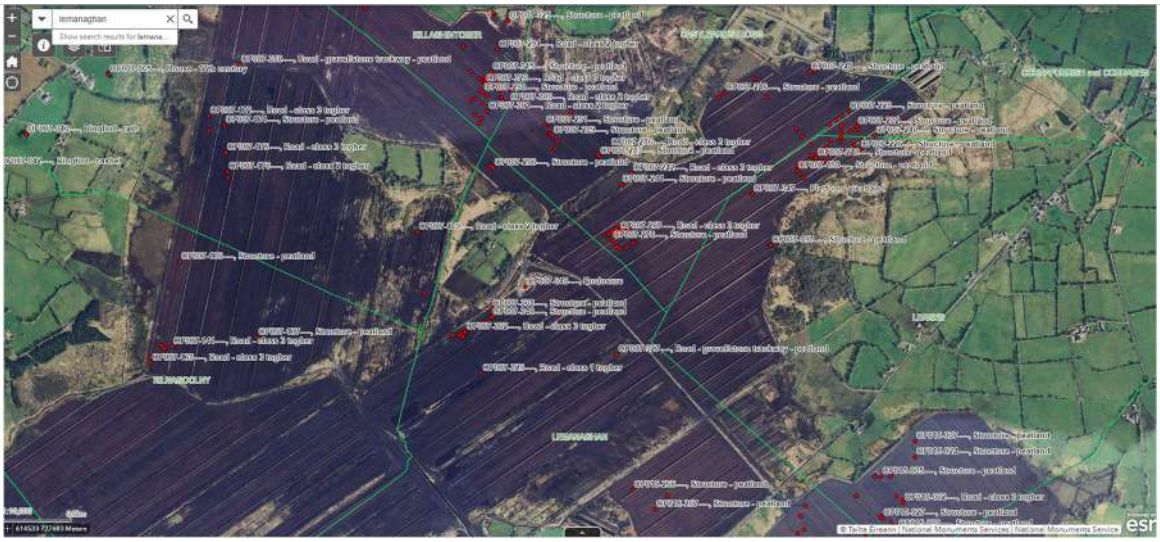


Image 3

Kilnagoolny and Tumbeg areas of Lemanaghan Bog — A dense spread of recorded sites including toghers (ancient roads) and peatland structures. The green boundary lines mark townlands and bog extents, showing the concentration of archaeology within the peat.

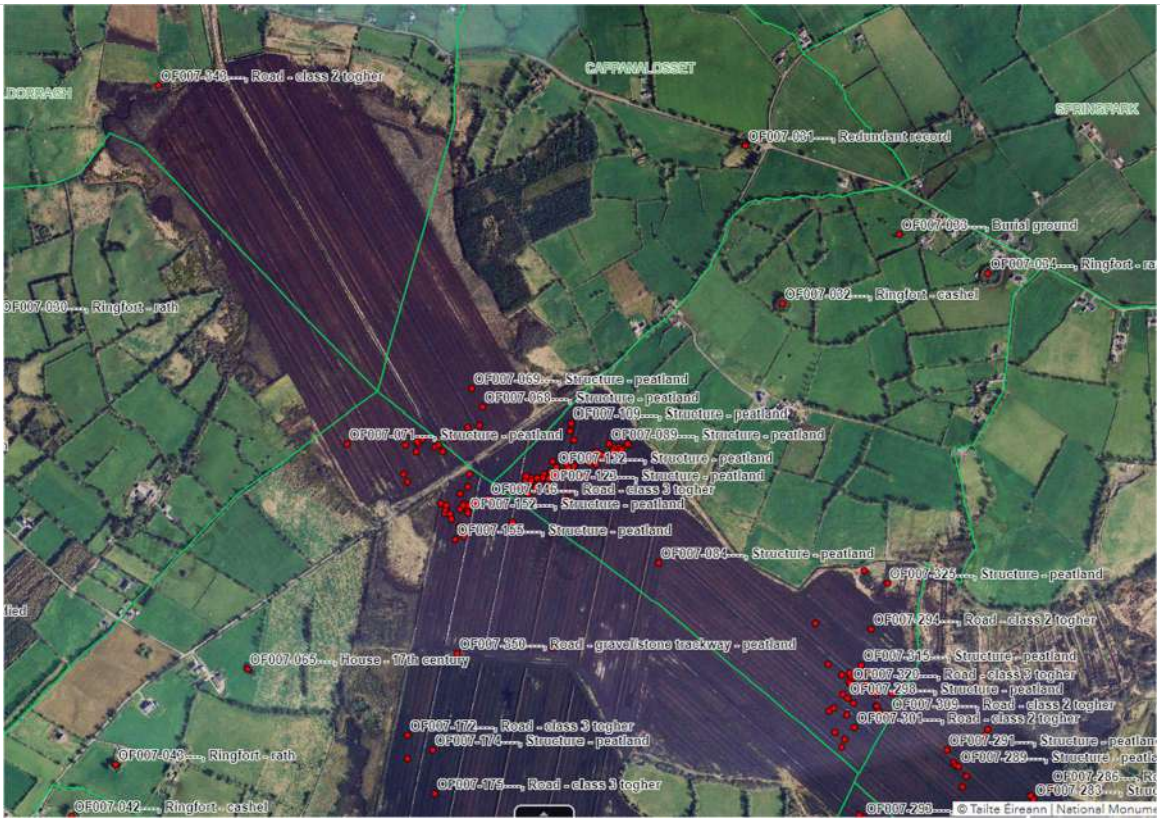


Image 4

Cappanalosset, Cooldorragh and Tumbeg areas of Lemanaghan Bog — Numerous archaeological records appear across the bog, including ringforts, cashels and peatland structures. The map shows how the archaeological landscape extends beyond the core monastic area.

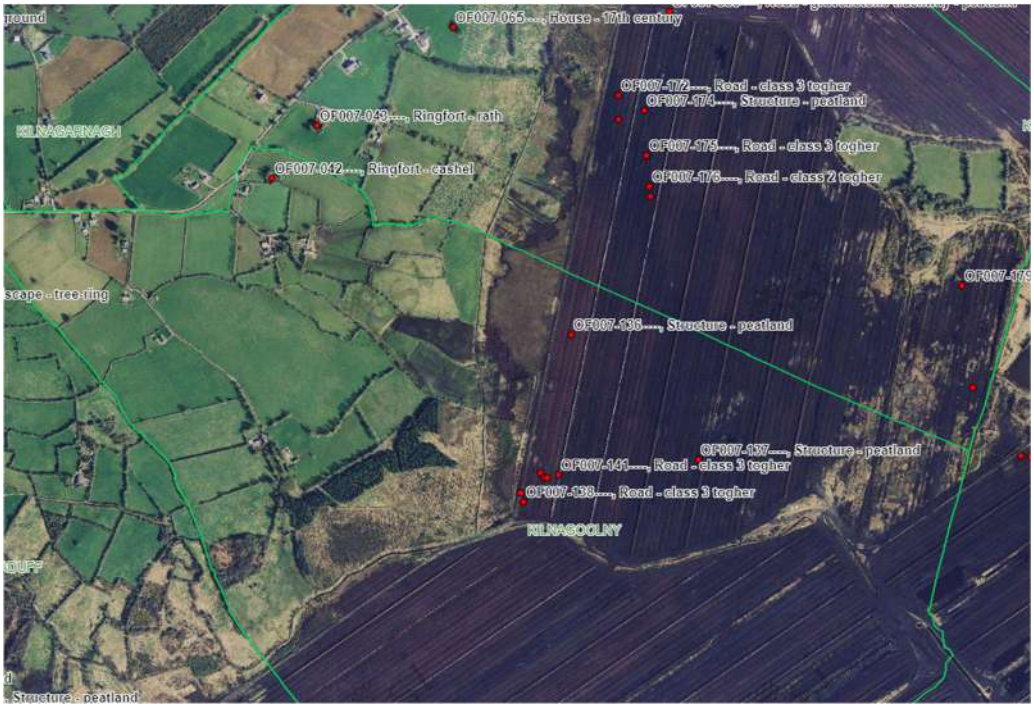


Image 5

Kilnagarnach and Kilnagoolny part of Lemanaghan Bog — This map reveals further ringforts, early roadways and peatland structures. It demonstrates how human activity was spread throughout the wider Lemanaghan environment.

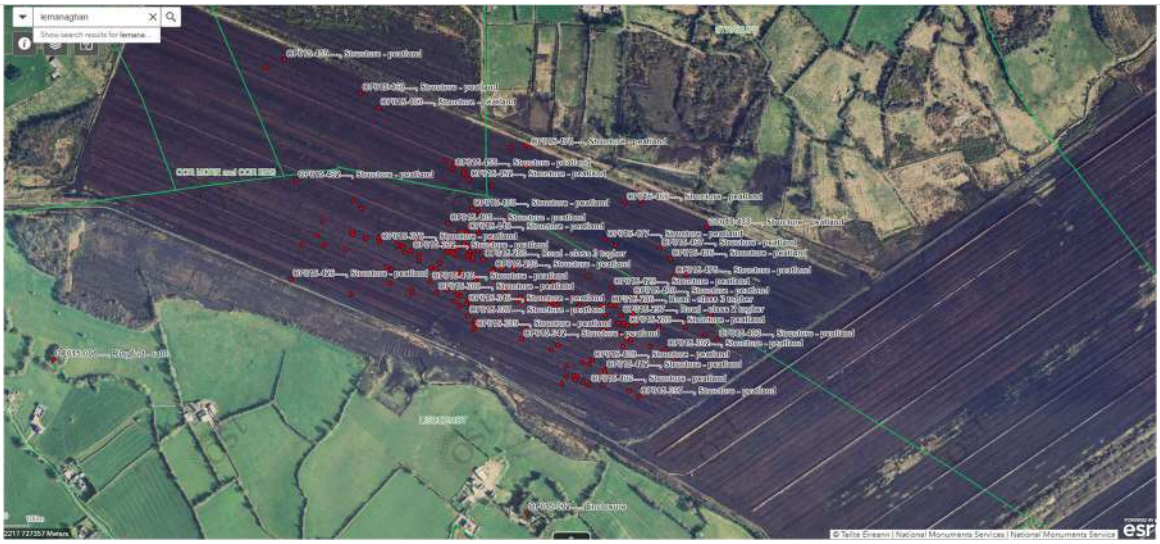


Image 6

Cormore and Corbeg, Lisdermot areas of Lemanaghan Bog — A wide view showing the density of archaeological features across the peatlands. The concentration of red dots reflects extensive human use and activity in this area over thousands of years.

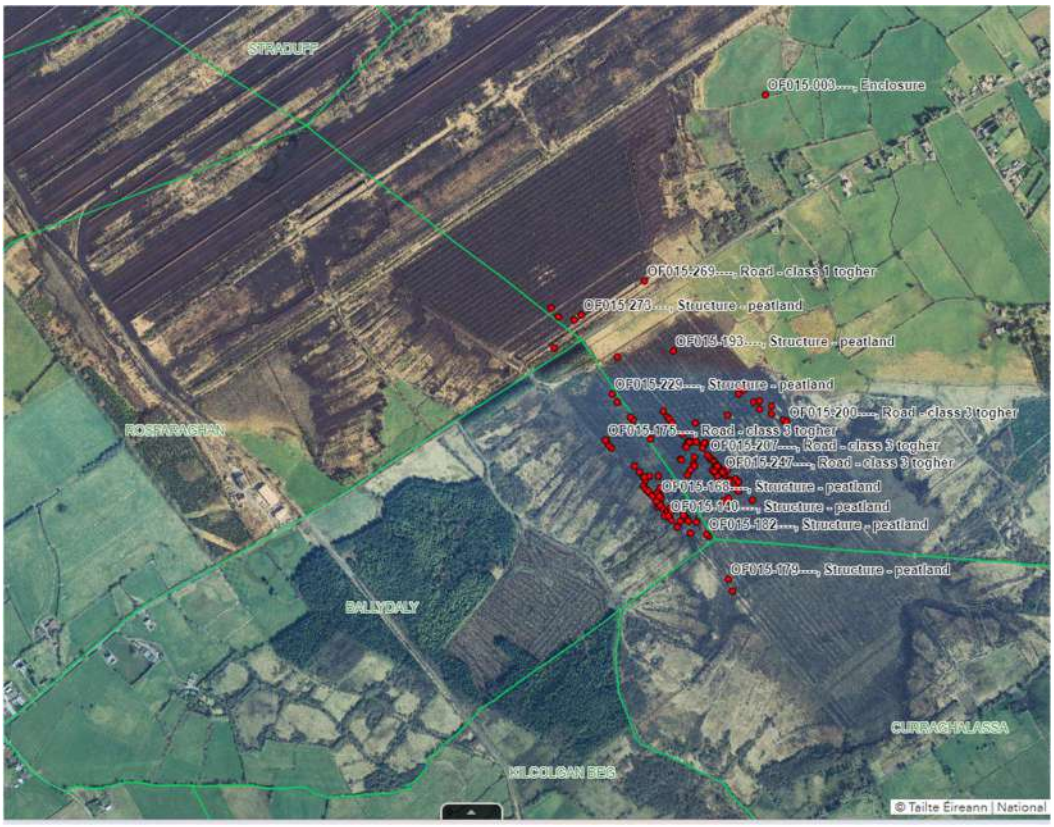


Image 7

Rosfaraghan, Ballydaly and Curraghalassa areas of Lemanaghan Bog — The red dots represent numerous recorded structures, toghers and enclosures across the bog. These features show how the wider Lemanaghan landscape forms part of a connected archaeological system.



Image 8

The Tumbeagh Bog Body — Discovered in Lemanaghan Bog, County Offaly, this remarkably preserved body dates from the 2nd century BCE, meaning it is over 2,200 years old. The remains were naturally mummified by the peat's acidic, low-oxygen conditions, which preserved skin, muscle and hair. Such bog bodies offer rare and invaluable insights into early Irish life, death and ritual practices.



Image 9

11th-Century Crosier, Lemanaghan Bog — This finely crafted crosier fragment was discovered in Lemanaghan Bog, County Offaly. Dating from the 11th century, it would have belonged to a high-ranking ecclesiastical figure, symbolising authority and spiritual leadership within the monastic community.

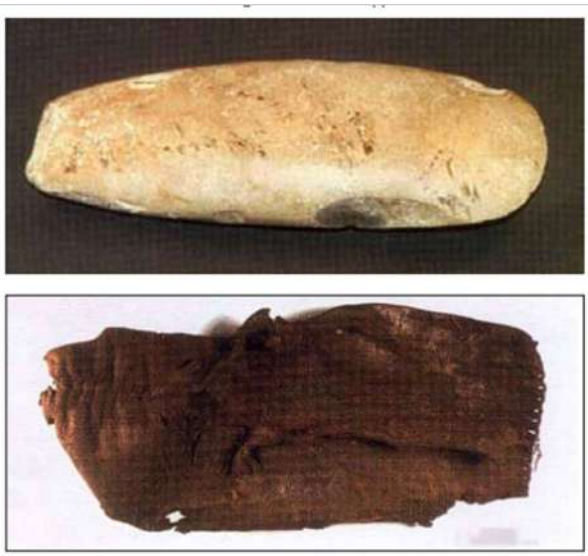


Image 10

Artefacts from Corhill Bog, near Lemanaghan — The polished stone axe-head (top) dates from the Neolithic period, showing early human activity in the area thousands of years ago. The leather shoe (bottom), discovered in the same bog and dating from the medieval period, offers a glimpse into daily life in early Irish society.



Image 11

St. Mella's Cell, Lemanaghan — This small stone structure is traditionally associated with St. Mella, mother of St. Manchan, and forms part of the early monastic complex at Lemanaghan. Believed to date from the early Christian period, the cell marks an important site of prayer and retreat within the monastic landscape. Its simple stonework and secluded setting reflect the early Irish monastic tradition of solitude and devotion.



Image 12

Lemanaghan Monastic Site and Cemetery, County Offaly — The remains of the medieval church at Lemanaghan stand at the heart of an ancient monastic landscape founded by St. Manchan in the 7th century.



Image 13

Early medieval cross-slab at Lemanaghan, County Offaly — This beautifully carved stone features an intricate interlaced pattern typical of early Christian art in Ireland.



Image 14

St. Manchan's Holy Well, Lemanaghan — This sacred well is traditionally associated with St. Manchan and has been a site of pilgrimage and devotion for centuries.

11.0 Recommended Reasons for Refusal — Chapter 14

It is respectfully submitted that permission should be refused for the following reasons, each of which is relied upon individually and cumulatively.

11.1 Exceptional Turbine Scale and Visual Prominence

The proposed turbines of 220 metres tip height would introduce structures of exceptional vertical scale into one of the flattest and most open landscapes in the Midlands region. The Applicant's own LVIA acknowledges full theoretical visibility throughout the landscape character area. The proposed development would give rise to widespread and dominant visual effects that are not adequately assessed or justified, contrary to proper planning and sustainable development and the applicable landscape and visual impact assessment requirements under the EIA Directive.

11.2 Conflict with the Lemanaghan Conservation Plan

The EIAR does not adequately demonstrate that the proposed development is compatible with the conservation objectives and land use policies established within the Lemanaghan Conservation Plan. The development would materially alter the visual character, setting and experiential qualities of the wider Lemanaghan monastic landscape, contrary to the conservation objectives applicable to this site and the requirements of the Offaly County Development Plan.

11.3 Scale and Impact of Transmission Infrastructure

The proposed 220kV GIS substation, IPP Control Building, transmission towers and associated electrical infrastructure constitute a major industrial installation of exceptional scale within an open peatland landscape. The EIAR does not provide an adequate landscape assessment of this infrastructure as a standalone landscape element and does not demonstrate that it can be appropriately assimilated into the receiving environment.

11.4 Failure to Assess Cumulative Landscape Impact

The EIAR does not adequately assess the cumulative landscape and visual impact of the proposed development in the context of the wider pattern of existing, permitted and proposed energy infrastructure in County Offaly and the Midlands region. The cumulative transformation of the peatland landscape into an energy infrastructure zone has not been evaluated at an appropriate scale or with sufficient depth.

11.5 Inadequacy of Mitigation Measures

The proposed landscape mitigation, including planting schemes, is not realistically capable of achieving meaningful screening of structures of 220 metres within exposed peatland conditions over the short to medium term. Post-consent mitigation cannot substitute for design-stage landscape integration. The development has not been demonstrated to be acceptable in its proposed form.

11.6 Failure to Assess Cultural Landscape Impacts

The EIAR does not provide a sufficiently complete, precise or reliable assessment of the impacts of the proposed development on the archaeological and cultural landscape of the wider Lemanaghan area. The extensive archaeological record distributed across the peatland landscape — including toghers, ringforts, ecclesiastical remains, bog bodies and internationally significant artefacts — has not been adequately considered in the context of visual and cultural landscape assessment.

12.0 Final Conclusion

For the reasons set out above, it is respectfully submitted that Chapter 14 of the EIAR is materially deficient.

The Applicant's own LVIA acknowledges full theoretical visibility of the proposed turbines throughout the surrounding landscape character area. The conservation objectives of the Lemanaghan Conservation Plan

emphasise the protection of setting, openness and important views within the historic monastic landscape. The proposed 220kV substation and transmission infrastructure constitute a major industrial installation the landscape impact of which has not been adequately assessed. The cumulative industrialisation of the wider peatland landscape has not been evaluated at an appropriate scale. The proposed mitigation measures are not realistically capable of addressing the visual impact of structures of this scale within an open peatland environment. The cultural landscape significance of the wider Lemanaghan area — including its internationally important archaeological record — has not been adequately incorporated into the landscape and visual assessment.

This is not a case where minor clarification or standard planning conditions would be sufficient. The deficiencies go to the core of the landscape and cultural heritage assessment and affect the ability of the Commission to understand the true visual and landscape consequences of the proposed development for this historically and culturally significant peatland landscape.

Core Submission

An Coimisiún Pleanála is respectfully requested to refuse permission. In the alternative, no positive decision should be contemplated unless and until the Applicant provides a complete, precise, receptor-specific and independently reviewable assessment of landscape, visual and cultural landscape impacts that fully engages with the conservation objectives of the Lemanaghan Conservation Plan, assesses the cumulative landscape burden across the Midlands region, and demonstrates that the proposed development is acceptable in its proposed form.

13.0 Final Statement

The community is not opposed to renewable energy. It is opposed to the selection of Lemanaghan Bog for a development of this scale where the significant landscape, visual, cultural heritage and cumulative concerns have not been resolved.

Renewable energy must be delivered in the right places, through lawful assessment, meaningful participation and genuine respect for environmental and cultural heritage limits. The wider Lemanaghan landscape is not an empty post-industrial wasteland. It is a recovering peatland, a carbon store, a hydrologically sensitive landscape, a culturally important monastic setting containing internationally significant heritage assets, and a community landscape of genuine significance. That significance deserves recognition in the planning process.

It is respectfully submitted that the proposed development should be refused permission for the reasons set out in this submission, individually and cumulatively.

Section 15: EIAR CHAPTER 15 REVIEW

Material Assets: Traffic, Transport and Telecommunications

Planning Observation Report

This Planning Observation Report (Chapter 15 – Material Assets: Traffic, Transport and Telecommunications) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction

This Chapter 15 Planning Observation Report is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of the Environmental Impact Assessment Report (EIAR), Chapter 15 — Material Assets (Traffic, Transport and Telecommunications), prepared in support of the proposed Lemanaghan Wind Farm development at Lemanaghan and surrounding townlands, Co. Offaly.

Chapter 15 must be read in conjunction with Chapters 8 (Land, Soils and Geology), 9 (Hydrology) and 11 (Climate), as the environmental effects of transport, peat disturbance and carbon emissions are intrinsically linked. The failure to assess these linkages in an integrated manner is a central deficiency of the EIAR.

It is respectfully submitted that Chapter 15:

- does not provide a complete or reliable assessment of the environmental effects associated with transport and infrastructure;
- does not adequately assess indirect and cumulative impacts;
- does not clearly integrate transport-related emissions into the overall climate assessment; and
- relies on limited baseline data and deferred mitigation measures.

These deficiencies materially undermine the reliability of the assessment and do not provide a lawful basis for decision-making under the EIA Directive.

2.0 Executive Planning Case and Core Request

It is respectfully submitted that permission should be refused.

In the alternative, the Commission should require significant further information, independent technical review and a revised, integrated assessment before any positive decision could lawfully be contemplated.

The central objection is that Chapter 15 does not provide a complete, integrated or legally compliant assessment of the material asset impacts of the proposed development. The transport and infrastructure assessment is fragmented, relies on limited baseline data, defers mitigation to post-consent processes, and fails to assess transport-related emissions in a manner that allows integration into the overall climate assessment. In circumstances where the development is advanced primarily on the basis of its climate benefits, the failure to assess transport-related emissions is a fundamental inconsistency in the environmental assessment.

2.1 Summary of Principal Chapter 15 Concerns

Issue	Planning Significance
Transport-climate integration failure	Transport emissions from construction traffic, heavy goods vehicles and abnormal loads are not quantified or integrated into the overall carbon balance, despite the development being justified on climate grounds.
Inadequate traffic baseline	The traffic assessment does not account for seasonal variation, peak agricultural activity or worst-case construction scenarios, undermining the reliability of the assessment.
Peat disturbance from infrastructure	The disturbance of peat soils arising from access roads, crane hardstands and junction modifications is not clearly assessed in terms of carbon release or hydrological interaction.
Deferred mitigation	Road upgrades, traffic management measures and mitigation strategies are to be agreed post-consent, contrary to the EIA

	Directive requirement to assess all likely significant effects before consent is granted.
Alternatives not assessed	Chapter 15 does not assess alternative transport routes, alternative layouts reducing infrastructure impacts, or alternative approaches minimising peat disturbance and emissions.
Cumulative impacts not assessed	The combined transport and infrastructure impacts arising from the proposed development alongside historic peat extraction, ongoing rehabilitation and regional development have not been meaningfully assessed.
Telecommunications assessment insufficient	The telecommunications assessment relies on assumptions regarding infrastructure decommissioning and proceeds in the absence of confirmed stakeholder responses.
Development Plan and national policy non-compliance	Chapter 15 does not clearly demonstrate compliance with the Offaly County Development Plan Sustainable Transport Strategy or consistency with national transport decarbonisation policy.
Climate Act compliance not demonstrated	Transport emissions have not been quantified or demonstrated to be consistent with Ireland's legally binding carbon budgets and sectoral emissions ceilings.

3.0 Legal and Planning Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. That obligation arises under section 171A and Part XA of the Planning and Development Act 2000 (as amended), which transpose the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU into domestic Irish law.

EIA Directive

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires the likely significant effects of the project on material assets — including transport, road infrastructure and telecommunications — to be identified, described and assessed. Article 5 and Annex IV require the EIAR to contain complete, precise, project-specific and reliable information. Article 8a requires the competent authority to reach a reasoned conclusion on the significant environmental effects of the project. That obligation is not satisfied by deferred mitigation, limited baseline data, or unsupported conclusions of "not significant".

Holohan and Others v An Bord Pleanála (C-461/17)

The principles in Holohan are directly relevant. The EIAR must contain complete, precise and definitive information sufficient to enable the competent authority to carry out its assessment. The assessment must also address interactions between environmental factors. In this case, the interaction between transport, peat disturbance, carbon emissions, hydrology and climate impact is not adequately assessed.

Climate Action and Low Carbon Development (Amendment) Act 2021

Section 15 of the Climate Action and Low Carbon Development (Amendment) Act 2021 requires public bodies to perform their functions in a manner consistent with national climate objectives, carbon budgets, sectoral emissions ceilings and the Climate Action Plan. As confirmed by the Supreme Court in Coolglass Wind Farm Ltd v An Coimisiún Pleanála [2026] IESC 5, this is a real and binding legal obligation. The Commission must assess whether

the proposed development is consistent with these obligations, which requires a complete quantification of all transport-related emissions — an exercise not carried out in Chapter 15.

National Transport and Planning Policy

The Offaly County Development Plan 2021–2027, Chapter 8 (Sustainable Transport Strategy) and the National Transport Authority Sustainability Strategy (2024–2030) both require reduction of transport-related emissions, minimisation of transport demand and transition to low-carbon transport systems. Chapter 15 does not demonstrate consistency with these policy requirements. Additionally, the Transport Climate Change Sectoral Adaptation Plan requires infrastructure to withstand future climate conditions and integrate long-term climate resilience — requirements that are not addressed in the context of a peatland development subject to hydrological and stability risks.

4.0 Core Planning Theme 1 — Failure to Integrate Transport Impacts into the Climate Assessment

Chapter 15 describes construction traffic, heavy goods vehicle movements, abnormal load transport and road modifications in detail. However, it does not clearly assess or quantify:

- the greenhouse gas emissions associated with these activities; or
- the contribution of transport to the overall carbon footprint of the project.

It is further noted that Chapter 11 (Climate) presents a carbon balance for the project but does not clearly integrate emissions arising from the traffic and transport activities described in Chapter 15. The two chapters are treated as distinct and largely unconnected topics within the EIAR, notwithstanding that the transport activities described in Chapter 15 are a direct consequence of and are inseparable from the construction of the development assessed in Chapter 11.

Objection

The proposed development is advanced primarily on the basis of its contribution to climate mitigation. In that context, the failure to assess and integrate transport-related emissions into the overall climate assessment is a fundamental inconsistency in the EIAR. A development cannot credibly be presented as a climate benefit while simultaneously failing to account for a material category of its own emissions. This fragmentation of the assessment is contrary to the requirements of Article 3 of the EIA Directive and the interaction requirements confirmed in Holohan (C-461/17).

Key Finding

Transport-related emissions are not clearly assessed in a manner that allows them to be incorporated into the overall climate assessment, resulting in an incomplete evaluation of the project's carbon impact. In circumstances where the justification of the proposed development is based on its contribution to climate mitigation, the failure to assess and integrate transport emissions materially undermines the reliability of that justification and the overall environmental assessment.

5.0 Core Planning Theme 2 — Inadequate Traffic Baseline and Road Safety Assessment

The traffic assessment in Chapter 15 is based on limited survey data and does not adequately account for:

- seasonal variation in traffic volumes and road conditions;
- peak agricultural activity and its interaction with construction traffic on rural roads; and
- worst-case construction scenarios, including peak delivery periods for turbine components, concrete and peat removal.

Objection

The Offaly County Development Plan requires strict control of development generating significant traffic outside settlements and protection of the safety and strategic function of national roads. The proposed development relies on substantial construction traffic, heavy goods vehicle movements, abnormal load transport and use of the N62, involving intensification of access onto a National Secondary Road. Chapter 15 does not clearly demonstrate how the strategic function and safety of the N62 are protected, or how peat-influenced road conditions and drainage vulnerability along the route have been assessed.

Conclusion

The traffic baseline does not reflect real-world conditions, including seasonal and agricultural variation, and therefore cannot support a reliable assessment of impacts on rural roads, national road infrastructure or community safety. The Commission cannot be satisfied on the basis of the information before it that the transport impacts of the proposed development have been adequately assessed.

6.0 Core Planning Theme 3 — Failure to Assess Peat Disturbance Arising from Infrastructure

Chapter 15 describes the construction of access roads, crane hardstands and junction modifications in the context of transport and material assets. However, it does not clearly assess or quantify:

- the disturbance of peat soils arising from these infrastructure works;
- the associated release of stored carbon through peat oxidation, drainage or compression; or
- the interaction between infrastructure-related drainage and the hydrological impacts identified in Chapter 9.

Objection

The access roads, hardstands and junction works described in Chapter 15 are not merely transport infrastructure. They are physical interventions in a sensitive peatland system that disturb peat soils, alter drainage pathways and release stored carbon. The environmental effects of this infrastructure cannot lawfully be assessed in isolation from the broader peat disturbance, hydrology and climate assessment. The fragmentation of these effects across separate EIAR chapters without integration is contrary to the requirements of Article 3 of the EIA Directive and the Holohan interaction principle.

Conclusion

The environmental effects of infrastructure development on peat soils, stored carbon and associated hydrology are not adequately assessed within Chapter 15 or integrated with the assessments in Chapters 8, 9 and 11. This represents a material deficiency in the EIAR.

7.0 Core Planning Theme 4 — Reliance on Deferred Mitigation

The EIAR indicates that road upgrades, traffic management measures and mitigation strategies will be agreed at a later stage, post-consent.

Legal Issue

This approach is contrary to the requirements of the EIA Directive. Under Wells v Secretary of State for Transport (C-201/02), environmental effects that are identified at application stage must be fully assessed before the grant of consent and cannot be deferred or substituted by post-consent processes. Where the Applicant has identified transport and road infrastructure as requiring mitigation, that mitigation must be identified, designed and assessed before consent is granted — not delegated to future agreement between the parties.

Principle

The Commission cannot lawfully grant consent on the basis that mitigation measures will be agreed after permission is granted where those measures are necessary to address identified impacts. The requirement to assess mitigation before consent is fundamental to the integrity of the EIA process. Deferral of mitigation effectively removes the competent authority's ability to assess whether the proposed development is acceptable.

Conclusion

The reliance on post-consent agreement of road upgrades, traffic management and mitigation strategies raises significant concerns regarding compliance with the EIA Directive and the principles established in Wells (C-201/02). The Commission should not grant consent unless all material mitigation measures are clearly identified, assessed and capable of being enforced.

8.0 Core Planning Theme 5 — Failure to Assess Alternatives

Chapter 15 does not adequately assess:

- alternative transport routes for construction traffic and abnormal loads;
- alternative layouts that would reduce transport infrastructure impacts on peat soils and rural roads; or
- alternative approaches that would reduce peat disturbance and associated carbon emissions arising from road and hardstand construction.

Objection

Article 5 and Annex IV of the EIA Directive require the EIAR to include a description of the reasonable alternatives studied by the developer and the main reasons for the option chosen, taking into account the environmental effects of the project. In the transport context, this requires consideration of alternatives that minimise construction traffic, reduce disturbance to sensitive road infrastructure, avoid or reduce peat disturbance, and minimise transport emissions. The EIAR does not provide such an assessment.

Conclusion

The failure to assess reasonable alternatives in the transport and infrastructure context represents a material deficiency in the EIAR. The Commission cannot be satisfied that the proposed transport arrangements represent the least impactful option for the receiving environment in the absence of a transparent and comparative alternatives assessment.

9.0 Core Planning Theme 6 — Inadequate Assessment of Cumulative Impacts

The EIAR does not adequately assess cumulative impacts arising from the combination of:

- historic peat extraction operations and associated infrastructure;
- ongoing land rehabilitation and rewetting works;
- regional renewable energy development and associated transport demand; and
- the combined transport and infrastructure impacts of the proposed development.

Objection

Directive 2011/92/EU requires projects to be assessed not only individually but also in terms of their cumulative effects with existing and reasonably foreseeable future developments. County Offaly and the wider Midlands region are already experiencing a substantial concentration of renewable energy infrastructure. The cumulative transport demand arising from multiple ongoing and proposed developments in the region — including construction traffic, abnormal loads, road modifications and associated infrastructure works — has not been assessed in an integrated manner.

Conclusion

Cumulative transport and infrastructure effects are not meaningfully assessed in Chapter 15. The Commission cannot understand the full transport impact of the proposed development without a cumulative assessment that considers the regional pattern of infrastructure development and its combined effect on rural roads, national road infrastructure and peatland systems.

10.0 Core Planning Theme 7 — Telecommunications Assessment

The telecommunications assessment in Chapter 15:

- relies on assumptions regarding infrastructure decommissioning and future network reconfiguration; and
- proceeds in the absence of confirmed stakeholder responses from relevant telecommunications operators and infrastructure providers.

Objection

A telecommunications assessment that is based on assumptions rather than confirmed stakeholder engagement does not satisfy the requirement for complete and reliable information under Article 5 and Annex IV of the EIA Directive. Where the impact of the proposed development on telecommunications infrastructure remains uncertain pending stakeholder confirmation, the Commission cannot be satisfied that the assessment provides an adequate basis for decision-making.

Conclusion

The telecommunications assessment is not sufficiently robust. It does not provide a complete, confirmed and reliable account of the likely significant effects of the proposed development on telecommunications infrastructure. The Commission should require the Applicant to provide confirmed responses from all relevant telecommunications operators before any positive decision is made.

11.0 Core Planning Theme 8 — National Transport and Climate Policy Alignment

Chapter 15 does not demonstrate consistency with national transport decarbonisation policy, including the National Transport Authority Sustainability Strategy (2024–2030), which requires:

- reduction in transport-related emissions;
- minimisation of transport demand; and
- transition to low-carbon transport systems.

Chapter 15 also does not demonstrate that the proposed infrastructure is consistent with the Transport Climate Change Sectoral Adaptation Plan. This Plan requires infrastructure to:

- withstand future climate conditions;
- integrate climate risks including flooding, rainfall and instability; and
- achieve long-term resilience.

Objection

The proposed development is located within a peatland environment that is hydrologically sensitive, vulnerable to drainage change, and susceptible to instability. In that context, the absence of an assessment demonstrating how climate risks have been incorporated into infrastructure design, and how long-term climate resilience of access roads, hardstands and junction works has been ensured, is a material omission.

Furthermore, Chapter 15 does not demonstrate how transport demand has been minimised, how emissions have been reduced, or how the transport requirements of the development align with the "Avoid–Shift–Improve" framework central to national and regional transport policy. The EIAR does not address the policy requirement to demonstrate consistency with these frameworks.

Policy Alignment Failure

National and regional transport policy requires reduction of transport-related emissions, minimisation of transport demand and transition to low-carbon transport systems. The proposed development relies on substantial construction traffic, heavy goods vehicles, abnormal loads and road modifications without clearly demonstrating how these transport demands are minimised or how they align with national decarbonisation objectives. The absence of such demonstration is a material policy compliance gap that the Commission must address.

Conclusion

The absence of an assessment demonstrating alignment with national transport decarbonisation policy and climate-resilient infrastructure standards is significant in circumstances where both national policy and legally binding climate obligations require a reduction in transport emissions and long-term climate resilience.

12.0 Core Planning Theme 9 — Climate Act Compliance and Carbon Budget Consistency

The Climate Action and Low Carbon Development (Amendment) Act 2021 establishes legally binding carbon budgets and sectoral emissions ceilings. Section 15 requires that public bodies perform their functions in a manner consistent with the national climate objective, carbon budgets, sectoral emissions ceilings and the Climate Action Plan.

Ireland operates legally binding carbon budgets, and the transport sector is subject to defined emissions limits reflecting its role as a major source of national emissions. It is not evident from Chapter 11 or Chapter 15 of the EIAR that emissions arising from construction traffic, transport logistics and infrastructure works have been fully quantified or integrated into the overall carbon balance of the proposed development.

Objection

National road guidance, including Transport Infrastructure Ireland carbon assessment methodologies, provides established approaches for quantifying emissions arising from construction traffic and infrastructure. The EIAR does not demonstrate that such methodologies have been applied. The absence of a recognised and transparent transport emissions assessment methodology is a material omission that undermines the reliability of the overall carbon balance presented in support of the application.

The transport sector is subject to legally binding limits under national climate law. Where construction traffic and infrastructure works associated with the proposed development give rise to transport-related emissions, those emissions must be quantified and assessed for consistency with applicable sectoral emissions ceilings. That exercise has not been carried out.

Critical Finding

This introduces material uncertainty as to whether the proposed development is consistent with the State's legally binding climate obligations. The Commission, acting under its own obligations pursuant to section 15 of the Climate Action and Low Carbon Development (Amendment) Act 2021 as interpreted in Coolglass Wind Farm Ltd v An Coimisiún Pleanála [2026] IESC 5, must satisfy itself that the development is consistent with climate law. It cannot do so on the basis of an assessment that has not quantified transport emissions or demonstrated their consistency with applicable carbon budgets.

13.0 Recommended Reasons for Refusal — Chapter 15

It is respectfully submitted that permission should be refused for the following reasons, each of which is relied upon individually and cumulatively.

13.1 Failure to Integrate Transport Emissions into Climate Assessment

Chapter 15 does not quantify or integrate transport-related emissions into the overall climate assessment in Chapter 11. In circumstances where the development is advanced on the basis of its climate benefits, this is a fundamental inconsistency in the EIAR. The Commission cannot satisfy its obligations under the EIA Directive or the Climate Action and Low Carbon Development (Amendment) Act 2021 on the basis of an assessment that omits this material category of emissions.

13.2 Inadequate Traffic Baseline

The traffic assessment does not adequately reflect seasonal variation, peak agricultural activity or worst-case construction scenarios. The baseline does not support a reliable assessment of impacts on rural roads, national road infrastructure or community safety, contrary to the requirements of the EIA Directive and the Offaly County Development Plan.

13.3 Failure to Assess Infrastructure-Related Peat Disturbance

The disturbance of peat soils arising from access roads, crane hardstands and junction modifications has not been clearly assessed in terms of carbon release, hydrological interaction or cumulative environmental impact. This represents a material omission contrary to Article 3 of the EIA Directive and the interaction requirements confirmed in Holohan (C-461/17).

13.4 Unlawful Reliance on Deferred Mitigation

Road upgrades, traffic management measures and mitigation strategies are proposed to be agreed post-consent, contrary to the requirement in Wells v Secretary of State for Transport (C-201/02) that all likely significant effects be assessed and mitigated before the grant of consent. The Commission cannot lawfully rely on deferred mitigation to cure an identified assessment deficiency.

13.5 Failure to Assess Reasonable Alternatives

Chapter 15 does not assess alternative transport routes, alternative layouts reducing infrastructure impacts, or alternative approaches minimising peat disturbance and transport emissions, contrary to Article 5 and Annex IV of the EIA Directive.

13.6 Inadequate Cumulative Impact Assessment

The combined transport and infrastructure impacts of the proposed development alongside historic peat extraction, ongoing rehabilitation and regional renewable energy development have not been meaningfully assessed. Cumulative effects are not adequately evaluated, contrary to the requirements of Directive 2011/92/EU.

13.7 Insufficient Telecommunications Assessment

The telecommunications assessment relies on unconfirmed assumptions and proceeds in the absence of stakeholder responses from relevant operators. It does not provide a complete, confirmed and reliable basis for assessing the impact of the proposed development on telecommunications infrastructure.

13.8 Non-Compliance with Development Plan and National Transport Policy

Chapter 15 does not clearly demonstrate compliance with the Offaly County Development Plan Sustainable Transport Strategy or consistency with the National Transport Authority Sustainability Strategy (2024–2030). The proposed development generates significant transport demand without demonstrating how that demand is minimised or how it aligns with national transport decarbonisation objectives.

13.9 Failure to Demonstrate Climate Act Compliance

Transport-related emissions have not been quantified or assessed for consistency with Ireland's legally binding carbon budgets and sectoral emissions ceilings under the Climate Action and Low Carbon Development (Amendment) Act 2021. This introduces material uncertainty as to whether the proposed development is

consistent with the State's legally binding climate obligations, as required by the Supreme Court's judgment in Coolglass Wind Farm Ltd v An Coimisiún Pleanála [2026] IESC 5.

14.0 Final Conclusion

For the reasons set out above, it is respectfully submitted that Chapter 15 of the EIAR is materially deficient.

Transport-related emissions are not assessed or integrated into the overall climate balance. The traffic baseline does not reflect real-world conditions. Peat disturbance arising from access roads, crane hardstands and junction works is not assessed in terms of carbon release or hydrological interaction. Mitigation is deferred to post-consent processes. Alternatives are not examined. Cumulative impacts are not meaningfully assessed. The telecommunications assessment lacks confirmed stakeholder responses. Compliance with the Development Plan, national transport policy and climate law is not clearly demonstrated.

These deficiencies are cumulative and mutually reinforcing. They affect the baseline, the impact assessment, the mitigation case, the alternatives assessment and the climate compliance demonstration. Taken together, they mean that Chapter 15 does not provide a complete, precise or reliable basis for An Coimisiún Pleanála to reach a lawful reasoned conclusion on the likely significant effects of the proposed development on material assets, transport, telecommunications or climate compliance.

Core Submission

An Coimisiún Pleanála is respectfully requested to refuse permission. In the alternative, no positive decision should be contemplated unless and until the Applicant provides a complete, precise, integrated and independently reviewable assessment that quantifies transport emissions and integrates them into the climate balance; provides a robust traffic baseline reflecting real-world conditions; identifies and assesses all mitigation at design stage; assesses reasonable transport alternatives; demonstrates compliance with the Development Plan, national transport policy and the Climate Action and Low Carbon Development (Amendment) Act 2021; and obtains confirmed stakeholder responses on telecommunications impacts.

15.0 Final Statement

The community is not opposed to renewable energy. It is opposed to the selection of Lemanaghan Bog for a development of this scale where significant environmental, transport, climate and cumulative concerns have not been resolved.

The proposed development is presented as a climate mitigation project. That justification demands a rigorous and complete assessment of all material emissions — including those arising from transport. A development cannot credibly be advanced on climate grounds while simultaneously failing to account for a material category of its own emissions in the environmental assessment submitted to the competent authority.

It is respectfully submitted that the proposed development should be refused permission for the reasons set out in this submission, individually and cumulatively.

Section 16: EIAR CHAPTER 16 REVIEW

Major Accidents and Natural Disasters

Third Party Observer — An Coimisiún Pleanála RED III Application

Planning Observation Report

This Planning Observation Report (Chapter 16 – Major Accidents and Natural Disasters) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction and Fundamental Planning Position

This submission is made in objection to Chapter 16 – Major Accidents and Natural Disasters of the Environmental Impact Assessment Report submitted in support of the proposed Lemanaghan Wind Farm, Co. Offaly.

This submission does not purport to make legal determinations. It is submitted to assist An Coimisiún Pleanála in its statutory assessment by identifying material concerns, omissions and deficiencies in the Applicant's assessment of major accident and natural disaster risk.

Chapter 16 states that its purpose is to assess:

> "the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or natural disasters which are relevant to the project concerned."

It is submitted that Chapter 16 does identify relevant risk headings, including flooding, contamination, major fire, bog fire, adverse weather, loss of critical infrastructure and peat stability. However, the central concern is that the assessment does not adequately translate those identified risks into a robust, site-specific, precautionary assessment of likely significant effects in the particular context of Lemanaghan Bog.

In particular, the EIAR does not clearly demonstrate that An Coimisiún Pleanála has been provided with sufficiently complete, precise and reliable information to assess:

- peat instability and peat failure consequences;
- bog fire risk in a drained and historically fire-affected peatland;
- flood risk in a heavily modified cutaway bog drainage system;
- climate-change-driven rainfall, drought and storm risks over the 35-year project life;
- emergency response feasibility in remote bog conditions;
- downstream contamination and sediment release;
- cumulative effects with historic peat extraction, peatland rehabilitation, artificial drainage, existing site infrastructure and other existing or proposed works; and
- the interaction between these risks and population and human health.

Accordingly, it is submitted that Chapter 16 does not provide a sufficiently robust basis for the competent authority to reach a fully informed reasoned conclusion on the likely significant effects of the proposed development.

1.1 Executive Summary — Key Deficiencies in Chapter 16

The principal deficiencies identified in Chapter 16 are as follows:

Peat stability risk materially understated

The Applicant acknowledges peat depths ranging from 0m to greater than 6m, with 20% of probes recording depths between 3.0m and 6.2m. Chapter 16 still concludes that the site is at low risk of peat failure and suitable for the wind farm.

Bog fire risk understated despite recorded fire history

Chapter 16 confirms recorded bog fires at the site in 2009, 2011 and 2020, including fires associated with dry and windy weather and fire spread from third-party lands, yet classifies the risk as low.

Flood risk over-reliant on modified drainage

The EIAR acknowledges mapped Flood Zones A and B affecting turbine T12 and access roads, but relies on the heavily modified Lemanaghan Stream and high drainage density to conclude the entire site should be treated as Flood Zone C.

Climate-change risks not integrated into risk ratings

Chapter 16 identifies extreme weather, heavy rainfall, strong winds and climate change as possible causes of flooding, fire, peat movement and infrastructure failure, yet risk ratings and conclusions do not clearly reflect how those factors have been incorporated.

Reliance on future mitigation, CEMP and ERP

Chapter 16 states that the CEMP will be a "live document" maintained by the contractor and relies on a future fire safety risk assessment, ERP and operational monitoring. Such arrangements are not a substitute for completed pre-consent assessment.

Emergency response feasibility not assessed

There is no clearly presented assessment of response times, bog access limitations, firefighting water availability, peat fire suppression, emergency access during flood conditions, or the capacity to manage a major incident in remote peatland conditions.

No completed turbine fire and bog fire assessment

Chapter 16 does not provide a completed, site-specific turbine nacelle fire, blade fire, electrical fire, oil/lubricant fire, lightning-related fire, burning-debris assessment or turbine-fire-to-bog-fire pathway assessment.

Human health not integrated

Chapter 16 does not clearly explain how major accident and natural disaster risks may affect nearby residents through smoke, ash, contaminated water, loss of access, flooding, emergency disruption, stress or impacts on private wells.

2.0 Legal and Planning Framework

The legal and planning framework relevant to this Chapter 16 objection includes:

- Directive 2011/92/EU, as amended by Directive 2014/52/EU;
- the Planning and Development Act 2000, as amended;
- the Planning and Development Regulations 2001, as amended, including Schedule 6;
- section 37F of the Planning and Development Act 2000, as amended;
- the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports 2022;
- the precautionary principle under Article 191 TFEU;
- the Water Framework Directive 2000/60/EC;
- the Floods Directive 2007/60/EC and the Planning System and Flood Risk Management Guidelines;
- the Habitats Directive 92/43/EEC and Birds Directive 2009/147/EC;
- the National Monuments Acts 1930–2014;
- the Fire Services Act 1981 and Safety, Health and Welfare at Work Act 2005; and
- relevant Irish and EU case law.

Section 171A of the Planning and Development Act 2000, as amended, confirms that EIA is a statutory assessment process requiring examination of the EIAR, a reasoned conclusion on significant environmental effects, and integration of that conclusion into the decision. It expressly includes the expected direct and indirect significant effects arising from vulnerability to risks of major accidents or disasters relevant to the development.

Schedule 6 of the Planning and Development Regulations 2001, as amended, is directly relevant. Paragraph 2(e)(i)(IV) requires description of likely significant effects from risks to human health, cultural heritage or the environment due to accidents or disasters. Paragraph 2(e)(ii) requires coverage of direct, indirect, secondary, cumulative, short-term, medium-term, long-term, permanent and temporary effects. Paragraph 2(f) requires identification of forecasting methods, technical deficiencies, lack of knowledge and main uncertainties. Paragraph 2(g) requires description of mitigation measures and explanation of the extent to which effects are avoided, prevented or reduced. Paragraph 2(h) requires description of expected significant adverse effects deriving from

vulnerability to major accidents and disasters and, where appropriate, details of preparedness and proposed emergency response.

Section 172 of the Planning and Development Act 2000, as amended, requires the Board to consider whether the EIAR adequately identifies and describes significant effects. Where it does not, the Board must require further information. This is directly relevant where the deficiencies in Chapter 16 concern the completeness of the assessment of peat failure, bog fire, turbine fire, flood risk, contaminated runoff, emergency response and human health.

The Derrybrien line of authority — Commission v Ireland, Case C-215/06 — is particularly relevant because it concerned wind farm development and peatland impacts. The Court held that Ireland had failed to ensure adequate environmental assessment of wind farm development and associated works at Derrybrien. That case is directly relevant to the need for robust pre-consent assessment of peat stability, peat movement, sediment release and downstream environmental consequences in the peatland context.

In Wells v Secretary of State, Case C-201/02, the Court of Justice confirmed that EIA must be carried out before development consent is granted. The reliance in Chapter 16 on future CEMP revision, future fire safety risk assessment, future confirmatory design and future management plans must therefore be treated with caution. Such documents may implement mitigation but should not be relied upon to supply a missing pre-consent assessment where the accident and disaster pathway is already identifiable.

2.1 Legal Test Applied to Chapter 16

The test for Chapter 16 is not satisfied merely because the Applicant has listed possible risks. The EIAR must provide sufficient information to allow An Coimisiún Pleanála, prescribed bodies and the public to understand the likely significant effects, the uncertainty, the assumptions relied upon, the mitigation measures, the residual consequences if mitigation fails, and the preparedness and proposed emergency response before consent is granted.

Recurring Deficiency

A recurring feature of Chapter 16 is the reliance upon future-stage management plans, confirmatory assessments, contractor-controlled procedures and operational measures. While such measures may form part of mitigation implementation, they should not substitute for a completed pre-consent assessment of identifiable accident and disaster pathways where those pathways are already recognised within the Applicant's own EIAR.

3.0 Overall Position

It is submitted that Chapter 16 is materially deficient because it identifies relevant risks but does not adequately assess their consequences in the specific context of Lemanaghan Bog. The concern is not that the Applicant failed to mention major accidents and natural disasters. The concern is that the Applicant has:

- identified risks;
- classified them as low;
- relied on mitigation and future procedures;
- failed to clearly assess credible worst-case or reasonable worst-case consequences;
- failed to integrate climate-change scenarios into risk ratings;
- failed to assess emergency response feasibility;
- failed to integrate human health consequences; and
- concluded "Not Significant" without sufficient site-specific reasoning.

This is particularly serious because the proposed development is not located on ordinary agricultural or mineral soil. It is located within a cutaway peatland system, with recorded bog fire history, deep peat, artificial drainage,

proposed large-scale turbine infrastructure, access roads, cable trenches, borrow pits, peat deposition areas and a proposed 35-year operational life.

4.0 Core Planning Theme 1 — Applicant's Own Identified Risks

Chapter 16 itself confirms that the following risks are relevant to the proposed development:

- flooding;
- major road traffic accident;
- contamination event;
- major fire;
- bog fire;
- adverse weather conditions;
- loss of critical infrastructure; and
- peat stability.

In Section 16.4.1.2, the construction phase risk register identifies contamination events, major fire, bog fire and peat stability. Bog fire is linked to spontaneous fire or fire spread from adjacent lands, lowered water tables and extreme dry weather events. Peat stability is linked to movement of peat during construction, mismanagement of excavated material and extreme weather.

In Section 16.4.1.3, the operational phase risk register again identifies adverse weather, loss of critical infrastructure, flooding, contamination, major fire, bog fire and peat stability.

Key Point

The Applicant's own assessment confirms that these are not speculative or irrelevant matters. They are expressly identified as risks capable of arising during construction, operation and decommissioning. The issue is therefore whether the assessment of those risks is sufficiently complete, site-specific, precautionary and transparent to support the conclusions reached. It is submitted that it is not.

5.0 Core Planning Theme 2 — Overarching Understatement of Risk

Chapter 16 repeatedly frames the proposed development as having an inherently low level of environmental risk. In Section 16.2.5.1, the Applicant states:

> "A wind farm is not a recognised source of pollution."

That framing is materially incomplete in the context of this project. The question under the EIA Directive is not whether a wind farm is an EPA-licensed industrial installation. The relevant question is whether this particular project, in this particular receiving environment, may give rise to likely significant effects arising from accident or disaster risk.

Chapter 16 itself identifies potential pollution pathways, including hydrocarbons, fuel spills, sediment-laden runoff, drainage and seepage water from infrastructure excavation, erosion from drainage channels, groundwater and surface water emissions, and contamination of local drinking water supplies and groundwater aquifers.

Objection

A wind farm on deep peat, involving turbine foundations, borrow pits, access roads, cable trenches and drainage interventions, may create environmental risks through sediment release, peat movement, water contamination, fire and emergency access constraints. Those risks must be assessed on their facts. The general statement that a wind

farm is not a recognised source of pollution risks narrowing the Chapter 16 assessment in a manner that does not satisfy the EIA Directive requirement for a complete and site-specific assessment.

6.0 Core Planning Theme 3 — Peat Stability Risk is Not Adequately Assessed

Chapter 16 acknowledges that a Peat Stability Assessment was undertaken and that peat depths across the site range from 0m to greater than 6m, with an average depth of approximately 2m, and that approximately 20% of probes recorded peat depths between 3.0m and 6.2m. The Applicant concludes that the site is at low risk of peat failure and suitable for the proposed wind farm, provided mitigation and control measures are implemented.

Objection

The difficulty is that Chapter 16 does not adequately translate the peat stability findings into a full major accident and natural disaster assessment. The Applicant's own Chapter 8 expressly identifies the potential significant effects of peat instability or failure as including:

- death or injury to site personnel;
- damage to machinery and infrastructure;
- drainage disruption by blockage of drainage pathways by relocated peat and spoil;
- contamination of watercourses and water supplies by particulates; and
- degradation of the peat environment.

Chapter 8 further classifies the pre-mitigation potential effect from peat instability and failure as a negative, significant, direct, permanent, unlikely effect on peat and subsoils. The fact that the Applicant later reduces the residual effect to imperceptible through mitigation does not remove the need for Chapter 16 to assess the credible consequences of failure if control measures do not operate as intended, particularly where the Chapter 16 methodology states that consequence ratings assume that mitigation and safety procedures have failed to prevent the major accident and/or disaster.

In particular, Chapter 16 does not clearly provide:

- peat-slide or peat-movement propagation modelling;
- credible worst-case or reasonable worst-case peat movement scenarios;
- cascade failure analysis involving roads, drains, turbine foundations, crane pads, borrow pits and settlement ponds;
- assessment of blocked drains, changed flow paths or drainage-system failure;
- assessment of downstream sediment-release and water-contamination consequences;
- emergency-response implications of peat movement in remote bog conditions; and
- assessment of human-health consequences from loss of access, water contamination, stress or emergency disruption.

Conclusion

Peat stability should be considered a central component of the Chapter 16 major accident and natural disaster assessment rather than solely a geotechnical design matter. The Applicant's conclusion appears to depend heavily on technical stability factors, risk ratings and mitigation, but those should not be treated as a substitute for a complete EIA assessment of the environmental consequences of a peat-related accident or disaster.

6A Additional Deficiency — Over-Reliance on Future Controls and Confirmatory Design

A further concern arises from the extent to which the peat stability conclusions rely on future construction-stage controls, method statements, monitoring, drainage maintenance, risk-register revision and confirmatory design. Appendix 8-1 states that detailed engineering construction design must be carried out by the appointed construction-stage designer prior to construction and must include a confirmatory peat stability assessment.

That is a significant statement. It indicates that the Applicant's present assessment is not the final construction-stage peat stability assessment. This is not objectionable in itself as engineering practice, but it is problematic if Chapter 16 relies on the present low-risk conclusion without clearly assessing what happens if site conditions change before construction; drainage conditions change due to rehabilitation, drain blocking or rewetting; extreme rainfall alters groundwater or surface-water behaviour; or peat deposition areas or borrow pits create localised instability or sediment release.

Assessment Requirement

The Chapter 16 assessment should clearly distinguish between: the current planning-stage peat stability assessment; future confirmatory construction-stage assessment; embedded design mitigation; contractor-controlled construction measures; monitoring and emergency response; and residual consequences if control measures fail. In the absence of that distinction, the competent authority and the public are not provided with a sufficiently transparent understanding of the peat-related accident and disaster risk before consent is granted.

7.0 Core Planning Theme 4 — Reliance on "Flat Terrain" is Insufficient

Chapter 16 states that the site is relatively flat and therefore there is a low risk of peat failure. Later, in its cumulative assessment, it states that the site has been subject to industrial peat extraction from 1960 to 2020 and is relatively flat, "so there is low/no potential for peat slides or landslides."

Objection

That conclusion is too narrow. Peat instability is not dependent on slope alone. In a cutaway bog system, instability may also be influenced by:

- peat depth, peat strength and drainage condition;
- loading, excavation, vibration and changed hydrology;
- stockpiling, settlement pond construction, access road construction and cable trenching; and
- extreme rainfall, drought and rewetting cycles.

The Applicant's own risk register identifies movement of peat as a risk during construction and operation, with possible causes including mismanagement of excavated material and extreme weather conditions. It is therefore not sufficient, without further site-specific explanation, to rely on relative flatness as a key basis for dismissing or minimising risk. The Applicant's own Appendix 8-1 confirms that qualitative factors are used alongside deterministic Factor of Safety calculations because not all factors affecting peat instability can be reasonably included in a stability calculation. That acknowledgement supports the submission that peat stability should not be assessed by numerical Factor of Safety alone.

8.0 Core Planning Theme 5 — Bog Fire Risk is Understated Despite Known Fire History

Chapter 16 confirms recorded bog fires at the proposed project site in 2009, 2011 and 2020, including a fire from May to June 2020 which spread to the site from third-party land. This is a significant site-specific acknowledgement. The Applicant's own identified causes of bog fire include:

- lowered water tables;
- extreme dry weather events;
- spontaneous fire; and
- fire spread from adjacent lands.

Objection

The concern is not merely whether bog fires are frequent. The concern is the potential consequence of a bog fire in a peatland environment, including:

- smouldering peat fire and smoke and air quality impacts on nearby residents;
- impacts on emergency access and biodiversity;
- impacts on carbon emissions and loss of rehabilitating peatland habitat;
- damage to archaeological and cultural heritage material within the peat; and
- fire spread from third-party lands or from the project site to third-party lands.

Offaly County Council's own climate-risk material confirms that heatwaves, drought and uncontrolled fire risk are relevant climate hazards in County Offaly. The Applicant's substitute consent rEIAR Chapter 15 states that bog fires generated air-quality impacts from ash and smoke and records a 2009 dust exceedance at Pollagh. The current EIAR does not clearly assess those consequences by reference to a credible worst-case or precautionary scenario. Nor does it clearly demonstrate that emergency services could access and contain a significant peat fire in remote bog conditions.

Bog Fire as a Known Risk

Bog fire is not a theoretical or remote concern at Lemanaghan. It is part of the known risk profile of the site, with documented fire events in 2009, 2011 and 2020. Chapter 16 should have assessed bog fire as a practical and site-specific major accident and disaster risk, including fire prevention, suppression, emergency access, smoke and ash impacts, public safety, water contamination, biodiversity impacts, cultural heritage impacts and human-health consequences.

8A Material Omission — No Completed Bog Fire Management or Peat Fire Suppression Assessment

A further significant omission arises from the absence of a completed fire-specific bog fire management plan, peat fire suppression assessment or site-specific fire response strategy for the proposed wind farm development. This is particularly serious because Chapter 16 itself identifies Major Fire and Bog Fire as relevant risks.

The Applicant's own substitute consent documentation for Lemanaghan Bog included Bord na Móna's Fire Prevention and Fire Fighting Procedures for Peat Production Bogs, which demonstrates that bog fire risk requires specific prevention, training, equipment, communications, mapping, emergency liaison and specialist response measures. That procedure states that:

> "The Use of Water on Peat Bog fires is largely ineffective and can actually contribute to the spread of such fires."

That statement is highly material. It means that ordinary assumptions about water-based firefighting cannot safely be applied to peat bog fires. Chapter 16 should therefore have provided a completed, site-specific assessment of how a bog fire would be prevented, accessed, contained and suppressed at Lemanaghan Bog during construction, operation and decommissioning.

8B Major Omission — Failure to Assess Turbine Fire as a Potential Trigger for Bog Fire

A central deficiency in Chapter 16 is that it treats "major fire" and "bog fire" as separate low-risk headings, without assessing the credible pathway whereby a turbine fire, electrical fire, transformer fire, lightning-related fire or burning-debris event could ignite peatland, cause contaminated runoff or trigger a wider environmental incident.

A wind turbine fire is not an ordinary ground-level fire. Fire protection guidance for wind turbines identifies recognised fire-risk features including lightning strikes, electrical faults, hot surfaces, combustible nacelle materials, hydraulic oils, gearbox oils, lubricants, transformer oils, cables and other electrical installations. Such guidance also notes that firefighting at nacelle height is strongly limited because fire-service ladders cannot reach the necessary height, and the route to the nacelle through the turbine is unsafe during fire conditions. Firefighting may therefore be restricted to protecting the surrounding area and preventing secondary fires on the ground or adjacent installations.

This is directly relevant to a 220 metre tip-height turbine on a peatland site. If fire-service response is likely to be limited to exclusion, safety, containment and prevention of secondary ground fires, then the EIAR must assess whether a burning turbine could ignite peatland, whether burning material falling from height could spread fire, whether oil or burning debris could contaminate drains or watercourses, and how such an event would be controlled in practice.

The Applicant's treatment of major fire consequences in Table 16-9 is deeply concerning. Major Fire is identified as arising from equipment or infrastructure failure, electrical problems, employee negligence and extreme dry weather events. The stated environmental effects include:

> "Injury or loss of life. Structural damage. Air pollution. Damage to, or depletion of habitats and species. Contamination."

However, the Applicant then states that should a fire or explosion occur, there would be "a limited number of people affected" with "localised effects of short duration", "normal community functioning" and "some inconvenience", and relies on the Offaly Fire Major Emergency Plan to reduce the consequence. That is not an adequate or precautionary basis for assessing fire risk in a drained peatland community setting with recorded bog fire history.

Assessment Required

Before consent is granted, the competent authority and the public should be provided with a site-specific assessment of: turbine nacelle fire, blade fire, transformer and electrical fire, lightning-related fire, hydraulic oil and lubricant fire loads, burning debris falling from height, ignition of peat and vegetation, fire spread along access tracks and drains, smoke and ash impacts on nearby residents, oil and firefighting residue entering drains or watercourses, emergency access and exclusion zones, firefighting limitations for 220m turbines, specialist peat-fire suppression methods, and cumulative interaction between turbine fire and bog fire risk. The absence of such assessment is a material deficiency.

8C Historic and Documentary Evidence Demonstrates that Bog Fire is a Real and Serious Risk

The need for a precautionary fire-risk assessment is further supported by the wider documentary record concerning bog fires in County Offaly and the Midlands. Publicly available material collated in the supporting appendices includes Dáil Éireann material from May 2011 referring to Bord na Móna staff and machinery assisting in the control of bog fires in the Ferbane area, RTÉ reporting of extensive peat fires across the Midlands including Lemanaghan, and local newspaper reporting of smoke impacts and significant firefighting deployment during the 2011 bog fires.

Historical material concerning Bord na Móna peat operations also records that spontaneous ignition and prolonged firefighting were recognised hazards within peat operations. This supports the submission that bog fire should not be treated as a merely hypothetical or remote issue. It is part of the known risk profile of peatland landscapes, particularly in dry weather and where peat, machinery, drainage, access tracks and human activity interact. Relevant extracts are provided at ATTACHMENT 16-D.

9.0 Core Planning Theme 6 — Flood Risk is Under-Assessed and Over-Reliant on Artificial Drainage Assumptions

Chapter 16 records several historic and recurring flood events in the surrounding lands. The EIAR further records that, for the present-day scenario, low and medium probability fluvial flood zones are mapped in the centre of the proposed project site along the EPA-mapped Lemanaghan Stream. It also records that turbine T12 and associated proposed new access roads are mapped within the low-probability fluvial flood zone.

Objection

Despite this, Chapter 16 relies on the Flood Risk Assessment conclusion that, because the Lemanaghan Stream has been heavily modified and because of the high drainage density within the site, the actual fluvial flood risk is the same across the site and the entire site should be treated as Flood Zone C. That conclusion requires stronger site-specific justification.

A heavily modified drainage regime does not eliminate flood risk. It may redistribute, conceal, accelerate, delay or artificially manage flood risk. In a peatland environment, the drainage condition is not a reason to dismiss risk; it is itself a central part of the risk pathway. The Applicant's own Flood Risk Assessment records that the EPA-mapped Lemanaghan Stream has been modified within the proposed project site and now forms part of the bog drainage infrastructure, with two Bord na Móna pumping stations operating along the large arterial drain. It further records that outfalls will become submerged when water levels in receiving watercourses are high, backwatering the outfalls and causing water to be stored on the bog until river levels recede.

That is precisely the type of scenario which should have been assessed in Chapter 16 as a major accident and natural disaster risk pathway. The Chapter 16 issue is whether flood conditions, including pluvial flooding, backwatered outfalls, pump failure or drainage obstruction, could interact with major accident and disaster pathways and increase risk to people, the environment, infrastructure and emergency response.

In particular, Chapter 16 does not adequately explain how the following matters have been assessed:

- whether T12 and associated access roads can be safely constructed, operated, maintained and decommissioned in or near mapped flood zones;
- whether emergency vehicles could access T12, the central bog area, the substation or other infrastructure during flood or high-water conditions;
- whether backwatered outfalls could prevent drainage from functioning during extreme rainfall;
- whether pump failure, power failure or operational interruption could increase flood extent or duration;
- whether flood events could interact with bog fire risk by restricting emergency access or firefighting response;
- whether flood events could interact with turbine fire, electrical fire or oil and lubricant spill pathways; and
- whether flood events could create contaminated floodwater exposure risks for residents, landowners, farmers and private wells.

Local photographic and documentary evidence of seasonal flooding, road flooding, standing water and hydrological connectivity is provided at ATTACHMENT 16-J as contextual public-participation evidence.

10.0 Core Planning Theme 7 — Climate Change Risk Acknowledged but Not Properly Applied

Chapter 16 acknowledges that climate change is affecting weather patterns and that increased wind speeds, increased precipitation, more extreme precipitation events, changes in wind direction and seasonal variations are relevant. The risk registers repeatedly identify extreme weather, heavy rainfall, strong winds and climate change as possible causes of flooding, critical infrastructure loss, bog fire and peat stability issues.

Objection

However, the assessment does not clearly explain how climate-change scenarios have altered the likelihood or consequence ratings. A risk assessment that acknowledges climate change but does not transparently explain how climate factors have influenced the likelihood and consequence ratings may give a false impression of certainty.

The proposed development has a stated operational life of approximately 35 years. Over that period, the Commission must understand whether increased rainfall, drought, storm intensity and wind events may alter flood risk, bog fire risk, peat stability, sediment release, emergency response, turbine safety, access-road resilience and drainage performance. Offaly County Council's own climate-risk material identifies increased extreme

precipitation, increased fluvial and pluvial flooding, increased frequency and intensity of heatwaves, extreme temperatures and drought, and uncontrolled fire risk. Relevant extracts are provided at ATTACHMENT 16-E.

Conclusion

Article 5 of the EIA Directive and the EPA EIAR Guidelines require the EIAR to contain information reasonably required to allow a reasoned conclusion on significant effects, taking account of current knowledge and methods of assessment. Where climate change is expressly identified as affecting rainfall, drought, heatwave, storm, fire and flood risk over a 35-year operational period, the EIAR should transparently explain how those factors have been reflected in the likelihood and consequence ratings. Acknowledging climate change in narrative form while retaining low-risk conclusions without clear recalibration is not sufficient.

11.0 Core Planning Theme 8 — Over-Reliance on Mitigation, CEMP, ERP and Future Management

Chapter 16 relies heavily on mitigation and management measures, including the CEMP (Construction Environmental Management Plan), future CEMP revision, the Emergency Response Plan, future fire safety and workplace risk assessment, operational monitoring and a decommissioning plan.

In Section 16.4.5.1, Chapter 16 states that:

> "The CEMP will be prepared/revised prior to the commencement of any works and will be a live document maintained by the contractor."

Legal Issue

A CEMP is a useful construction-management tool. It should not be used as a substitute for complete pre-consent assessment of likely significant effects. Under Wells v Secretary of State for Transport (C-201/02), environmental effects must be assessed before consent is granted and should not be left to be addressed after consent through contractor-controlled documents.

The difficulty is not the existence of mitigation. The difficulty is that Chapter 16 does not clearly distinguish between:

- unmitigated risk;
- design-embedded mitigation;
- future contractor-controlled mitigation;
- emergency response procedures;
- operational monitoring; and
- residual environmental effects.

Conclusion

Where the missing issue is a completed, site-specific assessment of turbine fire, bog fire, peat-fire suppression, emergency access, contaminated runoff and human-health consequences, reliance on cross-references, mitigation schedules, future contractor documents or general emergency planning is not a substitute for a clear pre-consent assessment of the fire-risk pathway itself. A plan for such events should be provided before permission is considered, not after permission is granted.

12.0 Core Planning Theme 9 — Emergency Response Feasibility is Not Adequately Assessed

Chapter 16 refers to the Offaly Major Emergency Plan, the ERP and future fire-safety assessment arrangements. However, it does not clearly assess whether emergency response is feasible in the particular conditions at Lemanaghan Bog.

It is not sufficient for Chapter 16 to rely on the existence of the Offaly Fire Major Emergency Plan in general terms without demonstrating that the practical assumptions of that plan have been tested against this specific project and site. The following matters do not appear to be adequately addressed:

- emergency vehicle access across remote bog roads;
- access during extreme rainfall or flooding;
- access during construction traffic movements;
- firefighting water supply and peat fire containment;
- smouldering underground peat fire and smoke impacts on nearby residents;
- evacuation or shelter advice for nearby homes;
- response times from relevant fire services;
- coordination with landowners and turbary-right holders;
- emergency response to blade failure, turbine fire or contamination events; and
- practical firefighting limitations at 220 metre turbine height.

Critical Omission

There is no clear project-specific evidence within Chapter 16 demonstrating that the practical emergency-response assumptions have been verified for this particular peatland site, including by reference to relevant fire, emergency-management or health-and-safety expertise. In the absence of such evidence, the assessment appears to rely on generic emergency planning assumptions rather than verified emergency-response capability for the actual site. This is a material weakness where bog fire, turbine fire, contamination, peat movement, flooding and restricted bog access are all relevant risk pathways.

It is also a material omission that Chapter 16 does not provide clear evidence that the site-specific fire-risk assumptions have been referred to, reviewed by or verified with the relevant fire and emergency-response authorities, including Offaly Fire Service and the relevant Chief Fire Officer. If existing fire and emergency services are relied upon to reduce the consequence rating, the EIAR should identify what consultation was undertaken, what information was provided, what response was received, and whether practical assumptions on access routes, response times, firefighting water supply, turbine-fire exclusion zones, firefighting limitations at 220 metre height, peat-fire suppression and smoke and ash impacts were accepted or qualified by the relevant emergency-response bodies.

12A Legacy Site Hazards and Baseline Verification

The proposed development is not located on a greenfield site. It is located within a historically industrial peatland landscape associated with decades of peat extraction, artificial drainage, railway infrastructure, silt ponds, discharge points, pumping infrastructure and ancillary works.

Chapter 16 should clearly demonstrate whether the proposed wind farm site has been assessed for legacy industrial hazards relevant to major accident and disaster risk, including redundant infrastructure, metallic debris, abandoned machinery, drainage obstructions, unstable ground conditions, contaminated material, buried infrastructure and other physical hazards. In the absence of a clear baseline inventory of legacy hazards, the conclusion that major accident and disaster risks are low is not fully substantiated. Supporting photographic examples of apparent legacy industrial material are provided at ATTACHMENT 16-F as contextual evidence.

13.0 Core Planning Theme 10 — Human Health Implications are Not Properly Integrated

Chapter 16 states that the assessment considers population and human health, biodiversity, land, soils, water, air quality, climate, material assets, cultural heritage and landscape. However, it does not clearly explain how major accident or natural disaster risks may affect human health and residential amenity through:

- smoke exposure, ash and particulates from bog fire and turbine fire;
- contaminated water from flooding, sediment release or drainage failure;

- loss of access and emergency disruption;
- stress and anxiety arising from environmental incidents;
- flooding of homes, farms and private wells; and
- sediment or peat release affecting local water quality and water supplies.

Objection

The human-health relevance of bog fire is supported by the Applicant's own substitute consent rEIAR Chapter 15, which records that bog fires would have generated air-quality impacts from ash and smoke and states that such fires pose significant risks to both the environment and human health. The separate Chapter 5 submission raises concerns regarding the absence of an integrated human health assessment. Chapter 16 compounds that issue by failing to clearly explain how accident and disaster risks translate into human health outcomes for nearby residents, schools, farms, vulnerable groups and local communities. Accordingly, it is submitted that Chapter 16 cannot be read in isolation. Its deficiencies may also undermine the reliability of the Chapter 5 conclusions on population and human health.

14.0 Core Planning Theme 11 — Cumulative Effects Assessment is Inadequate

Chapter 16 concludes that, with mitigation measures in place, there is no potential for significant in-combination or cumulative increase in vulnerability to major accidents and/or natural disasters. That conclusion is not sufficiently reasoned on the information presented.

Objection

The cumulative assessment should not simply rely on the same low-risk conclusions already challenged above. If the individual risk assessments are understated or insufficiently explained, the cumulative conclusion is also undermined. In particular, the cumulative assessment should address:

- proposed wind farm infrastructure and peatland rehabilitation and rewetting;
- historic peat extraction and historic and current artificial drainage;
- flood-risk and fire-risk changes and nearby land uses and third-party burning risk;
- road traffic and abnormal loads and other renewable energy or grid infrastructure;
- climate-change pressures over the project lifetime; and
- cumulative interaction between turbine fire, electrical and oil fire, bog fire, smoke and ash emissions, contaminated runoff, peatland rehabilitation and emergency access constraints.

Interaction Requirement

A turbine fire cannot be assessed in isolation from bog fire, drought, heatwave conditions, artificial drainage, lowered water tables, peat rehabilitation, emergency access, flood conditions, contaminated runoff, air quality, biodiversity, cultural heritage and human health. Chapter 17 of the EIAR recognises that interacting effects may exacerbate the magnitude of effects, yet the Chapter 16 fire assessment does not provide a clear, site-specific assessment of the interaction between turbine fire and peatland fire behaviour. The Applicant's conclusion that cumulative effects are not significant is not supported by a sufficiently clear, transparent and site-specific cumulative risk analysis.

15.0 Information Required Before Any Fully Informed Decision

Before any grant of permission could be considered on a fully informed basis, the Applicant should be required to provide, at minimum:

- A Revised Chapter 16 under section 37F and section 172 of the Planning and Development Act 2000, addressing the deficiencies identified in this submission;
- confirmation of firefighting access, water sources, specialist equipment and response limitations;

- a completed, site-specific turbine fire, bog fire, peat-fire suppression and emergency-response assessment addressing turbine nacelle fire, blade fire, transformer and electrical fire, lightning-related fire, oils and lubricants, burning debris, turbine-fire exclusion zones, emergency access, firefighting water limitations, smoke and ash management, contaminated runoff and resident notification procedures;
- an emergency-response feasibility assessment for remote peatland conditions;
- worst-case peat-failure and sediment-release scenarios;
- assessment of flood risk under present-day and climate-change scenarios;
- assessment of drain blockage, rewetting, pumping failure or altered drainage pathways;
- assessment of contaminated runoff from fire, oils, lubricants, fuels, transformers and firefighting residues;
- assessment of smoke, ash, particulate, access and water-quality effects on nearby residents;
- cumulative assessment of peatland rehabilitation, historic drainage, flood risk, bog fire, turbine fire, peat stability and climate change; and
- written evidence of consultation with Offaly Fire Service and the relevant Chief Fire Officer and emergency-response bodies, including confirmation of information provided and any response received.

16.0 Summary Table — Principal Deficiencies

Ref	Issue Identified	Applicant's Own Chapter 16 Material	Planning / Legal Concern
16-1	Overarching understatement of risk	Chapter 16 identifies flooding, contamination, major fire, bog fire, adverse weather, loss of critical infrastructure and peat stability, but repeatedly classifies residual effects as "Not Significant".	The assessment identifies relevant risk pathways but does not adequately translate them into a robust, site-specific and precautionary assessment of likely significant effects in the particular context of Lemanaghan Bog.
16-2	Peat stability not assessed as a major accident pathway	Chapter 16 records peat depths from 0m to greater than 6m, with 20% of probes between 3.0m and 6.2m, and identifies peat movement during construction and operation.	Peat stability is treated too much as an engineering and construction-management issue rather than a major accident and natural disaster pathway requiring assessment of credible worst-case consequences.
16-3	Over-reliance on flat terrain	Chapter 16 relies on the relative flatness of the site and a low-risk peat stability conclusion.	Peat instability is not dependent on slope alone. Risk may arise from peat depth, drainage condition, loading, excavation, stockpiling, settlement ponds, road construction, extreme rainfall and rewetting.
16-4	Bog fire risk understated	Chapter 16 confirms records of bog fires in 2009, 2011 and 2020, including fire associated with dry conditions and spread from third-party lands.	Recorded bog fire history is a material site-specific risk factor. The EIAR does not adequately assess credible worst-case consequences including smoke, ash, air quality, emergency access, carbon release,

			biodiversity loss and human health effects.
16-5	No completed bog fire management assessment	Chapter 16 identifies Major Fire and Bog Fire as relevant risks but does not provide a completed bog fire management plan or peat fire suppression assessment.	Material omission in a drained peatland. Bord na Móna's own peat-bog fire procedure recognises bog fire as a specialist risk requiring trained personnel, machinery, communications, emergency liaison and specialist suppression measures.
16-6	No turbine fire-to-bog fire pathway assessment	Chapter 16 treats major fire and bog fire as separate low-risk headings without assessing the turbine fire pathway.	The EIAR does not assess the credible pathway whereby burning debris, sparks, oil, molten material or electrical fire from a 220m turbine could ignite peat, vegetation, drains or adjoining lands.
16-7	Flood risk over-reliant on artificial drainage	Chapter 16 records mapped flood zones affecting T12 and access roads. Appendix 9-1 records pluvial flooding as very likely after heavy rainfall, and outfalls can become backwatered.	A heavily modified, pump-influenced peatland drainage system is not a basis for dismissing flood risk. Chapter 16 does not adequately assess emergency access, pump failure, outfall backwater, sediment release, contaminated floodwater or downstream water quality.
16-8	Climate risk not applied to ratings	Chapter 16 acknowledges climate change including increased precipitation, windstorms, heatwaves and drought.	The assessment does not transparently explain how climate change has altered likelihood or consequence ratings for flooding, bog fire, peat stability, access-road resilience, emergency response or drainage performance over the 35-year operational life.
16-9	Over-reliance on CEMP / ERP / future assessment	Chapter 16 relies on the CEMP, future CEMP revision, Emergency Response Plan, future fire safety risk assessment and operational monitoring.	Future contractor-controlled plans and management documents should not substitute for completed pre-consent assessment. The EIAR does not clearly distinguish unmitigated risk from embedded mitigation, future measures, emergency response and residual effects.
16-10	Emergency response not assessed	Chapter 16 refers to emergency planning but does not assess practical emergency response in remote peatland conditions.	The EIAR does not adequately assess response times, access during flooding or construction traffic, firefighting water supply, peat-fire suppression, smouldering fire, evacuation, turbine fire response or protection of residents from smoke and ash.

16-11	Human health not integrated	Chapter 16 states that population and human health are considered but does not explain how accident and disaster risks may affect nearby residents.	The assessment does not adequately integrate smoke, ash, particulates, contaminated water, flooding, loss of access, emergency disruption, stress, private wells, schools, vulnerable groups or residential amenity with the Chapter 5 assessment.
16-12	Cumulative effects inadequate	Chapter 16 concludes, with mitigation, there is no potential for significant cumulative increase in vulnerability.	The cumulative conclusion relies on the same low-risk assumptions already challenged. It does not adequately assess the interaction between turbine fire, bog fire, peat stability, artificial drainage, flood risk, climate change, peatland rehabilitation, contaminated runoff, emergency access and historic peat extraction.
16-13	Same-site substitute consent baseline not reconciled	The Applicant's substitute consent rEIAR Chapter 15 identifies historic information gaps, artificial drainage, silt ponds, outfalls, water-contamination pathways, bog fire history, smoke and ash impacts, pluvial flooding and modified drainage.	The current Chapter 16 does not clearly reconcile those same-site baseline risks with its repeated low-risk and not-significant conclusions, undermining the reliability and completeness of the major accidents and natural disasters assessment.

17.0 Ground for Refusal — Inadequate Assessment of Major Accident and Natural Disaster Risk

It is submitted that permission should be refused on the basis that Chapter 16 of the EIAR does not provide a sufficiently complete, precise and reliable assessment of the vulnerability of the proposed development to major accidents and natural disasters, or of the potential for the proposed development itself to cause or intensify such risks.

17.1 Failure to Adequately Assess Peat Stability as a Major Accident Pathway

Chapter 16 does not provide a complete assessment of credible worst-case or reasonable worst-case peat failure scenarios, including drainage blockage, watercourse contamination, access loss, infrastructure damage, emergency-response difficulty and human-health consequences. The assessment relies heavily on engineering-stage mitigation and future confirmatory design rather than a completed pre-consent assessment of peat-related accident and disaster risk.

17.2 No Completed Turbine Fire, Bog Fire and Peat-Fire Suppression Assessment

Chapter 16 identifies Major Fire and Bog Fire as relevant risks, and the Applicant's own documentation confirms a recorded history of bog fires at the site. However, the EIAR does not provide a completed, site-specific turbine fire, nacelle fire, blade fire, electrical fire, oil and lubricant fire, burning-debris or turbine-fire-to-bog-fire pathway assessment. This is a material omission where the site has recorded fire history, climate-related drought and heatwave risk, and proposed 220m turbines with electrical infrastructure and turbine oils.

17.3 Flood Risk Assessment Insufficient

Chapter 16 acknowledges mapped flood zones affecting turbine T12 and access roads but relies on heavily modified artificial drainage to treat the entire site as Flood Zone C. That conclusion is not adequately justified.

The assessment does not adequately evaluate pump failure, outfall backwater, drain blockage, drainage alteration, pluvial flooding, emergency access during flood events, or the interaction between flood risk, peat stability and contaminated runoff.

17.4 Climate-Change Vulnerability Not Integrated into Risk Ratings

Chapter 16 acknowledges climate-change effects including increased rainfall, drought, heatwaves and storm events over the 35-year operational life but does not transparently explain how these factors alter the likelihood and consequence ratings. A risk assessment that acknowledges climate change in narrative form without recalibrating risk conclusions does not satisfy the EIA Directive requirement for a reasoned conclusion on significant effects.

17.5 Unlawful Reliance on Deferred Mitigation and Future Management Plans

Chapter 16 relies on future CEMP revision, future fire safety risk assessment, future contractor-controlled procedures and post-consent emergency response planning as the basis for reduced risk conclusions. Under Wells v Secretary of State for Transport (C-201/02), this is not a substitute for completed pre-consent assessment where the risk pathways are already identified. Consent should not be granted on the basis that fire, peat stability, flood and contamination risks will be addressed through future contractor documents after permission.

17.6 Emergency Response Feasibility Not Demonstrated

Chapter 16 does not provide evidence that emergency response is feasible for peat fire, turbine fire, contamination events or flood incidents in remote peatland conditions. The Offaly Fire Major Emergency Plan is relied upon to reduce the consequence of major fire risk, but there is no evidence that the relevant fire and emergency-response authorities have reviewed the site-specific fire-risk and emergency-response assumptions for this proposed peatland wind farm.

17.7 Human Health Consequences Not Integrated

Chapter 16 does not clearly integrate major accident and disaster risks with population and human health assessment. The consequences of bog fire, turbine fire, smoke, ash, contaminated water, flooding, loss of access and emergency disruption for nearby residents, schools, farms, vulnerable groups and private wells are not adequately assessed. That deficiency also undermines the reliability of the Chapter 5 population and human health assessment.

17.8 Cumulative Effects Not Adequately Assessed

Chapter 16's cumulative conclusion relies on the same insufficient individual risk assessments. It does not assess the interaction between turbine fire, bog fire, peat stability, artificial drainage, flood risk, climate change, peatland rehabilitation and emergency access. The cumulative assessment does not satisfy the EIA Directive requirement to assess effects in combination with existing, permitted and reasonably foreseeable future developments.

18.0 Substitute Consent rEIAR Chapter 15 — Same-Site Baseline Information

This submission refers to the Applicant's own substitute consent rEIAR Chapter 15 – Major Accidents and Natural Disasters (An Coimisiún Pleanála – Case reference: SU19.323676) because it contains relevant same-site baseline information concerning Lemanaghan Bog, including historic peat extraction, artificial drainage, surface-water discharge pathways, peat and water-contamination risk, flooding, bog fire history, smoke and ash impacts, and the Applicant's own reference to the proposed Lemanaghan Wind Farm.

It is accepted that the substitute consent rEIAR and the current wind farm EIAR concern different statutory applications. However, where both assessments address the same site and the same environmental baseline, any material difference in emphasis, framing or risk conclusion should be clearly explained. The principal baseline concerns arising from the substitute consent material are summarised in the table below.

Issue	Substitute Consent / Bord na Móna Material	Current Chapter 16 Concern
Historic uncertainty	Substitute consent rEIAR acknowledges historic information gaps and no 1988 risk assessment (Extract 16-C1).	Current Chapter 16 does not clearly carry that uncertainty into its low-risk conclusions.
Drainage baseline	Identifies fully drained bog, silt ponds, discharge points and gravity-flow outfalls (Extract 16-C2).	Current Chapter 16 relies on modified drainage and high drainage density to reduce flood-risk concern.
Water contamination	Acknowledges silt discharge during extreme rainfall and peat disturbance and water-contamination pathways (Extract 16-C3).	Current Chapter 16 does not clearly assess worst-case downstream sediment and contamination consequences.
Hydrocarbon risk	Identifies hydrocarbon pollution risk from machinery and refuelling (Extract 16-C4).	Current Chapter 16 does not adequately address oil, fuel and lubricant pathways in the context of turbine infrastructure and peatland drainage.
Flooding	Identifies peat removal and water-storage issues and localised shallow pluvial flooding after heavy rainfall (Extracts 16-C5 and 16-C8).	Current Chapter 16 still treats flood risk within a low and minor-risk framework.
Bog fire history	Records fires in 2009, 2011 and 2020 and identifies dry weather, lowered water table and fire spread (Extract 16-C6).	Current Chapter 16 gives insufficient weight to fire consequence in a peatland environment.
Smoke, ash and dust	Records ash and smoke impacts and a 2009 dust exceedance at Pollagh (Extract 16-C7).	Current Chapter 16 does not clearly assess smoke, ash, dust or human-health consequences of bog fire.
Emergency response	Refers to documented emergency response, fire safety, training and risk-assessment arrangements (Extract 16-C9).	Current Chapter 16 relies on future fire safety assessment, ERP and CEMP rather than providing a completed site-specific fire response assessment.
Human health	States that bog fires pose significant risks to both the environment and human health (Extract 16-C10).	Current Chapter 16 does not adequately integrate fire, smoke, ash, contamination and emergency-response pathways with population and human health.
Wind farm reference	Refers to 15 turbines at 220m and a likely footprint of less than 3% (Extract 16-C12).	Percentage footprint is not a substitute for assessing concentrated risks from turbine infrastructure, fire pathways, drainage, peat stability and emergency access.

19.0 Final Conclusion

For the reasons set out above, it is submitted that Chapter 16 fails to provide a sufficiently robust, transparent and site-specific assessment of major accident and natural disaster risk.

Chapter 16 identifies relevant risks, including flooding, contamination, major fire, bog fire, adverse weather, loss of critical infrastructure and peat stability. However, it does not adequately assess the real-world consequences of those risks in the specific context of Lemanaghan Bog. This is particularly serious given the peatland nature of the site, the recorded history of bog fires, mapped flood risk, peat depths of up to 6.2 metres, artificial drainage, turbine foundations, crane hardstands, access roads, borrow pits, cable trenches, substation infrastructure and the proposed 35-year operational life of the development.

The fire-safety omission is one of the most serious deficiencies in Chapter 16. The Applicant's own same-site substitute consent rEIAR Chapter 15 records bog-fire history, smoke and ash impacts, and the fact that bog fires may arise during dry weather, particularly where the water table has dropped, and may spread from neighbouring landholdings. This is not a speculative or remote concern. It is a known site-specific risk pathway. That risk is materially heightened by climate change. Offaly County Council's climate-risk material identifies heatwaves, drought, extreme temperatures, increased extreme precipitation and uncontrolled fire risk as relevant hazards.

The absence of a completed, site-specific turbine fire, bog fire, peat-fire suppression and emergency-response assessment is a fundamental omission. A wind turbine fire is not an ordinary ground-level fire. A nacelle fire, blade fire, electrical fault, transformer fire, lightning-related fire, burning debris event or oil and lubricant fire could create secondary risks on the ground, including ignition of dry peat, vegetation, access-track margins, drainage banks, rehabilitating bog habitat or adjoining lands. In a peatland environment, such a fire may be difficult to access, difficult to contain and capable of generating smoke, ash, contaminated runoff, air-quality effects, water-quality effects, ecological damage, cultural heritage damage and human-health impacts.

No individual, household, emergency responder, landowner or public amenity user should be treated as an acceptable "limited consequence" where the relevant fire-risk pathway has not first been fully assessed. The Applicant's own Chapter 16 recognises that a major fire may involve injury or loss of life, structural damage, air pollution, habitat and species damage and contamination, yet then characterises the consequence as limited on the basis that only "a limited number of people" would be affected and that normal community functioning would continue with "some inconvenience". That is not an adequate basis for assessing fire safety in a peatland community setting.

The Applicant's reliance on generic emergency planning assumptions, future CEMP revisions, an Emergency Response Plan, future fire safety risk assessment and broad mitigation measures does not provide a substitute for complete pre-consent assessment.

Core Submission

An Coimisiún Pleanála is respectfully requested to refuse permission on the basis that Chapter 16 does not provide a sufficiently complete, transparent and site-specific assessment of major accident and natural disaster risk. Alternatively, and without prejudice to that request, the Applicant should be required to submit revised EIAR information and a fully substantiated, site-specific assessment of major accident and natural disaster risk, including turbine fire, bog fire, peat-fire suppression, flood risk, peat stability, emergency access, climate-change vulnerability, contaminated runoff and human-health consequences, before any decision is made. Before any decision is made, An Coimisiún Pleanála should also require written evidence that the relevant fire and emergency-response authorities, including Offaly Fire Service and the relevant Chief Fire Officer, have been consulted on the site-specific fire-risk and emergency-response assumptions for this proposal.

SECTION 16 ATTACHMENT Schedule

ATTACHMENT Ref	Title	Purpose
ATTACHMENT 16-A	Applicant's Chapter 16 Extracts	Shows the Applicant's own identified risks, assumptions and low-risk and not-significant conclusions, including the Major Fire consequence characterisation.
ATTACHMENT 16-B	Bord na Móna Fire Prevention and Fire Fighting Procedures for Peat Production Bogs	Shows peat-bog fire is a specialist risk requiring dedicated personnel, training, equipment, emergency liaison and specialist fire suppression, including the finding that water may be largely ineffective on peat bog fires.
ATTACHMENT 16-C	Relevant Extracts from Substitute Consent rEIAR Chapter 15	Shows same-site baseline information: historic drainage, silt ponds, outfalls, water-contamination pathways, peat-slide concerns, flooding, bog fire history and smoke and ash impacts.
ATTACHMENT 16-D	Publicly Available 2011 Bog Fire Material	Supports the seriousness of bog fires in Offaly and the Midlands, including fire response, smoke impacts and public safety concerns.
ATTACHMENT 16-E	Offaly Climate, Heatwave, Drought and Fire Risk Extracts	Supports climate, drought, heatwave and bog and grassland fire risk relevance over the 35-year operational life.
ATTACHMENT 16-F	Photographic Evidence of Fire-Risk Signage and Legacy Site Hazards	Contextual photographic evidence of fire-risk signage, reported legacy hazards and site conditions.
ATTACHMENT 16-G	Wind Turbine Fire Guidance Extracts	Supports the turbine fire argument: nacelle, blade, oil, electrical, lightning and firefighting limitation issues.
ATTACHMENT 16-H	Legal Framework Extracts	Supports pre-consent assessment, completeness, interaction of effects and reasoned conclusion.
ATTACHMENT 16-I	Applicant's Chapter 9 Water and Appendix 9-1 Flood Risk Assessment Extracts	Supports the flooding objection by identifying mapped flood zones, T12 flood risk, pluvial flooding, modified drainage, pumping stations, outfalls, backwater effects, downstream water bodies and contaminated-floodwater health pathways.
ATTACHMENT 16-J	Local Photographic and Documentary Flooding Evidence	Dated local evidence of seasonal flooding, standing water, road flooding, peat-stained runoff and hydrological connectivity.
ATTACHMENT 16-K	Applicant's Chapter 8 and Appendix 8-1 Peat Stability Extracts	Supports the peat stability objection by identifying the Applicant's own material on peat depths, peat failure consequences, Factor of Safety, drainage maintenance and infrastructure-specific peat risk.
ATTACHMENT 16-L	Historic Geological and Borehole Context	Contextual evidence of historic GSI and EMD borehole data, marl records and sub-peat geological information relevant to peat depth, baseline uncertainty and the need for a complete peat-stability assessment.

ATTACHMENT 16-A — Applicant's Chapter 16 Extracts: Identified Risks, Fire, Bog Fire, Flooding, Peat Stability and Risk Conclusions

This attachment contains relevant extracts from the Applicant's Chapter 16 – Major Accidents and Natural Disasters. These extracts are relied upon to demonstrate that the Applicant identifies relevant risk pathways but then classifies those risks within a low-risk and minor-consequence framework and relies on future mitigation, CEMP and ERP procedures, a future fire safety risk assessment and general best-practice assumptions. The full Chapter 16 is already before An Coimisiún Pleanála as part of the Applicant's EIAR. These extracts are provided for ease of reference only.

Extract Ref	Chapter 16 Location	Extract / Summary
16-A1	Section 16.1, p.16-1	Chapter states that it assesses likely significant effects arising from vulnerability to major accidents and/or natural disasters and seeks to determine relevant accidents and disasters, likely significant environmental effects, and measures to prevent or mitigate them.
16-A3	Section 16.2.5.1, p.16-4	Applicant states: "A wind farm is not a recognised source of pollution." It also states that pollution sources are limited and of low environmental risk.
16-A4	Section 16.2.5.1, p.16-4	Applicant states that the Proposed Project has low potential to cause natural disasters or major accidents, and that the site is relatively flat with low peat-failure risk.
16-A6	Section 16.3.3.1, pp.16-9 to 16-10	Flooding section records surrounding flood events, T12 and associated access roads within the low-probability fluvial flood zone, and the conclusion that the entire site should be mapped as Flood Zone C because the Lemanaghan Stream is heavily modified and drainage density is high.
16-A8	Section 16.3.3.5, pp.16-11 to 16-12	Applicant confirms bog fires may arise during dry weather, especially where the water table has dropped; confirms records of fires in 2009, 2011 and 2020; states the 2020 fire spread from third-party land; then says fire potential has decreased because peat extraction ceased and stockpiled peat was removed.
16-A11	Section 16.3.3.9, pp.16-13 to 16-15	Applicant records peat depths from 0m to greater than 6m, average 2m, and 20% of probes between 3.0m and 6.2m, but concludes low peat-failure risk and suitability for the wind farm, subject to mitigation and control measures.
16-A19	Section 16.4.2 / Major Fire, p.16-47	Applicant relies on a future fire safety risk assessment. Risk score 4. The Applicant states that if a fire or explosion occurred, there would be "a limited number of people affected", "localised effects of short duration", "normal community functioning" and "some inconvenience", and relies on the Offaly Fire Major Emergency Plan to reduce the consequence. Effects classified as Not Significant.
16-A22	Sections 16.4.4 and 16.4.5, p.16-47	Applicant states overall major accident and disaster risk is low and residual effects are Not Significant. CEMP will be prepared and revised before works and maintained by contractor as a live document.
16-A25	Table 16-9, Risk ID U "Major Fire" read with Section 16.4.2	Applicant identifies major fire environmental effects including "Injury or loss of life. Structural damage. Air pollution. Damage to, or depletion of habitats and species. Contamination." However, assigns limited consequence rating and relies on future fire safety assessment and the Offaly Fire Major Emergency Plan.

ATTACHMENT 16-B — Bord na Móna Fire Prevention and Fire Fighting Procedures for Peat Production Bogs

This ATTACHMENT contains relevant extracts from Bord na Móna's Fire Prevention and Fire Fighting Procedures for Peat Production Bogs (as submitted for substitute consent permission for the same bog). These extracts are relied upon to demonstrate that bog fire is a specialist peatland risk requiring dedicated prevention measures, trained personnel, machinery, communications, mapping, emergency-service liaison and specialist suppression methods.

Topic	Relevance
Scope and purpose	Shows bog fire is treated as a specific operational risk requiring dedicated procedures, personnel, training and equipment.
Fire prevention and response provisions	Supports the submission that bog fire requires organised prevention and specialist response measures.
Personnel, machinery, communications, maps and emergency liaison	Supports the argument that peat-bog fire response is specialist and operationally demanding, requiring prior preparation rather than generic emergency planning.
Internal and external fire sources	Supports the argument that fire may arise from machinery, hot works, third-party sources, trespass, smoking materials or other ignition sources relevant to wind farm construction.
Peat fire suppression methods	Supports the submission that peat fires require specialist suppression measures not assumed by generic water-based firefighting.
Water may be ineffective on peat bog fires and may contribute to spread	Highly material. Demonstrates that ordinary water-based firefighting assumptions are not sufficient for Lemanaghan Bog and that a completed, site-specific peat-fire suppression assessment is required.

APPENDIX 5-1

FIRE PREVENTION & FIRE FIGHTING PROCEDURES FOR PEAT PRODUCTION BOGS



BORD NA MÓNA

Feedstock Operations

Fire Prevention & Fire Fighting Procedures for Peat Production Bogs



Fire Prevention & Fire Fighting Policy for Production Bogs

The main focus of Bord na Mona in the prevention and management of bog fires is the safeguarding of members of the public, employees and property external to and within the ownership of the company. In addition, management recognise any legal obligations placed upon them relating to fire safety.

Management are therefore committed to the implementation and maintenance of systems to ensure, in so far as is practicable, the prevention of bog fires, and in the event of a fire occurring, the management and control of such fires so as to protect the safety and health of persons who may be affected.

The Feedstock management team will act as the fire committee for the Feedstock Business Unit and will hold two meetings per year. The function of the committee is to discuss and deliberate on all matters relating to fire prevention and fire fighting within the business unit.

Management will ensure the provision of adequate and appropriate resources to implement and maintain the fire plan including: Personnel; Training; Equipment; PPE and Communications.

Additional welfare facilities will be provided in the event of significant fires.

Communication channels with relevant emergency services will be established and maintained and appropriate maps provided.

Fire prevention and fire fighting will take precedence over all other operations.

All significant fires will be reported to the business unit manager in addition to health and safety and environmental personnel.

Management will ensure that the appropriate fire warning signs are in place and maintained as necessary.

All areas will be provided with maps and aerial photographs.

This policy will be communicated to all appropriate personnel and will be included in relevant training programmes.

Paul R...

Head of Feedstock Operations

Fire Protection Priorities

Feedstock management acknowledges that in undertaking activities to prevent and fight fire, priority will be placed as follows:

- Protection and safety of employees and members of the public
- Protection of external property
- Protection of Bord Na Mona property.
- Protection of Habitats and Biodiversity.





Fire Sources

There are two recognised sources of fire on bogs;
External and Internal

External Sources

- Burning of gorse / heather / brush
- Cigarettes and matches
- Trespass of quad bikes and motorbikes

Internal Sources

- Heating Peat
- Machinery
- Cigarettes and Matches
- Hot work – Production areas and Rail Lines



Fire Prevention Plans

Externally Sourced Fires

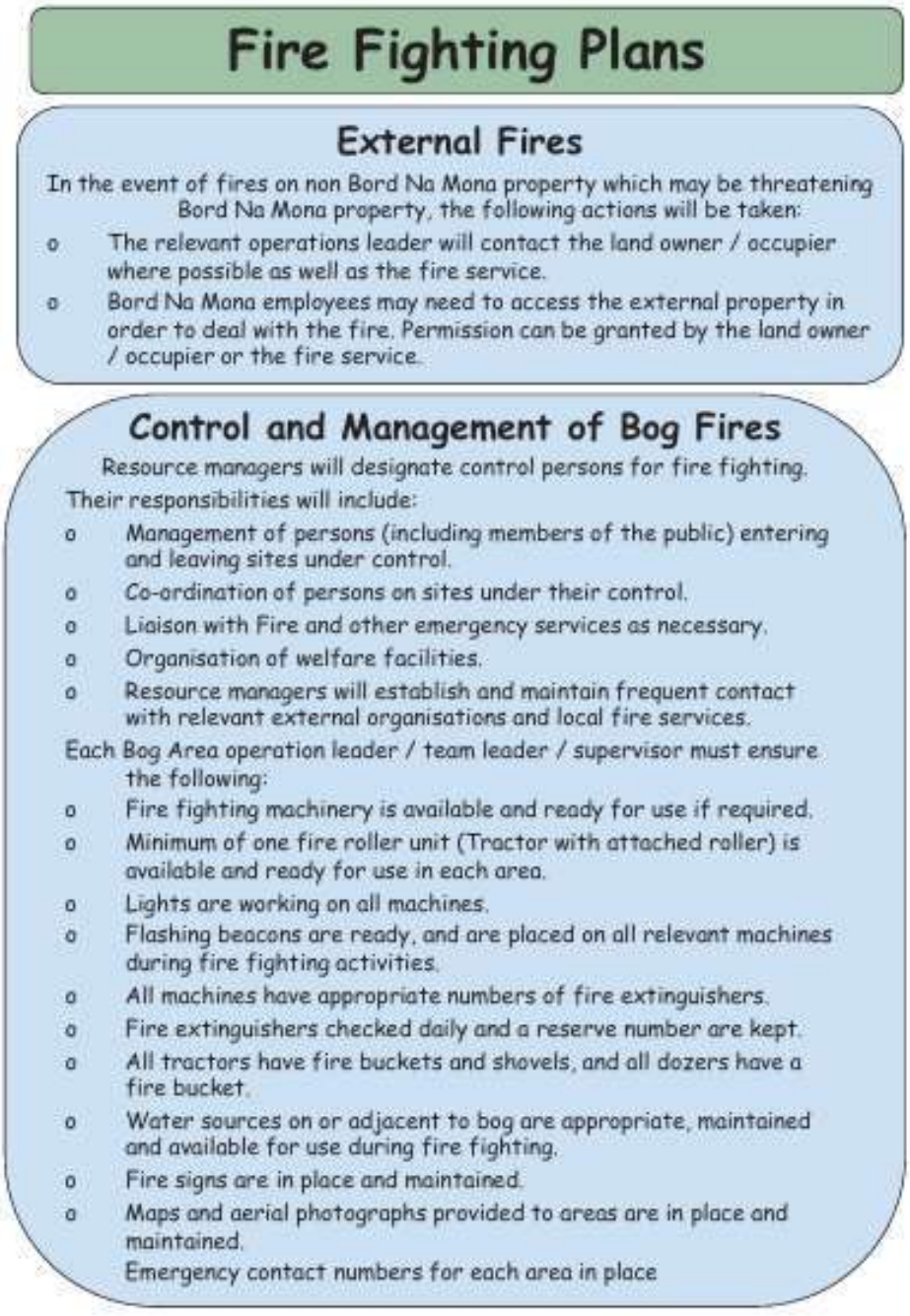
The following measures are implemented to endeavour to prevent fires on Bord Na Mona bogs which may be caused by external sources:

- An annual campaign to promote public awareness regarding bog fires.
- Liaison with local land owners and fire services to prevent fires / burning on properties adjacent to Bord Na Mona Land.
- Ensure fire warning and trespassing signage present in high risk locations.
- Appropriate control of public access.
- All employees to maintain vigilance at boundaries during periods of high fire risk.

Internally Sourced Fires

The following measures are implemented to endeavour to prevent fires on Bord Na Mona bogs which may be caused by internal sources:

- All employees to maintain vigilance on bog areas at all times, but particularly during production season and during high fire risk periods.
- Fire prevention and awareness training to be provided to all employees as part of induction training. Refresher training provided periodically. Specific fire training provided to all relevant employees.
- Machines must be inspected and washed / blown down on a daily basis.
- Peat Piles prone to heating must be closely monitored.
- Smoking is restricted to designated areas and is prohibited in machines and on bog areas.
- In order to minimise the risk of fire, peat sales plans should take account of piles prone to heating.
- Areas must be left safe from the threat of fire following hot work carried out on bog or on rail lines.
- Fire watch will be carried out (minimum period of one hour) by members of production team at the end of each production day.
- Fire patrols will be organised by local management / operations leaders during periods of high fire risk.
- Production operations will be suspended as necessary during periods of high fire risk.



Fire Fighting Plans

External Fires

In the event of fires on non Bord Na Mona property which may be threatening Bord Na Mona property, the following actions will be taken:

- The relevant operations leader will contact the land owner / occupier where possible as well as the fire service.
- Bord Na Mona employees may need to access the external property in order to deal with the fire. Permission can be granted by the land owner / occupier or the fire service.

Control and Management of Bog Fires

Resource managers will designate control persons for fire fighting.

Their responsibilities will include:

- Management of persons (including members of the public) entering and leaving sites under control.
- Co-ordination of persons on sites under their control.
- Liaison with Fire and other emergency services as necessary.
- Organisation of welfare facilities.
- Resource managers will establish and maintain frequent contact with relevant external organisations and local fire services.

Each Bog Area operation leader / team leader / supervisor must ensure the following:

- Fire fighting machinery is available and ready for use if required.
- Minimum of one fire roller unit (Tractor with attached roller) is available and ready for use in each area.
- Lights are working on all machines.
- Flashing beacons are ready, and are placed on all relevant machines during fire fighting activities.
- All machines have appropriate numbers of fire extinguishers.
- Fire extinguishers checked daily and a reserve number are kept.
- All tractors have fire buckets and shovels, and all dozers have a fire bucket.
- Water sources on or adjacent to bog are appropriate, maintained and available for use during fire fighting.
- Fire signs are in place and maintained.
- Maps and aerial photographs provided to areas are in place and maintained.

Emergency contact numbers for each area in place

Fire Fighting Measures for Bog Fires

Fire fighting measures used for bog fires are as follows :

Small Fires

Extinguished immediately using fire shovel and bucket, and fire beaters if available.

Large Fires

Larger fires are managed using a combination of the following:

- Ditching piles and fields.
- Dozing piles and fields.
- Deep milling fields.
- Use of water to wash down machines and dampen fringe areas.






The Use of Water on Peat Bog fires is largely ineffective and can actually contribute to the spread of such fires.

Equipment available for deployment in event of fire.

Available Equipment:



- Dozer
- Ditcher
- Digger / Excavator
- Screw Leveller
- Peat Miller
- Water Tanker
- Fire Roller unit
- Fire buckets and shovels
- Fire Pumps, hoses and ancillary equipment
- Fire beaters
- Flashing beacons
- First aid kit and stretcher
- Stock of additional fire extinguishers
- Towing chains and slings
- PPE

Training

Fire Safety awareness is provided as part of Bord Na Mona's general safety induction with refresher training occurring every three years.

Training in relation to fire safety awareness, fire prevention and fire fighting is provided to all relevant personnel.

Fire Safety Training includes the following:

- General Fire safety awareness and fire detection / prevention.
- Use of fire extinguishers.
- Use of machinery in fire fighting.
- Use of pumps, floatation pumps and fire rollers.
- Fire prevention for machinery, including washing and blowing down.
- Use and maintenance of PPE used in fire fighting.
- Dealing with small fires.
- General Health and Safety, including Hazard Identification and Risk Assessment.

Recommended Procedure to Minimize Fire Hazards on Machinery

General

- Machinery to be parked in a manner that allows them to be moved in an emergency.
- Machinery to be parked a reasonable distance apart from each other to avoid the risk of a fire spreading to adjacent machines.
- For driver occupied machinery, ensure the cab is kept clean and tidy.
- Smoking is prohibited both within all machinery and bog areas, smoking is permitted in designated areas only.
- All machines to be washed down following: a fire, replacement of a hydraulic pipe, oil leak, build up of peat, after exposure to the use of cutting and welding equipment.





Tractors

- Use correct procedure for shutting down engine to reduce temperature and prevent fires.
- Twice daily (or as often as is necessary) using compressed air remove peat from :-
  - Radiators, oil cooler grill and surrounding areas.
  - Around the engine, manifold, injectors, diesel tank and filler cap.
  - Around top of the transmission underneath the cab.
  - Behind instrument panel.
  - Around battery.
  - Over back axles.
- Fire bucket and shovel, one or two fire extinguishers depending on tractor size are carried on suitable external brackets, fully charged and in working order.

Recommended Procedure to Minimize Fire Hazards on Machinery

Harvesters

- Inspect Harvester after each shift for accumulation of dry peat and friction hot spots, Remove dry peat where assessable. :-
  - Inspect tracks for accumulations of peat.
  - Inspect conveyor belts and belt rollers, for hot spots from seized rollers and misaligned belts.
  - Inspect support frame for accumulations of peat.





Excavators

- Remove excavator from pile and park at a safe distance.
- Use correct procedure for shutting down engine to reduce temperature and prevent fires.
- Inspect excavator after shutting down :-
  - Lift engine hood, checking exhaust system, manifolds, turbocharger, and engine hot spots for residue of dry peat. Remove dry peat with brush where assessable.
  - Inspect radiators and oil cooler for peat clogging.
  - Inspect around slewing motor / gearbox and hydraulic pumps.
  - Inspect around tracks and rollers.

The Use of Water on Peat Bog fires is largely ineffective and can actually contribute to the spread of such fires.

Recommended Procedure to Minimize Fire Hazards on Machinery

Rail Layer and Dozers

- Use correct procedure for shutting down engine to reduce temperature and prevent fires.
- Inspect Machine after shutting down:-
  - Open engine doors, checking exhaust system, manifolds, turbocharger, and engine hot spots for residue of dry peat.
  - Inspect radiators and oil cooler for peat clogging.
  - Check for peat build up under engine.
  - Inspect around hydraulic pumps and related components.
  - Inspect around tracks and rollers.





Locomotives

- Use correct procedure for shutting down engine to reduce temperature and prevent fires.
- Inspect Locomotive after shutting down :-
  - Check exhaust system, manifolds, and engine hot spots for residue of dry peat. Remove dry peat with brush where assessable.

Other Production Area Machinery

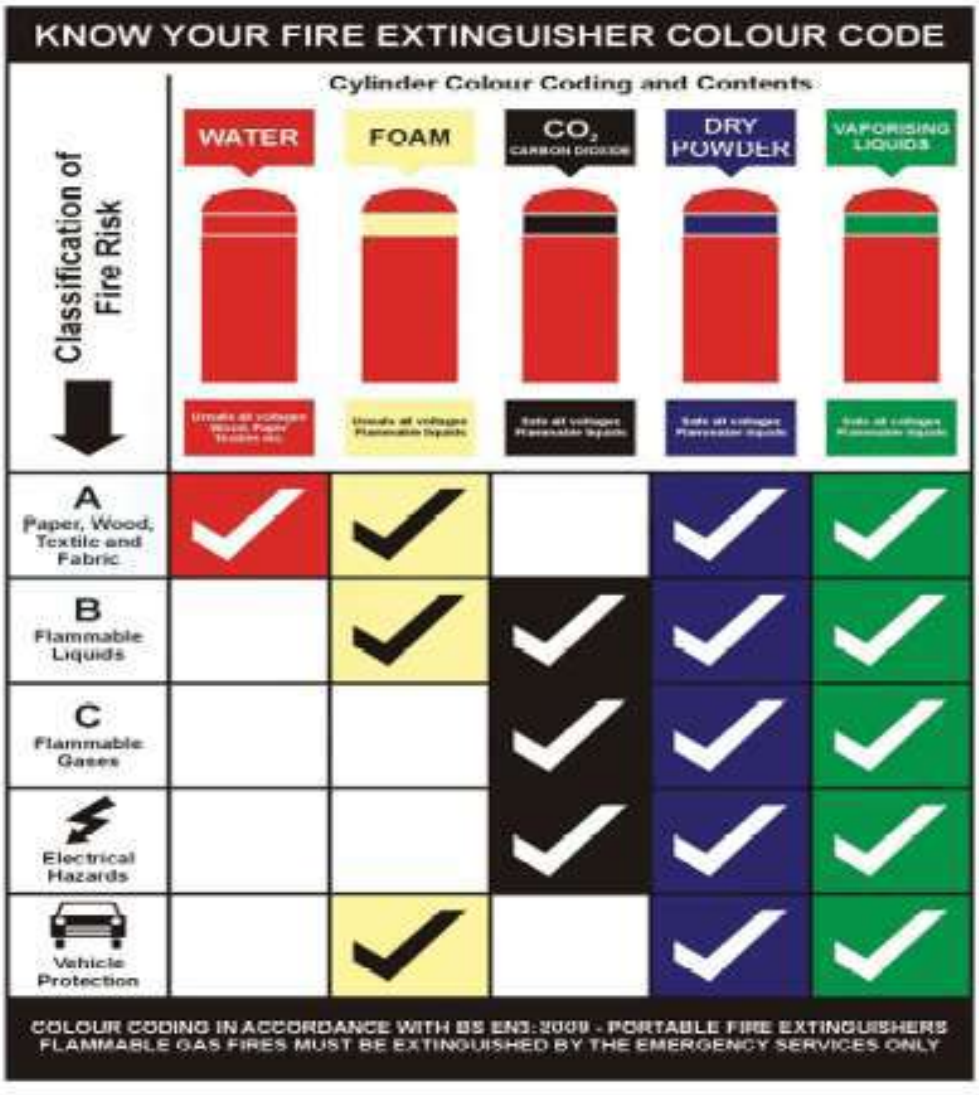
- At the each of each shift and following activities that can increase the risk of fire, clean accumulations of peat and thoroughly wash down machine.

The Use of Water on Peat Bog fires is largely ineffective and can actually contribute to the spread of such fires.

Deployment of Fire Extinguishers

Location	Machine Type	Extinguisher		
		Size.	No.	Type.
Machines	Tractors up to 100 HP	4.5 Kg	1	**ABC** Dry Powder or Foam
	Tractors over 100 HP	4.5 Kg	2	**ABC** Dry Powder or Foam
	Bulldozers	4.5 Kg	1	**ABC** Dry Powder or foam
	Excavators	4.5 Kg	2	**ABC** Dry Powder or Foam
	Locomotives	4.5 Kg	1	**ABC** Dry Powder or Foam
	Road vehicles, forklifts, loading shovels.	1.5 Kg	1	**ABC** Dry Powder
Tea Centres	General Electrical equipment	4.5 Kg 2.5 Kg	1 1 1	**ABC** Dry Powder Fire blanket CO2

Ensure that Used or Partially Used Fire Extinguishers are IMMEDIATELY Returned for Re-Filling / Replacement.



ATTACHMENT 16-C — Relevant Extracts from Applicant's Substitute Consent rEIAR Chapter 15: Major Accidents and Natural Disasters

The following extracts are taken from the Applicant's substitute consent rEIAR Chapter 15 – Major Accidents and Natural Disasters for Lemanaghan Bog (Case Ref: SU19.323676). They are included for the limited purpose of identifying relevant same-site baseline information. The full Chapter 15 is already before An Coimisiún Pleanála. These extracts are provided for ease of reference only.

Extract 16-C1 — Historic Information Gaps and No 1988 Risk Assessment

Source: Substitute Consent rEIAR Chapter 15, pp.15-2 to 15-4

> "Some of the activities, such as the construction of infrastructure and operational decisions were initiated many decades ago, with relevant detail and documentation unavailable due to the passage of time." "Where uncertainty exists, a precautionary approach has been adopted." "There is no record of a risk assessment carried out for the Application Site in 1988."

Extract 16-C2 — Fully Drained Industrial Peatland, Silt Ponds and Outfalls

Source: Substitute Consent rEIAR Chapter 15, p.15-8

> "By 1988, the land use at the Application Site was well established as industrial peat extraction. The Application Site was fully drained, milled peat extraction was underway, and railway infrastructure was in place. The Application Site included 9 no. artificial silt ponds, 9 no. surface water discharge points and 8 gravity flow surface water outflows which remain in situ today. These surface water outfall locations discharge directly into the Lemanaghan Stream and Brosna waterbody."

Extract 16-C3 — Extreme Rainfall, Silt Discharge, Peat Slide and Water Contamination

Source: Substitute Consent rEIAR Chapter 15, pp.15-8 to 15-9

> "Water contamination (primarily silt discharge) of the surrounding rivers and streams could have occurred during extreme rainfall events. Disturbance of a large area of peat has the potential to create a peat slide and subsequently significant levels of water contamination in the surrounding streams and rivers."

Extract 16-C4 — Hydrocarbon Pollution Risk

Source: Substitute Consent rEIAR Chapter 15, pp.15-9 to 15-11

> "Accidental spillage of petroleum hydrocarbons during machinery and plant refuelling could have posed a pollution risk, with the potential for significant impacts on the environment due to its high toxicity and persistence."

Extract 16-C5 — Peat Removal and Water Storage Capacity

Source: Substitute Consent rEIAR Chapter 15, p.15-10

> "Between 1988 to 2020, approximately 4,021,498m^3 of peat were extracted from the Application Site. Peat acts as a water storage medium, so its removal potentially reduces the water storage capacity of the bogs. The primary flood risk on the Application Site is pluvial flooding due to the low permeability of peat soils."

Extract 16-C6 — Bog Fire History and Fire Spread

Source: Substitute Consent rEIAR Chapter 15, pp.15-9 and 15-11

> "Bog fires may naturally arise during periods of dry weather. They can happen during exceptionally dry conditions, causing peat, scrub, and heather to ignite spontaneously, especially if the water table has dropped. Furthermore, bog fires can also result from fires spreading from neighbouring landholdings into the bog areas. There is record of bog fires at the Application Site in 2009, 2011 and 2020. There was one record of fire at the Application Site that started on the 29th May 2020 and continued until 17th June 2020."

Extract 16-C7 — Ash, Smoke and Dust Exceedance

Source: Substitute Consent rEIAR Chapter 15, p.15-11

> "The bog fires would have generated air quality impacts from ash and smoke. The 2009 dust monitoring results collected from the dust monitor located at Pollagh on that year exceeded the emission limit of 350mg/m2/day by reaching a maximum recording of 653mg/m2/day in the months July-September inclusive."

Extract 16-C8 — 2024 Flood Modelling and Localised Pluvial Flooding

Source: Substitute Consent rEIAR Chapter 15, pp.15-13 and 15-15

> "Recent flood modelling conducted in 2024 for the proposed Lemanaghan Wind Farm indicates localised shallow pluvial flooding is very likely after heavy or prolonged rainfall. The EPA mapped Lemanaghan Stream has been modified within the Application Site and now forms part of the bog drainage infrastructure. 2 no. pumping stations, operated by Bord na Móna, were also noted along this large drain."

Extract 16-C10 — Bog Fires Pose Environmental and Human Health Risks

Source: Substitute Consent rEIAR Chapter 15, p.15-20

> "These fires pose significant risks to both the environment and human health. Addressing these challenges necessitated a comprehensive approach that encompassed effective bog management practices, stringent pollution control measures, and robust workplace safety protocols."

Extract 16-C12 — Proposed Lemanaghan Wind Farm: 15 Turbines, 220m, 3% Footprint

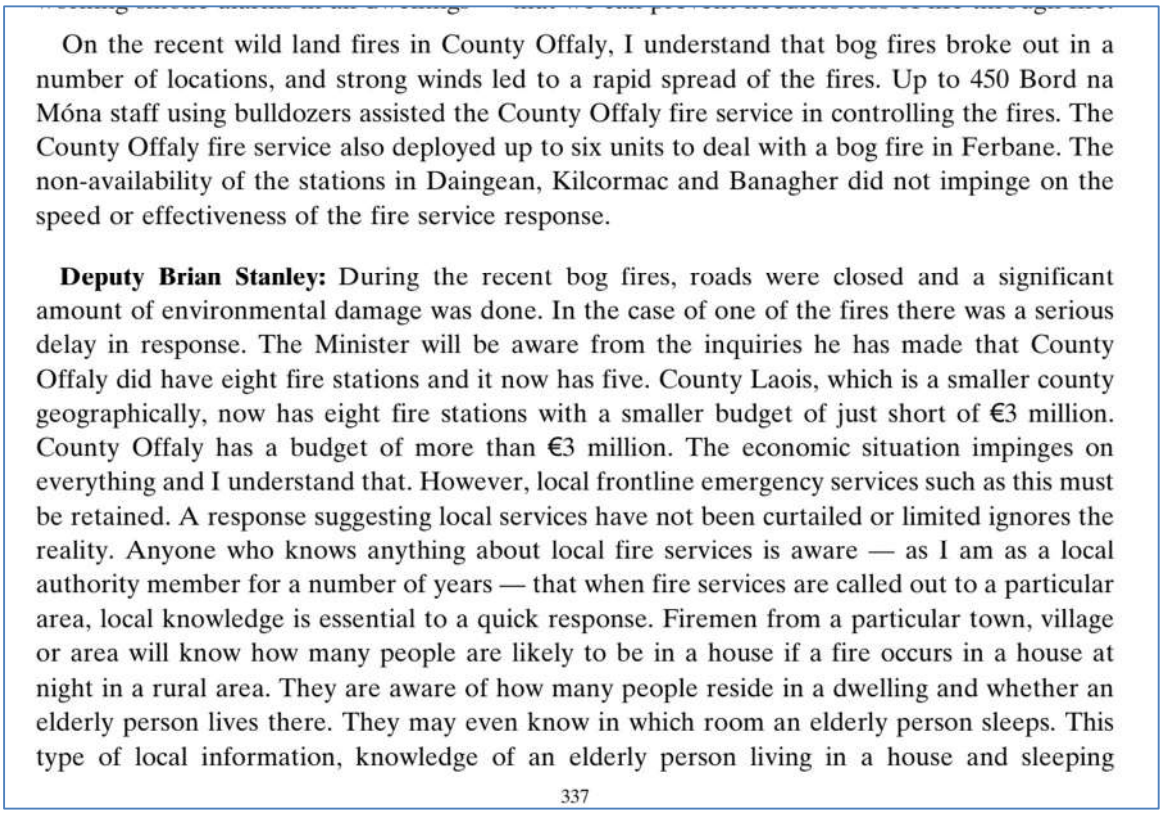
Source: Substitute Consent rEIAR Chapter 15, pp.15-44 to 15-45

> "The Lemanaghan Wind Farm planning application will propose to construct 15 no. wind turbines with an overall blade tip height of 220m and all associated works. The footprint of the proposed Lemanaghan Wind Farm will likely be less than 3% of the total Application Site."

Note: A percentage footprint is not a major accident or natural disaster risk assessment. The risk depends not only on the area occupied, but on the nature, location and interaction of the infrastructure, including turbine foundations, crane hardstands, access roads, cable trenches, substation infrastructure, fire pathways and emergency access constraints.

ATTACHMENT 16-D — Publicly Available 2011 Bog Fire Material

This attachment contains publicly available material concerning bog fires in County Offaly and the wider Midlands, including Dáil Éireann material, RTÉ and local media reporting and historical peat-industry material. It is relied upon as contextual evidence that bog fire is a known and serious risk in peatland landscapes, particularly during dry weather and where peat, drainage, machinery, access tracks, human activity and emergency response constraints interact. It is not relied upon to determine historic liability.



On the recent wild land fires in County Offaly, I understand that bog fires broke out in a number of locations, and strong winds led to a rapid spread of the fires. Up to 450 Bord na Móna staff using bulldozers assisted the County Offaly fire service in controlling the fires. The County Offaly fire service also deployed up to six units to deal with a bog fire in Ferbane. The non-availability of the stations in Daingean, Kilcormac and Banagher did not impinge on the speed or effectiveness of the fire service response.

Deputy Brian Stanley: During the recent bog fires, roads were closed and a significant amount of environmental damage was done. In the case of one of the fires there was a serious delay in response. The Minister will be aware from the inquiries he has made that County Offaly did have eight fire stations and it now has five. County Laois, which is a smaller county geographically, now has eight fire stations with a smaller budget of just short of €3 million. County Offaly has a budget of more than €3 million. The economic situation impinges on everything and I understand that. However, local frontline emergency services such as this must be retained. A response suggesting local services have not been curtailed or limited ignores the reality. Anyone who knows anything about local fire services is aware — as I am as a local authority member for a number of years — that when fire services are called out to a particular area, local knowledge is essential to a quick response. Firemen from a particular town, village or area will know how many people are likely to be in a house if a fire occurs in a house at night in a rural area. They are aware of how many people reside in a dwelling and whether an elderly person lives there. They may even know in which room an elderly person sleeps. This type of local information, knowledge of an elderly person living in a house and sleeping

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Figure 16-D1 Dáil Éireann debate, 17 May 2011

Extract confirming that Bord na Móna staff and machinery assisted in controlling bog fires in the Ferbane / Lemanaghan area, County Offaly, illustrating the frequency and scale of fire events affecting local air quality and safety.

RTÉ News Sport Entertainment Business Lifestyle Culture Gaeilge | Player

News ▸ Politics Regional Ireland Middle East Climate Nuacht World Programmes

Efforts to contain extensive gorse fires

Updated / Tuesday, 3 May 2011 12:28



Air Corps - Tackle fires with bambi buckets

Firefighters in a number of counties are tonight tackling gorse fires in an effort to prevent flames from spreading further.

High winds and dry conditions have been making the task more difficult.

Units from the Offaly Fire Service are tackling two large fires that have spread onto Bord na Móna lands in the county tonight.

One fire is at Lemanaghan, between Ferbane and Clara, and the other is at Ballinagar, between Dangan and Tullamore, which is sending plumes of smoke across the area.

Around 450 Bord na Móna staff are also involved in the effort.

In Donegal, a large fire around Dungloe has been brought under control but fire personnel in the county are still working at a wooded area between Glenties and Ardara.

Figure 16-D2 RTÉ News, 2 May 2011
Screenshot describing extensive peat fires across the Midlands, specifically mentioning Lemanaghan, County Offaly.



Bog Fires Rage Across Offaly

By Camilla McLoughlin

EFFORTS were still underway this morning (Wednesday) to bring bog fires at Ballinagar, and Ferbane under control.

The fires broke out on Monday morning and due to the dry weather and windy conditions on Monday and Tuesday they quickly spread across vast areas.

A number of householders also had to be evacuated because of the smoke yesterday [(Tuesday).

Up to 450 Bord na Mona staff were deployed to help Offaly Fire service to extinguish the flames. Brian Purcell of Bord na Mona said the staff are expertly trained and qualified to help in the effort.

'We have big bulldozers and are putting in fire breakers to stop the fire spreading into public areas. We are also using the drainage system in the bog and pulling out wet muck which when thrown onto the flames puts them out straight away.'

Mr Purcell said he believed the fires spread from people burning gorse, but that in small instances it looked like they were started maliciously. Fire also spread to some private bog lands and set fire to turf piles.

Speaking to the Tullamore Tribune yesterday afternoon Brian Purcell said the next 24 to 48 hours would make a difference. He appealed to the public to be vigilant and to report all fires no matter how small.

Meanwhile Offaly Fire Service continued to deal with the bog fire in Ferbane. Up to six units battled the blaze from 10am on Monday morning until 2am on Tuesday morning and were back again later on Tuesday and are still there today.

A spokesperson for the fire service said the weather has been so dry that a cigarette butt or a glass bottle with the sun shining onto it could have started the fires.

As the bog fires raged Ballinagar and Tullamore were under a haze of smoke on Monday and Tuesday and the smell of fires burning could be detected all over.

The Irish Chief Fire Officers Association has described the outbreak of gorse, bog and forest fires throughout the country as 'unprecedented'.

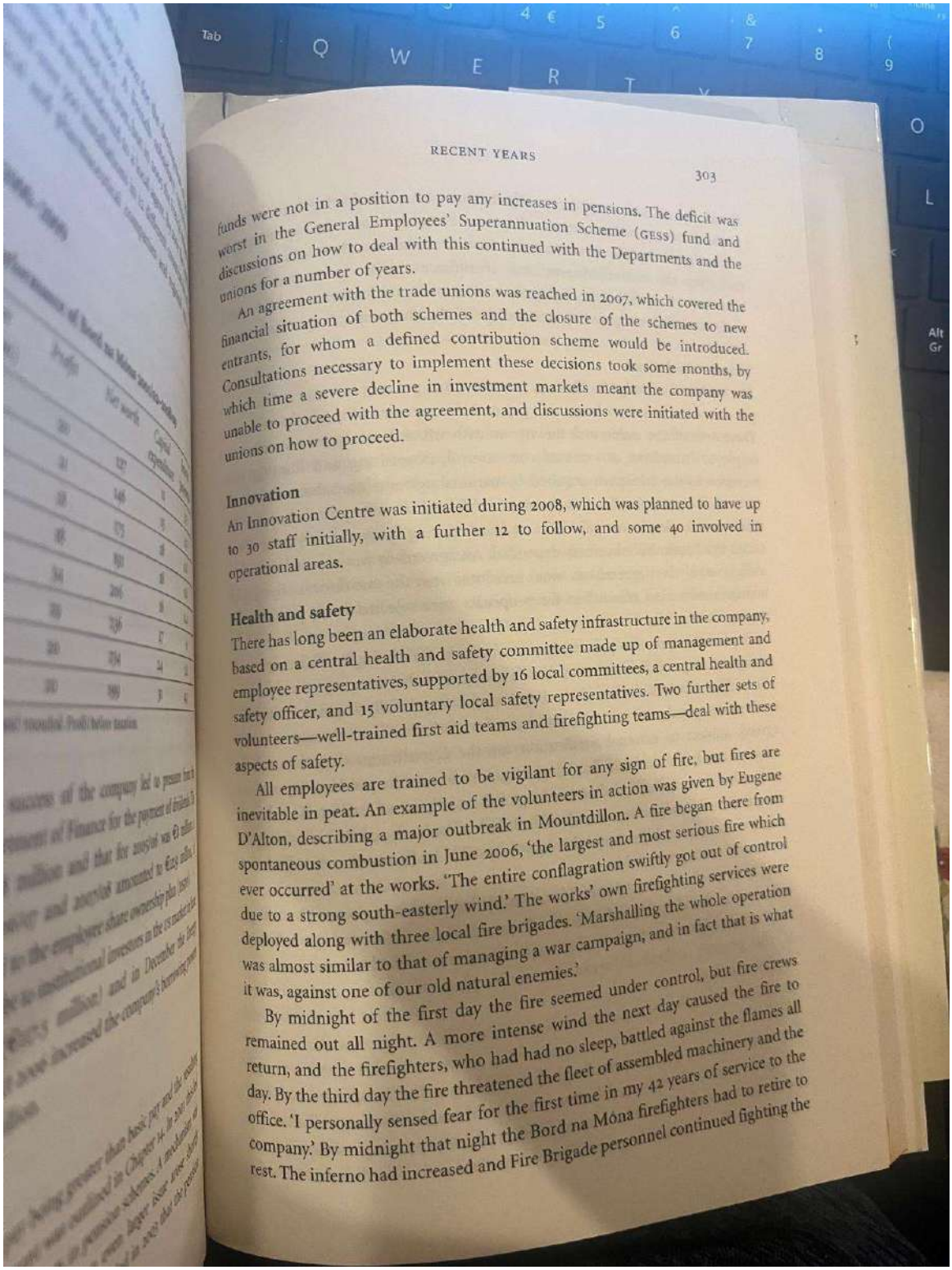
They said 'many of the fires that broke out over the weekend have been controlled at this stage but efforts are continuing to contain other fires.

A combination of strong winds and the continuing dry conditions exacerbated the situation by causing fires to spread, particularly across Donegal.

The arrival of rain in affected areas over the next 48 hours will provide a significant boost to emergency services in tackling the continuing threat of fires.'

Figure 16-D3 Tullamore Tribune, 5 May 2011

Local newspaper coverage of widespread bog fires across County Offaly. Reports confirm residents were forced to leave their homes due to heavy smoke, with up to 450 Bord na Móna staff and Offaly Fire Service personnel deployed.



RECENT YEARS

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funds were not in a position to pay any increases in pensions. The deficit was worst in the General Employees' Superannuation Scheme (GESS) fund and discussions on how to deal with this continued with the Departments and the unions for a number of years.

An agreement with the trade unions was reached in 2007, which covered the financial situation of both schemes and the closure of the schemes to new entrants, for whom a defined contribution scheme would be introduced. Consultations necessary to implement these decisions took some months, by which time a severe decline in investment markets meant the company was unable to proceed with the agreement, and discussions were initiated with the unions on how to proceed.

Innovation

An Innovation Centre was initiated during 2008, which was planned to have up to 30 staff initially, with a further 12 to follow, and some 40 involved in operational areas.

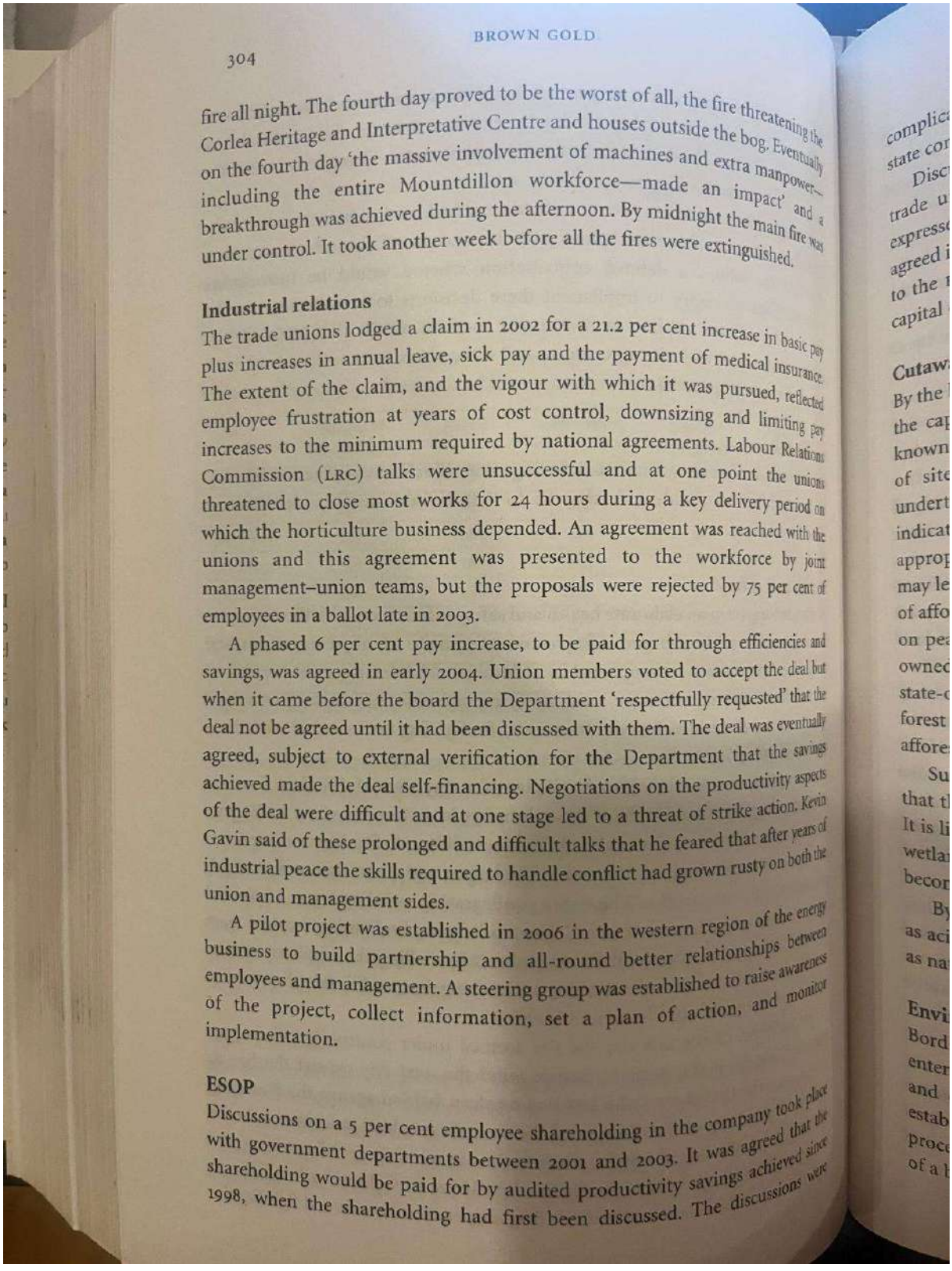
Health and safety

There has long been an elaborate health and safety infrastructure in the company, based on a central health and safety committee made up of management and employee representatives, supported by 16 local committees, a central health and safety officer, and 15 voluntary local safety representatives. Two further sets of volunteers—well-trained first aid teams and firefighting teams—deal with these aspects of safety.

All employees are trained to be vigilant for any sign of fire, but fires are inevitable in peat. An example of the volunteers in action was given by Eugene D'Alton, describing a major outbreak in Mountdillon. A fire began there from spontaneous combustion in June 2006, 'the largest and most serious fire which ever occurred' at the works. 'The entire conflagration swiftly got out of control due to a strong south-easterly wind.' The works' own firefighting services were deployed along with three local fire brigades. 'Marshalling the whole operation was almost similar to that of managing a war campaign, and in fact that is what it was, against one of our old natural enemies.'

By midnight of the first day the fire seemed under control, but fire crews remained out all night. A more intense wind the next day caused the fire to return, and the firefighters, who had had no sleep, battled against the flames all day. By the third day the fire threatened the fleet of assembled machinery and the office. 'I personally sensed fear for the first time in my 42 years of service to the company.' By midnight that night the Bord na Móna firefighters had to retire to rest. The inferno had increased and Fire Brigade personnel continued fighting the

Figures 16-D4 Clarke, Donal (2008). Brown Gold: A History of Bord na Móna and the Irish Peat Industry. pp. 303
Historical peat-industry material recording fire risk in peat operations, including spontaneous ignition and prolonged firefighting as recognised hazards.



fire all night. The fourth day proved to be the worst of all, the fire threatening the Corlea Heritage and Interpretative Centre and houses outside the bog. Eventually on the fourth day 'the massive involvement of machines and extra manpower—including the entire Mountdillon workforce—made an impact' and a breakthrough was achieved during the afternoon. By midnight the main fire was under control. It took another week before all the fires were extinguished.

Industrial relations

The trade unions lodged a claim in 2002 for a 21.2 per cent increase in basic pay plus increases in annual leave, sick pay and the payment of medical insurance. The extent of the claim, and the vigour with which it was pursued, reflected employee frustration at years of cost control, downsizing and limiting pay increases to the minimum required by national agreements. Labour Relations Commission (LRC) talks were unsuccessful and at one point the unions threatened to close most works for 24 hours during a key delivery period on which the horticulture business depended. An agreement was reached with the unions and this agreement was presented to the workforce by joint management–union teams, but the proposals were rejected by 75 per cent of employees in a ballot late in 2003.

A phased 6 per cent pay increase, to be paid for through efficiencies and savings, was agreed in early 2004. Union members voted to accept the deal but when it came before the board the Department 'respectfully requested' that the deal not be agreed until it had been discussed with them. The deal was eventually agreed, subject to external verification for the Department that the savings achieved made the deal self-financing. Negotiations on the productivity aspects of the deal were difficult and at one stage led to a threat of strike action. Kevin Gavin said of these prolonged and difficult talks that he feared that after years of industrial peace the skills required to handle conflict had grown rusty on both the union and management sides.

A pilot project was established in 2006 in the western region of the energy business to build partnership and all-round better relationships between employees and management. A steering group was established to raise awareness of the project, collect information, set a plan of action, and monitor implementation.

ESOP

Discussions on a 5 per cent employee shareholding in the company took place with government departments between 2001 and 2003. It was agreed that the shareholding would be paid for by audited productivity savings achieved since 1998, when the shareholding had first been discussed. The discussions were

Figures 16-D5 Clarke, Donal (2008). Brown Gold: A History of Bord na Móna and the Irish Peat Industry. pp. 304

Historical peat-industry material recording fire risk in peat operations, including spontaneous ignition and prolonged firefighting as recognised hazards.

Bog fire warning issued

BORD na Mona is asking everyone to refrain from lighting fires outdoors and to take care when disposing of lit cigarettes this weekend, particularly as the country is experiencing a dry spell of weather that has left the countryside exposed to a high risk of fire.

People are also being reminded that it's illegal to set fires in growing vegetation between March 1 and August 28.

The company is also asking people who witness a fire on any area of bog or peatland to immediately alert the gardai and fire service.

we are online
offalyindependent.ie

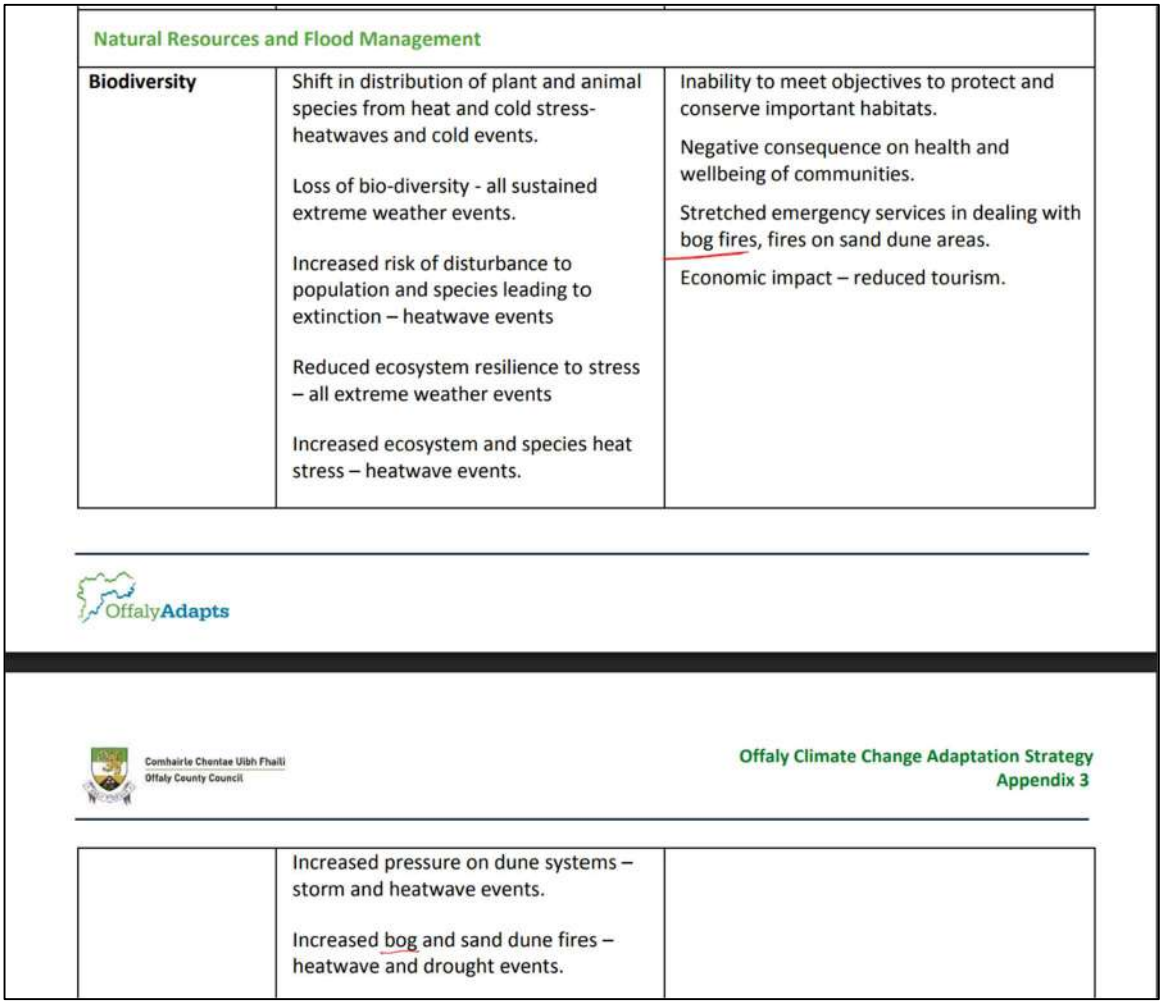
Figure 16-D6 Offaly Independent, 19 April 2014
Bord na Móna issue caution to public over Bog Fires.



Figure 16-D7 Local photographic evidence, 6 June 2023
Fire in Lemanaghan Bog — not mentioned in Chapter 16. Provides corroborative local evidence of a recorded fire event within the application area.

ATTACHMENT 16-E — Offaly Climate, Heatwave, Drought and Fire Risk Extracts

The following extracts are taken from Offaly County Council climate-risk documents and are included to support the Chapter 16 objection in relation to climate-change vulnerability, extreme rainfall, pluvial flooding, heatwaves, drought, severe windstorms and uncontrolled fire risk over the 35-year operational life of the proposed wind farm.



Natural Resources and Flood Management		
Biodiversity	Shift in distribution of plant and animal species from heat and cold stress-heatwaves and cold events. Loss of bio-diversity - all sustained extreme weather events. Increased risk of disturbance to population and species leading to extinction – heatwave events Reduced ecosystem resilience to stress – all extreme weather events Increased ecosystem and species heat stress – heatwave events.	Inability to meet objectives to protect and conserve important habitats. Negative consequence on health and wellbeing of communities. Stretched emergency services in dealing with bog fires, fires on sand dune areas. Economic impact – reduced tourism.

OffalyAdapts

Comhairle Chontae Uibh Fhaili
Offaly County Council

Offaly Climate Change Adaptation Strategy
Appendix 3

	Increased pressure on dune systems – storm and heatwave events. Increased bog and sand dune fires – heatwave and drought events.	

Figure 16-EA Extract from the Offaly Climate Change Adaptation Strategy (2019-2024, p. 78) highlighting the recurring risk of bog fires in County Offaly.

Source: Offaly County Council Climate Action Plan 2024–2029, p.12.
"Climate projections indicate that the climate trends observed over the last century will continue and intensify over the coming decades."
"Significant reductions in levels of average precipitation (rainfall) are expected in Spring and Summer, whilst projections indicate the increased occurrence of extreme precipitation events, particularly during Winter."
"Increases in the frequency of fluvial (river) and pluvial (surface water) flooding."
"Increases in the frequency and intensity of summer heat waves, extreme temperatures and drought."

Extract 16-E1 Offaly County Council Climate Action Plan 2024–2029, p.12

Climate projections indicate increases in extreme precipitation events, increases in frequency of fluvial and pluvial flooding, and increases in frequency and intensity of summer heatwaves, extreme temperatures and rought.

1. Exec Summary

Executive Summary

Context and Scope of this Report

Climate change poses a critical challenge for Offaly County Council. It will result in a wide range of impacts across Offaly, from damaging infrastructure such as roads and bridges, to detrimental impacts on biodiversity and restrictions on water supply. These bring substantial implications for Offaly County Council.

Internationally, national and local governments are increasingly compelled to take ambitious action to increase resilience to climate change within their organisations and their functional areas through adaptation and mitigation measures.

Ireland's Climate Action and Low Carbon Development (Amendment) Act, 2021 highlights the role of the Local Authority in meeting national emission reductions targets and achieving climate resilience. The Act stipulates that local authorities need to prepare a Local Authority Climate Action Plan (LACAP) that will drive local response to the challenges posed by climate change, translating the national climate policy to the local level.

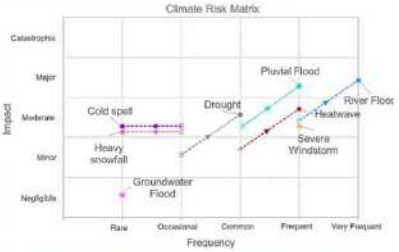
This report provides an assessment of Offaly's climate change risks and impacts on the delivery of services by Offaly County Council. The aim of the report is to provide the evidence base and inform the development of the LACAP for Offaly County Council.

Key Results and Findings

As illustrated in the climate risk matrix on the right the frequency and intensity of some hazards (e.g., river and pluvial flooding, heatwaves and drought) will increase while others will remain the same (e.g., severe windstorms). Some hazards are expected to decrease in frequency, such as cold spells and heavy snowfalls.

- Recent experiences of **cold spells and heavy snowfall** events (e.g. Storm Emma) demonstrated the wide range of impacts for County Offaly. These included, amongst others, disruption to public transport networks, power outages and a reduction in agricultural production. Projected increases in average temperature and decreases in the frequency of snowfall indicate a decrease in the frequency of cold spells, heavy snowfall, and their associated impacts.
- Recent **river and pluvial flooding** events in 2020 had a wide range of impacts for County Offaly, including inundation of residential properties, damage to recreational amenities, disruption of transport networks and inundation of farmland. Projected increases in the frequency of extreme precipitation events will result in increased surface water and riverine flood risk for Offaly.
- Offaly experienced both a **heatwave and drought** in 2018, with heatwaves recorded in 2021 and 2022. These events included, amongst others, disruption of public transport networks, the imposition of restrictions on water supply, and contributed to the development of uncontrolled fires (e.g. Slieve Bloom Mountains). Projected increases in the frequency of heatwaves and drought conditions will mean that events currently experienced on an infrequent basis will become more frequent. As the population ages, there will also be an increase in the number of vulnerable people exposed to heat-related risks.
- **Severe windstorms** are currently experienced on a frequent basis in Offaly and result in wide-ranging impacts, including damage to buildings and infrastructure, and disruptions to energy supply and transport networks across the county. Projections indicate no significant change to this frequency.

To increase resilience, Offaly County Council will need to proactively plan for and adapt to the **current and future climate change risks** identified through this report.



The risk matrix above shows the current and future level of risk associated with climate hazards for Offaly. The hollow marker showing the current level of risk and the solid marker the future level of risk. The dotted line shows the change between the current and future risk.

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Extract 16-E2 Offaly KPMG LACAP Final Report, p.4

The frequency and intensity of hazards including river and pluvial flooding, heatwaves and drought will increase. Projected increases in extreme precipitation will result in increased surface water and riverine flood risk. Projected increases in heatwaves and drought will mean that events currently experienced on an infrequent basis will become more frequent.

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3.4 CCRA – Summary

Summary

This CCRA detailed within this report provides an assessment of County Offaly's climate change risks to support Offaly County Council's efforts to prepare its LACAP. The CCRA has been carried out in line with the Local Authority Climate Action Plan Guidelines, Technical Annex B, drafted by the Climate Action Regional Offices (CAROs). The key results are summarised below:

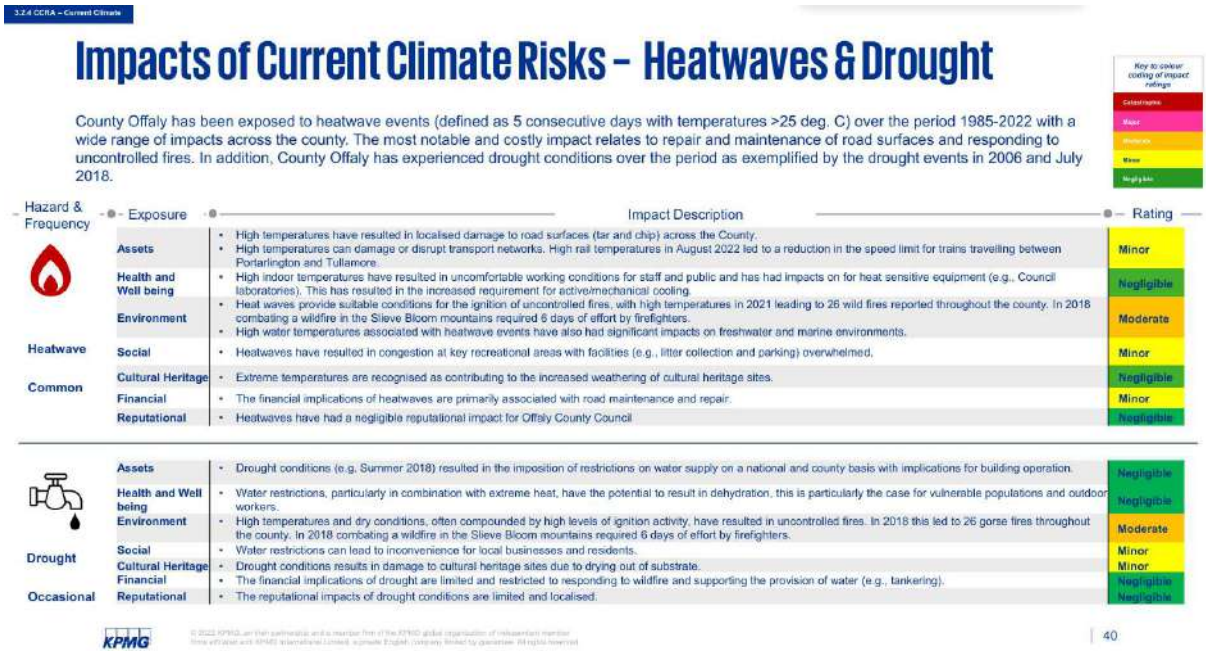
- Recent experiences of **cold spells and heavy snowfall** events (e.g. Storm Emma) demonstrated the wide range of impacts for County Offaly. These included, amongst others, disruption to public transport networks, power outages, and a reduction in agricultural production. Projected increases in average temperature and decreases in the frequency of snowfall indicate a decrease in the frequency of cold spells, heavy snowfall, and their associated impacts.
- Offaly experienced significant **river and pluvial flooding** events in 2020. These events demonstrated the wide range of impacts for County Offaly, including inundation of residential properties, damage to recreational amenities, disruption of transport networks, and inundation of farmland. Projected increases in the frequency of extreme precipitation events will result in increased surface water and riverine flood risk for Offaly.
- Offaly experienced both a **heatwave and drought** in 2018, with heatwaves recorded in 2021 and 2022. These events included, amongst others, disruption of public transport networks, the imposition of restrictions on water supply, and contributed to the development of uncontrolled fires (e.g., Slieve Bloom Mountains). Projected increases in the frequency of heatwaves and drought conditions will mean that events currently experienced on an infrequent basis will become more frequent. As the population ages, there will also be an increase in the number of vulnerable people exposed to heat-related risks.
- **Severe windstorms** are currently experienced on a frequent basis in Offaly and result in wide-ranging impacts, including damage to buildings and infrastructure, disruptions to energy supply and transport networks across the county. Projections indicate no significant change to this frequency for County Offaly.

To increase resilience, Offaly County Council will need to proactively plan for and adapt to the current and future climate change risks identified through this CCRA.

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Extract 16-E3 – Offaly Co Council Climate Change Risk Assessment – 2nd February 2023 –Note it refers to extreme precipitation increasing flood risk, and notes heatwave/drought events contributing to uncontrolled fires.
Full report can be viewed on: https://www.offaly.ie/app/uploads/KPMG_OffalyCoCo_LACAP_Final-Report_20230202.pdf



3.2.4 CCRA – Current Climate

Impacts of Current Climate Risks – Heatwaves & Drought

County Offaly has been exposed to heatwave events (defined as 5 consecutive days with temperatures >25 deg. C) over the period 1985-2022 with a wide range of impacts across the county. The most notable and costly impact relates to repair and maintenance of road surfaces and responding to uncontrolled fires. In addition, County Offaly has experienced drought conditions over the period as exemplified by the drought events in 2006 and July 2018.

Key to colour coding of impact ratings

Hazard & Frequency	Exposure	Impact Description	Rating
Heatwave Common	Assets	• High temperatures have resulted in localised damage to road surfaces (tar and chip) across the County. • High temperatures can damage or disrupt transport networks. High rail temperatures in August 2022 led to a reduction in the speed limit for trains travelling between Portarlington and Tullamore.	Minor
	Health and Well being	• High indoor temperatures have resulted in uncomfortable working conditions for staff and public and has had impacts on for heat sensitive equipment (e.g., Council laboratories). This has resulted in the increased requirement for active/mechanical cooling.	Negligible
	Environment	• Heat waves provide suitable conditions for the ignition of uncontrolled fires, with high temperatures in 2021 leading to 26 wild fires reported throughout the county. In 2018 combating a wildfire in the Slieve Bloom mountains required 6 days of effort by firefighters. • High water temperatures associated with heatwave events have also had significant impacts on freshwater and marine environments.	Moderate
	Social	• Heatwaves have resulted in congestion at key recreational areas with facilities (e.g., litter collection and parking) overwhelmed.	Minor
	Cultural Heritage	• Extreme temperatures are recognised as contributing to the increased weathering of cultural heritage sites.	Negligible
	Financial	• The financial implications of heatwaves are primarily associated with road maintenance and repair.	Minor
	Reputational	• Heatwaves have had a negligible reputational impact for Offaly County Council	Negligible
Drought Occasional	Assets	• Drought conditions (e.g. Summer 2018) resulted in the imposition of restrictions on water supply on a national and county basis with implications for building operation.	Negligible
	Health and Well being	• Water restrictions, particularly in combination with extreme heat, have the potential to result in dehydration, this is particularly the case for vulnerable populations and outdoor workers.	Negligible
	Environment	• High temperatures and dry conditions, often compounded by high levels of ignition activity, have resulted in uncontrolled fires. In 2018 this led to 26 gorse fires throughout the county. In 2018 combating a wildfire in the Slieve Bloom mountains required 6 days of effort by firefighters.	Moderate
	Social	• Water restrictions can lead to inconvenience for local businesses and residents.	Minor
	Cultural Heritage	• Drought conditions results in damage to cultural heritage sites due to drying out of substrate.	Minor
	Financial	• The financial implications of drought are limited and restricted to responding to wildfire and supporting the provision of water (e.g., tankering).	Negligible
	Reputational	• The reputational impacts of drought conditions are limited and localised.	Negligible

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Extract 16-E4 Offaly KPMG LACAP Final Report, p.40

County Offaly has been exposed to heatwave events. The most notable and costly impact relates to repair and maintenance of road surfaces and responding to uncontrolled fires. High temperatures and dry conditions, often compounded by high levels of ignition activity, have resulted in uncontrolled fires. In 2018 this led to 26 gorse fires throughout the county, with one wildfire in the Slieve Bloom mountains requiring 6 days of effort by firefighters.

3.3.2 CCRA – Future Climate

Future Exposure and Vulnerability (1/2)

In addition to the changes in the frequency of hazard events, future risk is also driven by the changes in exposure and vulnerability of assets. In order to estimate the potential change in risk, a number of assumptions have been made in relation to the seven impact areas, which are outlined below.

Assets	• Due to the expected increase in County Offaly's population, there will be an **increase in the associated households and infrastructure**, resulting in an increase in the number of assets exposed to hazard events • Due to the expected increase in the frequency of heatwaves, **road assets will be more regularly exposed to melting**, and **drought** conditions will result in **shrinkage of peatland** and increased damage to roads as a result • Pluvial and river flooding events that were once considered extreme, will become more frequent. This will **increase damage in the areas already exposed to these hazards** and also expose new areas and therefore assets that were previously unaffected
Health and Wellbeing	• Due to the expected increase in the elderly population in County Offaly there will be **a greater number of vulnerable people who are more sensitive to hazards**, particularly heatwaves • Pluvial and river events that were once considered extreme, will become more frequent. Consequently, people will be more frequently exposed to flooding hazards, and higher flood levels which will mean **people previously unaffected by flooding may become exposed.** This could impact on both physical and mental health and wellbeing
Environment	• The potential increasing occurrence of heatwaves and drought conditions within County Offaly will mean **increased temperatures in water bodies and lower water levels** which can decrease water quality resulting in short and long term impacts on the environment • Due to the potential increased frequency of exposure to hazards in County Offaly, there could be an **increase in the impact on environmental assets** as the time/ability for the habitat/environment to recover is reduced • Pluvial and river flooding events that were once considered extreme, will become more frequent. Consequently, environmental assets will be more frequently exposed to flooding hazards, and higher flood levels will mean **environmental assets previously unaffected by flooding may become exposed-** resulting in short and long term damage to habitats/environment by these hazards

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3.3.2 CCRA – Future Climate

Future Exposure and Vulnerability (2/2)

In addition to the changes in the frequency of hazard events, future risk is also driven by the changes in exposure and vulnerability of assets. In order to estimate the potential change in risk, a number of assumptions have been made in relation to the seven impact areas, which are outlined below.

Social	• Due to the expected increase in the total and elderly population in County Offaly there will be an **increase in the number of people affected by social isolation during some hazard events** • In response to heatwaves, there will be an increased use of blue/green spaces by the public **putting increased pressure on local amenities** e.g. littering, traffic problems
Cultural Heritage	• Due to the potential increase in frequency of heatwave and drought events, **degradation rates will potentially increase resulting in an increase in the impact of cultural heritage assets** • Pluvial and river flooding events that were once considered extreme, will become more frequent. Consequently, **cultural heritage assets will be more frequently exposed to flooding hazards**, and higher flood levels will mean cultural heritage assets previously unaffected by flooding may become exposed resulting in short and long term damage to habitats/environment by these hazards
Financial	• Due to the potential increase in frequency of hazard events and exposure across County Offaly, there will be an **associated increase in the actions the local authority takes before, during, and after an event** • As a consequence, there will be an **increase in the costs associated with dealing with the events**, e.g. air conditioning, emergency service response, temporary and permanent flood defences, staff, training, and equipment purchase/maintenance
Reputational	• Due to the potential increase in frequency of hazard events and exposure across County Offaly during an event there will be an **increase in demand/pressure on services/resources** potentially reducing the level of service delivery and harming the reputation of the local authority • For hazards which are existing long-term issues in County Offaly, e.g. river flooding, if the response to the increased frequency and severity events is deemed insufficient by the public, this **may negatively impact on the reputation of the local authority**

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Extract 16-E5 Source: Offaly County Council Climate Change Risk Assessment / KPMG LACAP Final Report, pg53 & 54



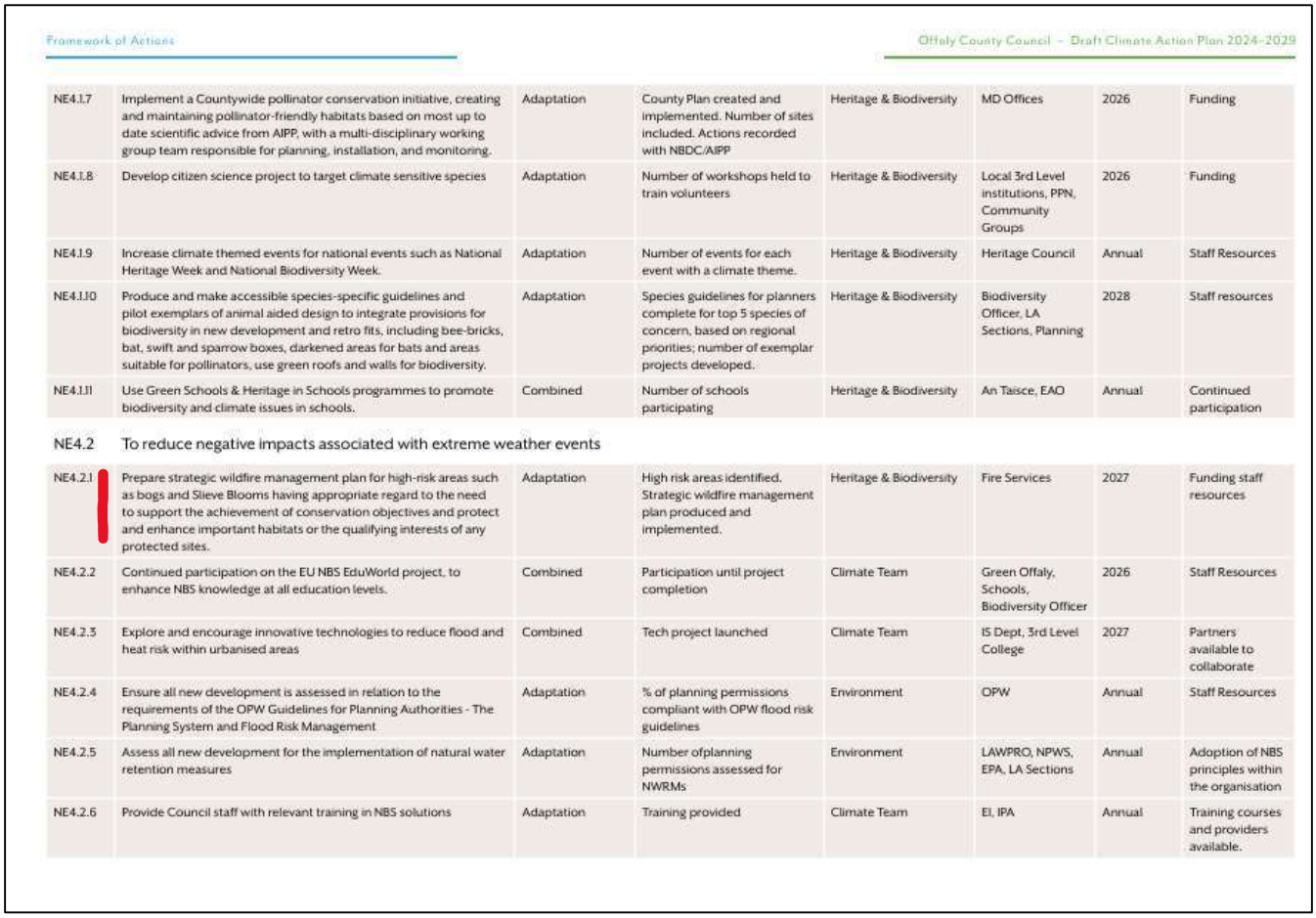
Offaly County Council – Climate Action Plan 2024-2029

The EPA, Marine Institute and Met Éireann published The Status of Ireland's Climate Report in July 2021. Future climate projections for Ireland / Offaly County Council can be summarised as follows:

- Climate projections indicate that the climate trends observed over the last century will continue and intensify over the coming decades;
- Temperatures are increasing and are expected to continue to increase and across all seasons;
- Significant reductions in levels of average precipitation (rainfall) are expected in Spring and Summer, whilst projections indicate the increased occurrence of extreme precipitation events, particularly during Winter;
- Projections show little change in average wind speed and direction. The frequency of extreme wind conditions are expected to increase, particularly during Winter;
- Increases in the frequency of fluvial (river) and pluvial (surface water) flooding;
- Increases in the frequency and intensity of summer heat waves, extreme temperatures and drought;
- Reductions in the frequency of frost and snowfall; and
- An increase in the duration of the growing season (phenological cycle).

The state of Ireland's climate today and how it may look in the future can be brought together in one simple conclusion. Ireland's climate has changed relative to the 1900's, it has undoubtedly warmed along with global temperatures, bringing about an array of impacts that are associated with a warmer climate and more extreme weather events.

Extract 16-E6 source Offaly Co Council action plan 2024 – 2029 - Future climate projections: extreme precipitation, fluvial/pluvial flooding, heatwaves, drought.



NE4.1.7	Implement a Countywide pollinator conservation initiative, creating and maintaining pollinator-friendly habitats based on most up to date scientific advice from AIPP, with a multi-disciplinary working group team responsible for planning, installation, and monitoring.	Adaptation	County Plan created and implemented. Number of sites included. Actions recorded with NBDC/AIPP	Heritage & Biodiversity	MD Offices	2026	Funding
NE4.1.8	Develop citizen science project to target climate sensitive species	Adaptation	Number of workshops held to train volunteers	Heritage & Biodiversity	Local 3rd Level institutions, PPN, Community Groups	2026	Funding
NE4.1.9	Increase climate themed events for national events such as National Heritage Week and National Biodiversity Week.	Adaptation	Number of events for each event with a climate theme.	Heritage & Biodiversity	Heritage Council	Annual	Staff Resources
NE4.1.10	Produce and make accessible species-specific guidelines and pilot exemplars of animal aided design to integrate provisions for biodiversity in new development and retro fits, including bee-bricks, bat, swift and sparrow boxes, darkened areas for bats and areas suitable for pollinators, use green roofs and walls for biodiversity.	Adaptation	Species guidelines for planners complete for top 5 species of concern, based on regional priorities; number of exemplar projects developed.	Heritage & Biodiversity	Biodiversity Officer, LA Sections, Planning	2028	Staff resources
NE4.1.11	Use Green Schools & Heritage in Schools programmes to promote biodiversity and climate issues in schools.	Combined	Number of schools participating	Heritage & Biodiversity	An Taisce, EAO	Annual	Continued participation
NE4.2	To reduce negative impacts associated with extreme weather events						
NE4.2.1	Prepare strategic wildfire management plan for high-risk areas such as bogs and Slieve Blooms having appropriate regard to the need to support the achievement of conservation objectives and protect and enhance important habitats or the qualifying interests of any protected sites.	Adaptation	High risk areas identified. Strategic wildfire management plan produced and implemented.	Heritage & Biodiversity	Fire Services	2027	Funding staff resources
NE4.2.2	Continued participation on the EU NBS EduWorld project, to enhance NBS knowledge at all education levels.	Combined	Participation until project completion	Climate Team	Green Offaly, Schools, Biodiversity Officer	2026	Staff Resources
NE4.2.3	Explore and encourage innovative technologies to reduce flood and heat risk within urbanised areas	Combined	Tech project launched	Climate Team	IS Dept, 3rd Level College	2027	Partners available to collaborate
NE4.2.4	Ensure all new development is assessed in relation to the requirements of the OPW Guidelines for Planning Authorities - The Planning System and Flood Risk Management	Adaptation	% of planning permissions compliant with OPW flood risk guidelines	Environment	OPW	Annual	Staff Resources
NE4.2.5	Assess all new development for the implementation of natural water retention measures	Adaptation	Number ofplanning permissions assessed for NWRMs	Environment	LAWPRO, NPWS, EPA, LA Sections	Annual	Adoption of NBS principles within the organisation
NE4.2.6	Provide Council staff with relevant training in NBS solutions	Adaptation	Training provided	Climate Team	EI, IPA	Annual	Training courses and providers available.

Extract 16-E7- source Offaly Co Council action plan 2024 – 2029 - Wildfire-management action: high-risk areas and strategic wildfire management plan

ATTACHMENT 16-F — Photographic Evidence of Fire-Risk Signage and Legacy Site Hazards

These photographs are included as contextual local evidence of fire-risk signage, reported legacy hazards and site conditions at or near Lemanaghan Bog. They are not relied upon as a standalone technical fire-risk assessment. They support the submission that, given the peatland setting, known bog-fire history, climate-related drought and heatwave risk and the proposed introduction of large turbine and electrical infrastructure, Chapter 16 should have included a completed, site-specific fire-risk and emergency-response assessment before concluding that major fire and bog fire effects are low or not significant.





ATTACHMENT 16-G — Wind Turbine Fire Guidance Extracts

This attachment contains extracts from wind turbine fire guidance relied upon to support the submission that Chapter 16 should have assessed turbine nacelle fire, blade fire, electrical fire, lightning-related fire, oil and lubricant fire loads, falling burning debris, firefighting limitations at height, exclusion zones, secondary ground fire and contaminated runoff.

Topic	Relevance
Wind turbine fire causes	Supports assessment of electrical faults, lightning, mechanical failure, hot surfaces and combustible materials.
Nacelle and blade fire	Supports the argument that fire at height creates response limitations incompatible with ordinary firefighting assumptions.
Oils, lubricants, hydraulic fluids and transformer components	Supports the argument that turbine fire may create burning debris, oil fire load and contaminated runoff pathways.
Firefighting limitations at height	Supports the argument that emergency response may be restricted to exclusion zones and protection of surrounding land and vegetation.
Secondary ground fire and falling debris	Supports the argument that turbine fire should be assessed as a potential trigger for bog fire and contaminated runoff.
Emergency planning and exclusion zones	Supports the need for a completed, site-specific turbine fire and emergency-response assessment addressing exclusion zones, access routes, resident notification and protection of drains.

Wind turbines fire protection guideline

CFPA-E Guideline No 22:2022 F



Pages Extracted for Reference: 4,11,12,13,14,16,17,18,23,24

1 Introduction

With the politically declared objective to support renewable energy sources and to increase their share in the overall energy supply significantly, wind turbines have developed rapidly over the last few years. In addition to the expansion of locations, the development is characterized by a constant increase of wind turbines' dimensions (hub height, rotor diameter) and a constant performance increase to up to 6 MW today

The value increase coming along with the performance increase of wind turbines, and increasing requirements with respect to the availability of wind turbines as well as loss experiences made over the last few years have caused

- the German Insurance Association (GDV) and
- Germanischer Lloyd Industrial Services GmbH, Business Segment Wind Energy (GL Wind) to prepare a VdS-guideline (VdS 3523) on fire protection for wind turbines. This guideline is used as the basis of the following CFPA-Guideline on the same topic.

This guideline will describe typical risks of fire given under the special conditions of the operation of wind turbines. Measures for loss prevention will be suggested as a result of the fire risk analysis. The objective is to minimize the incidence rate and the scope of a potential loss by fire at wind turbines. In addition to special fire protection measures for detecting, fighting and preventing fires, procedural safety measures and comprehensive control technologies/systems for monitoring procedural operations and conditions are required. It must be ensured that the wind turbine is being transferred to a safe state as a result of early detection of malfunctions of the system.

***Note**: Measures, which are in responsibility of the operator during operation of a wind turbine and other important facts for the operator, are marked in grey.*

2 Scope of application

The present guideline refers to the planning and operation of wind turbines constructed as lattice mast or tower. The fire protection concept applies to individual wind turbines as well as to wind farms designed as onshore or off-shore installations.

Fire protection requirements on wind turbines refer to the overall system and take into account the system-specific main areas of risk at the rotor blades, in the nacelle (machine house), in the tower, or at the premises. Depending on the kind of risk, different fire protection measures might be required.

Fire protection measures are specifically designed for the operation and for servicing and maintenance activities resulting from the operational process. All fire protection measures should be ready for operation by the time the operation starts at the latest. Fire protection measures mentioned in this guideline do not take into account the assembly period.

This guideline basically applies to turbines that will be newly built. Existing turbines should be adjusted to the fire protection measures mentioned in this guideline as far as is feasible.

Hydraulic oils, oil-containing waste that has not been removed, and lubricants, which are stored in the nacelle are additional fire loads and not only increase the general risk of fire unnecessarily, but increase the risk of a spread of fire.

3.3.6 Strongly limited accessibility for fire fighting

With the currently available means, fire brigades do not have any chance to fight a fire at wind turbines if the nacelles or rotors are affected. The fire brigade's turntable ladders do not reach the necessary height. Therefore, a nacelle that is on fire cannot be reached from the outside. The way towards the nacelle via ladder or elevator of a burning turbine is also perilous for fire fighters, and therefore, this is also not an option. Fire fighters are exposed to the risk of getting hurt by burning parts falling down even on the ground in the surroundings of the turbine. Due to the fact that there is an increasing trend to integrate transformers into the nacelle, fire fighters also have to pay attention to high-voltage power lines.

With respect to the fires that have occurred so far, the fire fighters' work has been restricted to the protection of the location of the fire and the prevention of secondary fires on the ground or at adjacent installations.

In case offshore wind turbines are affected by fire, manual fire fighting from the outside is not to be expected.

3.3.7 Restrictions with respect to maintenance (servicing, inspection and repair)

Due to the cramped confines in wind turbines and the limited accessibility of the turbines' components it is very difficult for the maintenance staff to conduct maintenance work appropriately and professionally. The quality of work might suffer from the difficult conditions.

4 Protection targets and protection concept

Experience has shown that in order to ensure the required fire safety it is always sensible to prepare a fire protection concept after consulting with all parties involved, the insurer in particular. According to this concept, all structural, turbine-specific and organizational protection measures shall supplement each other in terms of risk and protection targets, and any kind of mutual impairment of protection functions shall be excluded. The risks of an outbreak of fire shall be limited effectively by the following, amongst others:

- Use of non-combustible or difficult to ignite materials
- Early fire detection with automatic fire detection/alarm systems
- Frequent as well as professional maintenance
- Automatic switch-off of the turbines and complete disconnection from the power supply system in the case of fire risks being identified
- Training of employees with respect to handling dangerous situations, and in-house regulations with respect to work involving fire hazards, e.g., welding permit procedure.

In order to limit the risks of fire spread,

- early fire detection with automatic fire detection/alarm systems and
- fire fighting with automatic fire extinguishing systems

have proven to be effective in addition to the use of fire resistant components and shall be installed.

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Moreover, an emergency plan in order to limit potential damages shall be prepared. The plan must be kept updated. Implementation of this plan should be ensured by means of staff training that take place on a regular basis.

Highly acknowledged rules of technology have been prepared for planning, implementation and operation of these fire precautions as well as for assuring their quality. The present European Guidelines shall be used, harmonised on the special boundary conditions of wind turbines (e.g. climate and temperatures in and outside of the nacelle, etc.).

In addition, changes of the conditions in the power train can be detected early on by means of condition monitoring systems (CMS), and thus the risk of an outbreak of fire due to such changes can be prevented (see also Germanischer Lloyd (GL), guideline for the certification of condition monitoring systems for wind turbines).

In case existing wind turbines shall be revised in terms of fire protection according to this guideline, it should be clarified in advance with authorities, the manufacturer of the turbine, the certifying body of the turbine, and the insurer, amongst others, whether a renewal of the official approval and certification of the turbines might be required due to retrofitting. It is generally sensible to grade the required scope of protection depending on the risk parameters. In doing so, the following have to be taken into account, e.g.,

- loss experiences with different types and components of turbines,
- capacity of the turbine in MW,
- structure of the wind turbine and arrangement of risk components,
- location of the turbine (onshore or offshore),
- amount insured, and
- amount of deductibles.

The required scope of protection for wind turbines may vary depending on the object-specific risk and the risks to be insured, which can also significantly determine the insurability according to the insurers' experience.

Table 1 shows an example of the grading of protection measures by means of so-called protection levels (independent from e.g. the location or capacity of the wind turbine because of the low influence out of that). It is possible to agree upon a different grading of protection measures after consulting with the insurer. Lightning and surge protection according to paragraph 5.1.1 as well as general electrical protection measures according to paragraph 5.1.2 are generally implied.

Thinking about losses due to business interruption, the protection level of a wind energy plant can vary depending on the fact, if the plant is part of wind energy park or if it is a single plant.

Moreover, in case the automatic early fire detection system which serves to monitor the installation is activated, the wind turbine shall be automatically shut down and disconnected completely from the power supply system.

Protection measures as modules	Protection levels			
	0	1	2	3
Fire detection system – installation and room monitoring	x	x	x	x
Fire extinguishing systems – installation protection				
Control, inverter and switchgear cabinets (LV/MV)		x	x	x
Transformer			x	x
Hydraulic system				x
Slip ring housing of the generator				x
Fire extinguishing systems – room protection				
Raised floors with oil sump and cable and electrical installation			x	x
Nacelle with generator, transformer, hydraulic systems, gearbox, brake, azimuth drive				x
Hub with pitch drive and generator, if applicable				x
Tower base/platform with existing installations, if applicable				x

Table 1: Examples of protection levels

Evidence of the effectiveness and reliability of turbine-specific fire precautions can be provided through use of components and systems approved by an independent third party certification body.

The overall fire protection concept for wind turbines shall be checked by an independent, acknowledged body after consultation with the insurer, if applicable, with respect to whether an adequate protection against risk is ensured for the respective wind turbine.

5 Protection measures

The following explanations represent an instruction for specifying fire precautions in the framework of a turbine-specific fire protection concept.

5.1 Reducing the risks of an outbreak of fire

Potential risks of fire and explosions should be identified and important aspects of fire protection should be taken into account during the planning and construction phase.

5.1.1 Lightning and surge protection

Wind turbines have to be equipped with comprehensive lightning and surge protection that is adjusted to the individual type of turbine. Systems for lightning and surge protection have to be planned, build and operated like other components of the wind turbine according to the acknowledged rules of technology.

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In order to plan systems for the purpose of lightning and surge protection it is necessary to do a risk evaluation or to assume the highest possible risk according to IEC 62305 (lightning protection level I = LPL I). When evaluating the risk, the possible lightning paths, e.g., from the rotor blade via hub, nacelle and tower to the foundation, have to be recorded and observed exactly.

Lightning and surge protection have to cover the nacelle and rotor blades, in particular, as well as any kind of electrical installations or equipment, including cable lines that are relevant for the operation and safety.

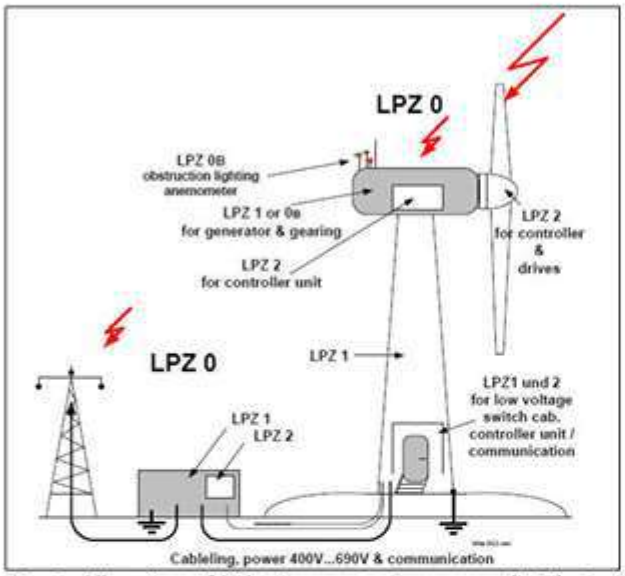


Fig. 5: Allocation of lightning protection zones (LPZ) at wind turbines with metal nacelle (Source: Phoenix Contact)

Attention has to be paid to the allocation of the wind turbines' components to individual lightning protection zones depending on the disturbance variable through partial lightning currents and switching surges that may be expected.

In order to design the turbines' components for lightning protection, the relevant protection level of the turbines has to be defined. In doing so, at least protection level II should be chosen for a comprehensive lightning protection system for wind turbines.

However, as is the case with high towers, low current lightning also poses a challenge to wind turbines. "Therefore, protection areas at the tower, nacelle, hub and rotors – also rotating – should be identified by means of the so-called rolling sphere method.

5.1.2 Minimizing the risk of electrical systems

The protection technology, which comprises any electrical installations as well as measures for identifying power system faults and other abnormal operating conditions at wind turbines and the associated peripheral systems, shall be state of the art and comply with current national standards. Its main task is to identify flaws selectively and to switch off faulty parts of the power system or individual electrical equipment, e.g., transformer, line, generator, immediately. There is currently no sufficient protection in most of the older wind turbines.

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- Hot surfaces, e.g., bearings, brake disk
- Spontaneous ignition through dirty cleaning cloths (e.g., oil, solvents).

Components and the before mentioned possible ignition sources must be arranged and executed so that combustible material is not set on fire during normal operation or in case of malfunctions. In order to ensure this it is necessary to install coverings, baffle plates or the like that are made of non-combustible material. Electrical equipments shall be secluded.

Dirty cleaning cloths must be disposed when leaving the wind turbine.

5.1.5 Work involving fire hazards

Work involving fire hazards relating to repair, assembling or disassembling work shall be avoided. If this is impossible, it must be checked whether so-called cold procedures (sawing, screwing, cold bonding, etc.) can be used instead.

If work involving fire hazards cannot be avoided it is mandatory to take fire precautions prior, during and after the work in order to avoid an outbreak of fire or to detect a fire early on, and to fight it effectively.

For more information on hot works see CFPA Guideline No 12:2006

5.1.6 Maintenance (servicing, inspection and repair) of mechanical and electrical systems

Fires caused by technical defects at electrical and mechanical systems represent the most frequent causes of loss. Means to reduce such kind of loss include regular maintenance according to the manufacturer's instructions (maintenance manual) and inspections of the systems as well as timely repair of identified deficiencies.

One tool serving this purpose, which is already available at many wind turbines, is systems that automatically monitor important operating parameters such as the pressure and temperature of mechanical and electrical systems such as transformer, generator winding, gearboxes, hydraulic systems or bearings. If the limiting value is exceeded or is not reached, there must be some kind of alarm and finally an automatic shutdown of the wind turbine. In the course of type testing and certification processes of wind turbines, the monitoring of operating parameters is usually taken into account.

Electrical installations and monitoring systems in wind turbines have to be examined by experts on site on a regular basis. At least every five years the gas and oil of the transformer insulation liquid has to be analysed.

The analysis allows drawing a conclusion on the quality of the insulating oil and provides insights with respect to possible electrical defects, thermal overloads of the transformer, and the condition of the paper dielectric. If there are any defects in the active component of oil transformers, there is the risk of an explosion due to large electrical currents in connection with the insulating oil as fire load resulting from rapidly increasing internal pressure in the boiler. With respect to drytype transformers, the surface has to be controlled annually, and it has to be cleaned if necessary. Additional safety is provided by installations that serve the optical detection of partial discharge (spark switch).

Recurring inspections of electrical installations shall take place every two years.

In addition to these inspections, thermography at the electrical installations shall be examined on a regular basis, e.g., in the following areas:

- Connection areas and, if possible, contacts of the LV HRC fuse switch disconnections
- Clamping devices and terminal strips, respectively, in distribution boards as well as switch terminal blocks and control terminal blocks
- Connection areas and, if possible, contacts of bus bars, contactors, capacitors, etc.
- Connection areas and surfaces of transformers, converters, and engines
- Power cable and cable bundles, respectively
- Surfaces of equipment which may pose a risk in case of heating.

Thermography inspections must be conducted by an approved expert (or comparable for countries, where no certifying system exists) who disposes of the technical qualification and the required measuring instruments. For more information on thermography experts see CFPA Guideline No 3:2003.

Mobile devices which are applied in the course of maintenance and repair have to be inspected on a regular basis according to national requirements. Basically the recommended period is for that is semi-annually; with an unique annually period in maximum in between.

Lightning protection systems have to be inspected by an approved expert at regular intervals, the recommended period is in minimum annually. The inspection of the operability and condition of the lightning protection system includes a visual inspection of all air terminals and down conductors as well as measuring the contact resistance of the conduction path from the air terminals in the rotor blades to the ground terminal lug and measuring the ground resistance of the foundation.

The ground resistance of the foundation according to EN 62305-3 has to be measured in addition in the course of this recurring inspection.

The result of any maintenance activities must be documented in written form, e.g., in a maintenance specification sheet or a report book. Deficiencies that have been identified during maintenance or testing shall be fixed immediately. The correction of deficiencies has to be documented and reviewed.

5.1.7 No smoking

The entire area of the wind turbine must be declared a non-smoking area.

In order to ensure compliance with the ban on smoking, employees and external companies, if applicable, must be instructed accordingly, and sanctions shall be imposed in case of violation of the ban. "No Smoking" signs have to be put up clearly and permanently right at the entry areas of the wind turbine.

5.1.8 Training

Service staff and authorized external companies, if applicable, are to be instructed on the risks of fire at the wind turbine on a regular basis. Instructions may include, amongst others:

- Preventing risks of fire
- Functionality of fire protection systems and installations installed as well as how to handle them
- Correct behaviour in case of fire, e.g., alerting assisting bodies
- Correct use of fire extinguishers.

It is recommended to conduct fire protection training, e.g., fire alarm tests, rehearsals for implementation of the emergency plan and evacuation of the nacelle, at regular intervals, and to involve the local fire brigade (for onshore wind turbines) into this training.

5.1.9 Prevention of forest fires

The possibility of the occurrence of a forest fire due to a fire in a wind turbine can be easily prevented by adopting the measures to clean up the area where the tower is located, so that its surroundings are free of all scrub and low bush that can contribute to the spread of fire in a strip of 25 m.

5.2 Fire detection and fire fighting

Operating conditions, first environmental and weather conditions, for fire protection systems at wind turbines may vary significantly. The following, in particular, has to be taken into account, e.g.,

- effects of atmospheres containing salt (offshore wind turbines),
- significant fluctuations of temperature due to the change of day and night, e.g., cooling down significantly at night and intensive sun shining at day,
- vibrations,
- oil deposits,
- air change und flow conditions in the nacelle.

Moreover, increased humidity, e.g., due to the location, and construction of the wind turbine may have an impact on the functionality of the turbine's technology.

Therefore, effects that may have an impact on the effectiveness and reliability of the fire protection technology have to be taken into account already in the planning phase of the turbine, and they have to be adjusted to the different techniques and constructions applied at wind turbines.

5.2.1 Fire detection

In order to effectively limit fire and consequential loss, fires at wind turbines shall also be detected early on by automatic fire detection systems, in particular, since wind turbines are usually operated without any on-site staff. Distinction is basically made between room and installation monitoring.

On the one hand, automatic fire detection serves to inform the control unit, and on the other hand, it serves to activate the extinguishing devices automatically plus to shut down the wind turbine automatically, if necessary.

Room monitoring

The nacelle and parts of the tower in which the wind turbine technology is installed as well as external transformer and electric power substations are to be monitored by an automatic fire detection system.

Raised floors and ceiling voids or the like with fire loads, e.g., cables and other lines, have to be included in the monitoring.

Fire detectors have to be qualified for the area to be monitored and for the fire characteristics to be expected. Special environmental conditions, e.g., temperature, humidity, and vibrations, have

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Extinguishing systems (extinguishing agents) / Room/Installation wind turbine	Gas extinguishing systems		Water extinguishing systems				Other extinguishing systems	
	CO_2 (high pressure)	Inert gases	Sprinkler	Water spray	Fine spray	Foam	Powder	Aerosol[1)]
Room protection, e.g.,								
Nacelle with generator, transformer, hydraulic systems, gearbox, brake, azimuth drive	+	+	+	+	+	-	-	-
Hub with pitch drive and generator, if applicable	+	+	+	+	+	-	-	-
Raised floors with oil sump and cable and electrical installations	+	-	+	+	+	+	-	-
Central electric power substation, switchgear rooms (without transformer)	+	+	-	-	+	-	-	-
Tower base/platform with available installations, if applicable	+	+	+	+	+	-	-	-
Installation protection, e.g.,								
Control, inverter, switchgear cabinets (LV/MV), closed	+	+	-	-	+	-	-	-
Transformer	+	-	-	+	+	-	-	-
Control, inverter, switchgear cabinets (LV/MV), open	+	-	-	-	+	-	-	-
Hydraulic system, open	+	-	+	+	+	+	-	-

* basically suitable - not likely suitable

The data in this table refers to the basic suitability of several fire extinguishing systems with respect to their functionality and general application conditions in the respective area of the wind turbine's system; it serves as a first orientation guide and does not replace the required proof of suitability as well as the object-specific technical planning by appropriate specialist planners, e.g., certified installers. Type-specific characteristics of wind turbines and fire extinguishing systems have to be taken into account after consulting with the insurer (e.g., Insurer engineering department) as well as the certifying body for wind turbines, if applicable (for more information on fire fighting systems see also CEA-Specifications for the planning and installation of the respective fire extinguishing systems at www.cea.eu).

1) There is currently no empirical information available on the reliability and effectiveness concerning the application of aerosol extinguishing systems

Table 3: Support information on the selection of fire extinguishing systems for room and installation protection

5.2.3 Fault monitoring

Fire detection systems and fire extinguishing systems have to be monitored constantly in order to ensure their operational reliability.

Failures with traditional fire protection systems, e.g., failure of individual fire detectors or leakage at the extinguishing agent stock or shrinkage of the extinguishing agent supply will be displayed directly at the fire protection system by means of an error message. Due to the operation without on-site staff and the remote location of wind turbines and the resulting non-identification of possible failures at the fire protection system on site, forwarding of all error messages to a permanently manned post (control post) is required. This control post will then initiate immediate recovery of the unlimited operational readiness of the fire protection system.

Any events have to be documented in the report book.

5.2.4 Deactivation of safety installations

Fire protection systems may only be deactivated for a short period of time after consulting with the persons in charge in case of compelling requirements.

When deactivating a fire protection system it must always be checked whether there is any obligation to inform the insurer because of the increase of risk.

Sufficient backup measures must be provided for the duration of the deactivation, e.g.,

- ensuring fire alarm/call,
- providing suitable fire fighting equipment (see also paragraph 5.2.2).

After completion of the work all safety and fire protection installations that had been deactivated have to be set in operation again. The operating condition of the systems must be visible at the entrance area of the wind turbine and at the primary control unit.

5.3 Measures for limiting loss

Experience has shown that it is sensible to prepare an emergency plan for the case of fire. This plan shall in particular include the following specifications:

- Determination of the personnel that is on standby in the internal work schedule for the existing wind turbines (ensuring "twenty-four-seven" standby of the control post)
- Preparation and introduction of an internal, written schedule in case of fire in which any immediate measures to be taken by the employee in charge are included. The schedule should include the following issues:
  - Provision of local emergency telephone codes
  - Notification of fire brigade and police
  - On-site support by fire brigade and police
  - Shutdown of the wind turbine and disconnection from the power supply system, if required
  - Reporting fire damage immediately to the insurer
- Preparation of an emergency plan for the case of fire after consulting with fire brigades and police offices in charge and with the insurer, if applicable. The following issues should be included in an emergency concept:
  - Leave internal standby schedule and a respective standby telephone number with the police and fire brigade
  - Information and briefing, if applicable, of the competent rescue forces (fire brigade, police) on:

ATTACHMENT 16-H — Legal Framework Extracts

This ATTACHMENT summarises the principal Irish, EU and case-law authorities relied upon in support of the Chapter 16 objection. It is relied upon to support the submission that the EIAR must provide a complete, site-specific and pre-consent assessment of peat stability, bog fire, turbine fire, flooding, artificial drainage, climate change, emergency response, downstream contamination, human health, cultural heritage and cumulative effects.

Ref	Source	Key Legal Requirement	Relevance to Chapter 16
16-H1	Planning and Development Act 2000, s.171A	EIA must identify, describe and assess direct and indirect significant effects, including effects derived from vulnerability to risks of major accidents or disasters.	Central Irish statutory basis. Chapter 16 must assess not only named risks but their direct, indirect and interacting consequences.
16-H4	Schedule 6, para.2(e)(i)(IV)	EIAR must describe likely significant effects from risks to human health, cultural heritage or the environment due to accidents or disasters.	Accident and disaster risk is an EIA issue affecting human health, cultural heritage and the environment, not merely an engineering issue.
16-H5	Schedule 6, para.2(e)(ii)	Description must cover direct, indirect, secondary, cumulative, short-term, long-term, permanent and temporary effects.	Chapter 16 must not assess each hazard in isolation. Interactions between turbine fire, bog fire, peat movement, flooding, contaminated runoff and emergency access must be considered.
16-H7	Schedule 6, para.2(g)	EIAR must describe measures to avoid, prevent, reduce or offset significant adverse effects and explain the extent to which effects are avoided or reduced.	General CEMP, ERP and future fire assessment reliance is insufficient unless the EIAR explains how and to what extent those measures prevent or reduce significant effects.
16-H8	Schedule 6, para.2(h)	EIAR must describe expected significant adverse effects from vulnerability to major accidents and disasters and, where appropriate, details of emergency preparedness and proposed response.	Core Chapter 16 provision. Directly supports the requirement for assessment of bog fire, turbine fire, peat failure, flooding, contaminated runoff and emergency access.
16-H12	Wells v Secretary of State, Case C-201/02	Environmental effects must be assessed before development consent is granted.	Supports the objection to reliance on future CEMP revision, future ERP, future fire safety assessment and future confirmatory peat stability design.
16-H13	Commission v Ireland, Case C-215/06 (Derrybrien)	Failure to carry out proper EIA for peatland wind farm development gave rise to breach of EU law following a major landslide.	Directly relevant to peatland wind farm risk. Supports robust pre-consent assessment of peat stability, peat movement, sediment release, drainage

			disruption and downstream contamination.
16-H16	Connelly v An Bord Pleanála [2018] IESC 31	Reasons must allow interested parties to understand why the decision went the way it did and whether there is a lawful basis for challenge.	Relevant to Chapter 16's repeated low-risk and not-significant conclusions. Such conclusions must be supported by clear, transparent and site-specific reasoning.
16-H21	Planning and Development Act 2000, s.37F	An Coimisiún Pleanála may require further information, including a revised EIAR, before determining the application.	Supports the request that the Applicant be required to submit a revised, site-specific Chapter 16 assessment addressing all identified deficiencies.

ATTACHMENT 16-I to 16-L — Supporting Evidence Panels

> **ATTACHMENT 16-I Applicant's Chapter 9 Water and Appendix 9-1 Flood Risk Assessment Extracts**
> Contains relevant extracts from the Applicant's own flood risk assessment identifying mapped flood zones, T12 and associated access-road flood risk, pluvial flooding, modified drainage, pumping stations, outfalls, backwater effects, downstream water bodies, WFD status and contaminated-floodwater health pathways. The full Chapter 9 Water and Appendix 9-1 are before An Coimisiún Pleanála as part of the Applicant's EIAR. Extracts 16-I1 to 16-I12 are provided for ease of reference.

Extract 16-I1 – Flooding Identified as a Relevant Risk
Source: Chapter 16, Section 16.3.3.1 / Risk Tables
The Applicant identifies flooding as a relevant risk pathway, including heavy rainfall, climate change, sedimentation of watercourses and potential effects on aquatic habitats and species.

Extract 16-I2 – Reliance on Modified Drainage / Flood Zone C Conclusion
Source: Chapter 16, Flooding Risk Assessment
The Applicant accepts that surface-water flooding is considered likely in parts of the site, but relies on the heavily modified Lemanaghan Stream and high drainage density to treat the wider site as Flood Zone C.

Extract 16-I3 – Extensively Modified and Drained Peat Bog
Source: Appendix 9-1 Flood Risk Assessment, Introduction / Background
The Applicant's Flood Risk Assessment confirms that Lemanaghan Bog forms part of the Boora Bog Group and is a Bord na Móna peat bog which has been extensively modified and drained as a result of previous peat extraction.

Extract 16-I4 – Flat, Modified Site with Basin Effect
Source: Appendix 9-1 Flood Risk Assessment, Site Location / Topography
The Applicant records that the site is relatively flat and has been modified by industrial peat extraction and associated drainage works. It also records that headlands and remnant peat banks create a basin effect within former extraction areas.

Extract 16-I5 – Artificial Drainage Infrastructure
Source: Appendix 9-1 Flood Risk Assessment, Existing Drainage / Hydrology
The Applicant identifies artificial drainage infrastructure, including field drains, larger arterial drains, outfalls and pumping arrangements. This supports the concern that flood behaviour depends on an artificial drainage system rather than a natural greenfield hydrological baseline.

Extract 16-I6 – Flood Mapping and Future Scenario Mapping
Source: Appendix 9-1 Flood Risk Assessment, Flood Risk Identification
The Applicant identifies historic flood mapping, OPW past flood events mapping, CFRAM / National Indicative Fluvial Flood Mapping and high-end future scenario mapping as relevant to the assessment.

Extract 16-I7 – Fluvial and Pluvial Flood Pathways
Source: Appendix 9-1 Flood Risk Assessment, Detailed FRA / Conceptual Model
The Applicant identifies fluvial flooding of the Lemanaghan Stream together with pluvial flooding during significant rainfall events as relevant flood pathways.

Extract 16-I8 – Turbine and Road Infrastructure within Mapped Flood Zones
Source: Appendix 9-1 Flood Risk Assessment, Table D / Initial FRA
The Applicant identifies one turbine and sections of proposed road infrastructure within mapped flood zones. The Applicant also identifies pluvial flooding as very likely after heavy or prolonged rainfall.

Extract 16-I9 – Extreme Rainfall and Climate-Change Testing
Source: Appendix 9-1 Flood Risk Assessment, Substation Assessment
The Applicant applies extreme rainfall and climate-change testing to the proposed onsite 220kV substation area. This demonstrates that extreme rainfall and climate-change scenarios are relevant to infrastructure on this site.

Extract 16-I10 – Rehabilitation, Drain Blocking and Increased Water Storage
Source: Appendix 9-1 Flood Risk Assessment, Rehabilitation / Drainage

The Applicant states that rehabilitation measures include drain blocking, outfall modification and water-level management through overflow pipes, and that the bog will store more water following rainfall.

Extract 16-I11 – Downstream Hydrological Pathways
Source: Chapter 9 Water, Drainage / WFD / Water Quality Sections
The Applicant identifies hydrological pathways from the site to downstream waterbodies, including the Lemanaghan Stream, the Brosna catchment and the River Shannon system.

Extract 16-I12 – Contaminated Floodwater and Human Health
Source: Chapter 9 Water, Health Effects / Water Contamination
The Applicant acknowledges that flooding may cause exposure to contaminated floodwater and that floodwaters can carry disease, contamination or effluent, with potential temporary health effects.

These extracts are relied upon because flood risk, drainage, water quality, contaminated floodwater and downstream hydrological pathways are directly relevant to Chapter 16's assessment of major accidents and natural disasters.

> **ATTACHMENT 16-J Local Photographic and Documentary Flooding and Hydrological Connectivity Evidence**
> Contains dated local photographic and documentary evidence of seasonal flooding, standing water, road flooding, peat-stained runoff and hydrological connectivity in and around Lemanaghan Bog. Figures 16-J1 to 16-J6 show recurring surface-water accumulation on Lemanaghan Bog between 2019 and 2025. Figures 16-J7 to 16-J10 show local road and community flooding relevant to emergency access and flood-response considerations. Figures 16-J11 to 16-J12 show hydrological connectivity between the Lemanaghan Stream system and the River Brosna. This evidence is relied upon as contextual public-participation evidence, not as a substitute for technical flood modelling.



Figure 16-J1 – Seasonal flooding / standing water at Lemanaghan Bog, January/March 2020. Photograph showing surface-water accumulation on the cutaway bog during winter/spring conditions. This supports the concern that pluvial flooding and seasonal ponding are recurring features of the receiving environment and should be addressed in the Chapter 16 natural-disaster assessment.



Figure 16-J2 – Whooper Swans on flooded peat fields at Lemanaghan Bog, winter 2022.
Photograph showing Whooper Swans using flooded peat fields at Lemanaghan Bog, with the former welfare building / "Tea Rooms" visible in the background. This image is relied upon to demonstrate that seasonal flooding is not merely a drainage issue, but may also be relevant to biodiversity, wetland conditions and the interaction of water, ecology and land-use change.



Figure 16-J3 – Surface-water accumulation at Lemanaghan Bog, 8 November 2023.
Photograph showing extensive standing water on the bog, with Bellair Hill visible in the background and birds present on the water. This image supports the concern that seasonal surface-water accumulation continued after the cessation of industrial peat extraction and should be considered in flood-risk and emergency-response assessment.



Figure 16-J4 – Surface-water accumulation beside former rail-bed infrastructure, Lemanaghan Bog, 19 October 2024.

Photograph showing standing water beside former industrial peat infrastructure. This is relevant to Chapter 16 because flood or ponding conditions may interact with legacy infrastructure, access constraints, drainage management and emergency-response feasibility.



Figure 16-J5 – Recent surface-water accumulation at Lemanaghan Bog, September 2025. Photograph showing standing water on Lemanaghan Bog in September 2025. This image is relied upon as recent local evidence that ponding / surface-water accumulation remains an ongoing feature of the bog environment.



Figure 16-J6 – Road flooding near St Manchan's Estate / Lemanaghan area, 1 January 2016.
Photograph showing surface-water flooding affecting a local road. This image is relied upon as contextual evidence of local drainage stress and potential flood-related access constraints relevant to emergency-response planning.



Figure 16-J7 – Flooding at Erin Rovers GAA grounds / Pollagh area, 26 February 2020.
Photograph showing inundation following heavy rainfall. The Lemanaghan Stream is understood locally to run behind this area before entering the River Brosna. This image is relied upon as contextual evidence of local flood conditions and possible drainage / river interaction in the wider receiving environment.



OFFALY INDEPENDENT

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Last updated: Thu 27 Feb 2020, 3:40 PM

Flooding at Erin Rover's club grounds in Pullagh.

Flooding update by Offaly County Council

Offaly County Council continues to monitor river levels in the county. We are prepared for the deployment of defence measures if required and our crews continue to respond to localised flooding.

Figure 16-J8 – Newspaper report documenting local flooding, Offaly Independent, 27 February 2020. Screenshot of a local news report referring to flooding in the Pullagh / Erin Rovers area following heavy rainfall. This is included as documentary context supporting the local flood-history evidence. Full article not reproduced.



Figure 16-J9 – Local road flooding near Lemanaghan Bridge / River Brosna, 26 February 2020. Photograph showing local road flooding near Lemanaghan Bridge following heavy rainfall. This image is relied upon as contextual evidence of flood-related access vulnerability and high-water conditions in the receiving environment.



Figure 16-J10 – Lemanaghan Stream / River Brosna confluence, 30 April 2025.
Photograph showing the confluence area where the Lemanaghan Stream enters the River Brosna. This image is relied upon to illustrate hydrological connectivity between the Lemanaghan Bog drainage system and downstream receiving waters.



Figure 16-J11 – Active flow / peat-stained water in the Lemanaghan Stream system, 22 October 2025.

Photograph showing visible flow and peat-stained water within the Lemanaghan Stream system. This is relied upon as local contextual evidence of ongoing hydrological activity and potential movement of peat-stained water or suspended organic material through connected drainage channels.



Figure 16-J12 – Peat drainage channel with visible debris / discoloured standing water, 22 October 2025.

Photograph showing discoloured standing water and visible material within a peat drainage channel. This image is relied upon as contextual evidence of potential mobilisation of sediment, debris or discoloured runoff through active drainage channels during flood or high-flow conditions. It is not relied upon as laboratory proof of contamination.

ATTACHMENT 16-K Applicant's Chapter 8 and Appendix 8-1 Peat Stability Extracts

Contains extracts from the Applicant's own peat stability material identifying peat depths, peat failure consequences, Factor of Safety methodology, previous peat-slide lessons learned (Derrybrien, Shass Mountain, Meenbog), construction controls, confirmatory peat stability assessment requirements and infrastructure-specific peat risk. Extracts 16-K1 to 16-K11 are provided. Particularly significant: Extract 16-K4 (peat failure consequences including death, injury, watercourse contamination and degradation); Extract 16-K7 (Shass Mountain failure following heavy rainfall); Extract 16-K9 (qualitative factors cannot all be captured in Factor of Safety calculations); Extract 16-K10 (medium pre-control risk on internal road section to T12).

Extract 16-K1 – Peat Stability Identified in Chapter 16

Source: Chapter 16, Section 16.3.3.9 and Risk Registers

Chapter 16 identifies peat stability as a relevant risk and states that peat movement may occur during construction or operation, with possible causes including mismanagement of excavated material and extreme weather conditions.

Extract 16-K2 – Peat Depths Across the Proposed Project Site

Source: Chapter 16, Section 16.3.3.9 / Chapter 8, Section 8.3.3.2

The Applicant records 722 peat probes and peat depths ranging from 0m to greater than 6m, with approximately 20% of probes recording peat depths between 3.0m and 6.2m.

Extract 16-K3 – Infrastructure Located on Material Peat Depths

Source: Chapter 8, Peat / Soils and Subsoils Site Investigation Data

Chapter 8 records material peat depths at several infrastructure locations, including construction compounds, crane pads, tower build areas, the substation, telecoms tower, steel mast locations and borrow pit areas.

Extract 16-K4 – Potential Effects of Peat Instability and Failure

Source: Chapter 8, Section 8.5.2.6

Chapter 8 identifies potential effects of peat failure including death or injury to site personnel, damage to machinery, damage or loss of infrastructure, drainage disruption, contaminated watercourses / water supplies and degradation of the peat environment.

Extract 16-K5 – Pre-Mitigation Effect Classified as Significant

Source: Chapter 8, Section 8.5.2.6

Chapter 8 classifies the pre-mitigation potential effect from peat instability and failure as negative, significant, direct, permanent and unlikely.

Extract 16-K6 – Mitigation / Control Measures Required

Source: Chapter 8, Section 8.5.2.6

Chapter 8 identifies mitigation including experienced contractors, qualified supervision, sufficient construction time, avoiding undercutting and unsupported excavations, robust drainage,

avoiding loading on marginal ground, monitoring systems, method statements and revision of the Construction Risk Register.

Extract 16-K7 – Previous Peat Failures and Lessons Learned

Source: Appendix 8-1, Peat Stability Assessment Methodology

Appendix 8-1 refers to Derrybrien, Shass Mountain and Meenbog peat failures and states that existing drainage must be maintained during construction to avoid a similar failure to Shass Mountain, which occurred following heavy rainfall.

Extract 16-K8 – Confirmatory Assessment Required Before Construction

Source: Appendix 8-1, Section 2.3 / 2.4

Appendix 8-1 states that detailed engineering construction design must be carried out before construction and must include a confirmatory peat stability assessment and a peat and spoil management plan.

Extract 16-K9 – Qualitative Factors Cannot All Be Captured in FoS Calculation

Source: Appendix 8-1, Peat Stability Risk Assessment

Appendix 8-1 states that the risk assessment uses deterministic Factor of Safety results in combination with qualitative factors which cannot reasonably be included in stability calculations but may still affect peat instability.

Extract 16-K10 – Medium Pre-Control Risk on Internal Road Section to T12

Source: Appendix 8-1, Peat Stability Risk Register

Appendix 8-1 identifies the internal road from the T5/T6 junction to T12 as having a medium pre-control risk rating, requiring control measures to reduce the risk.

Extract 16-K11 – Rehabilitation / Flooding Interaction

Source: Chapter 8, Section 8.5.2.12

Chapter 8 identifies Biodiversity Management and Enhancement Plan measures including a 10ha flooded area and associated lakeshore, with controlled winter flooding proposed for Whooper Swan. This is relevant to the interaction between drainage, rewetting, water retention, access and peat stability.

ATTACHMENT 16-L Historic Geological and Borehole Context for Lemanaghan Bog

Contains contextual public-record evidence of historic GSI and EMD borehole data, marl records and sub-peat geological information relevant to peat depth, sub-peat strata, baseline uncertainty and the need for a complete peat-stability and major accidents assessment. Figures 16-L1 to 16-L5 are provided. This material is relied upon only as contextual evidence that historic subsurface data exists for the Lemanaghan area and may be relevant to the assessment. It is not relied upon as a substitute for the Applicant's technical geotechnical assessment.

Evidence Ref	Material	Relevance
16-L1	GSI / EMD verified borehole locations within / adjacent to Lemanaghan Bog	Shows historic subsurface data may exist and should be considered if relevant to peat depth, sub-peat strata and stability.
16-L2	GSI marl locality / shelly marl record	Supports concern that sub-peat stratigraphy may be more complex than a simple peat-over-till summary.
16-L3	Historic drillhole record showing overburden over limestone	Supports concern that historic records may assist in understanding peat depth, overburden and geological baseline.

This material is relied upon only as contextual public-record evidence of historic subsurface information in the Lemanaghan area. It is not relied upon as a substitute for the Applicant's technical geotechnical or peat-stability assessment.

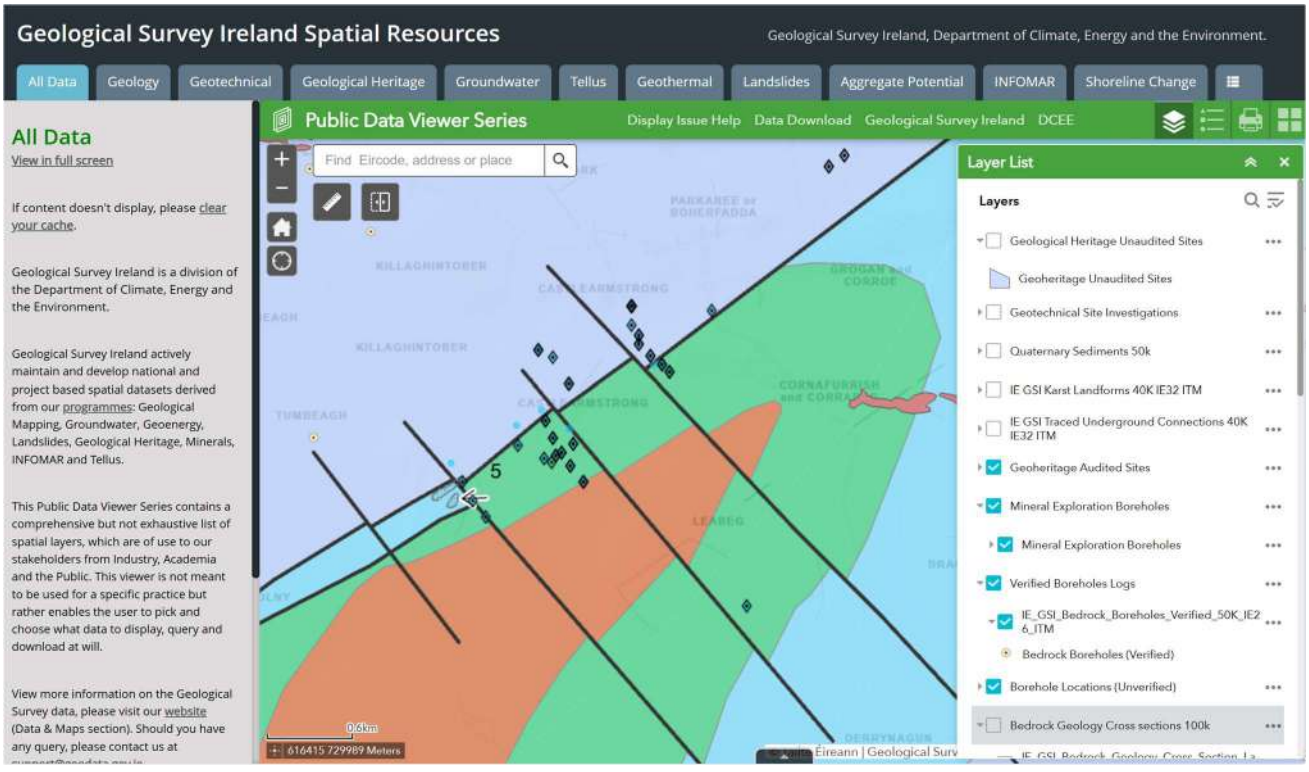


Image 16-L1 – GSI / EMD verified borehole locations within and adjacent to Lemanaghan Bog: Geological Survey Ireland (GSI) Spatial Resources -
Screenshot from the **GSI Spatial Resources Viewer** showing verified borehole locations associated with Exploration and Mining Division records. This is relied upon as contextual evidence that historic subsurface data exists for the Lemanaghan area and may be relevant to peat depth, sub-peat strata and baseline uncertainty.

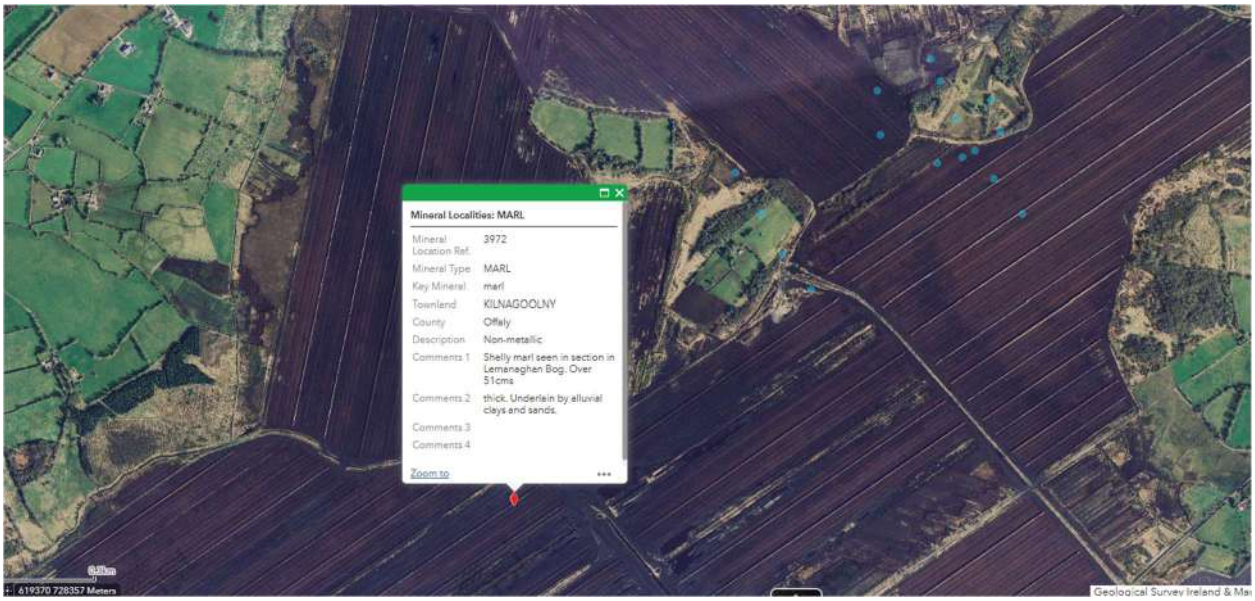
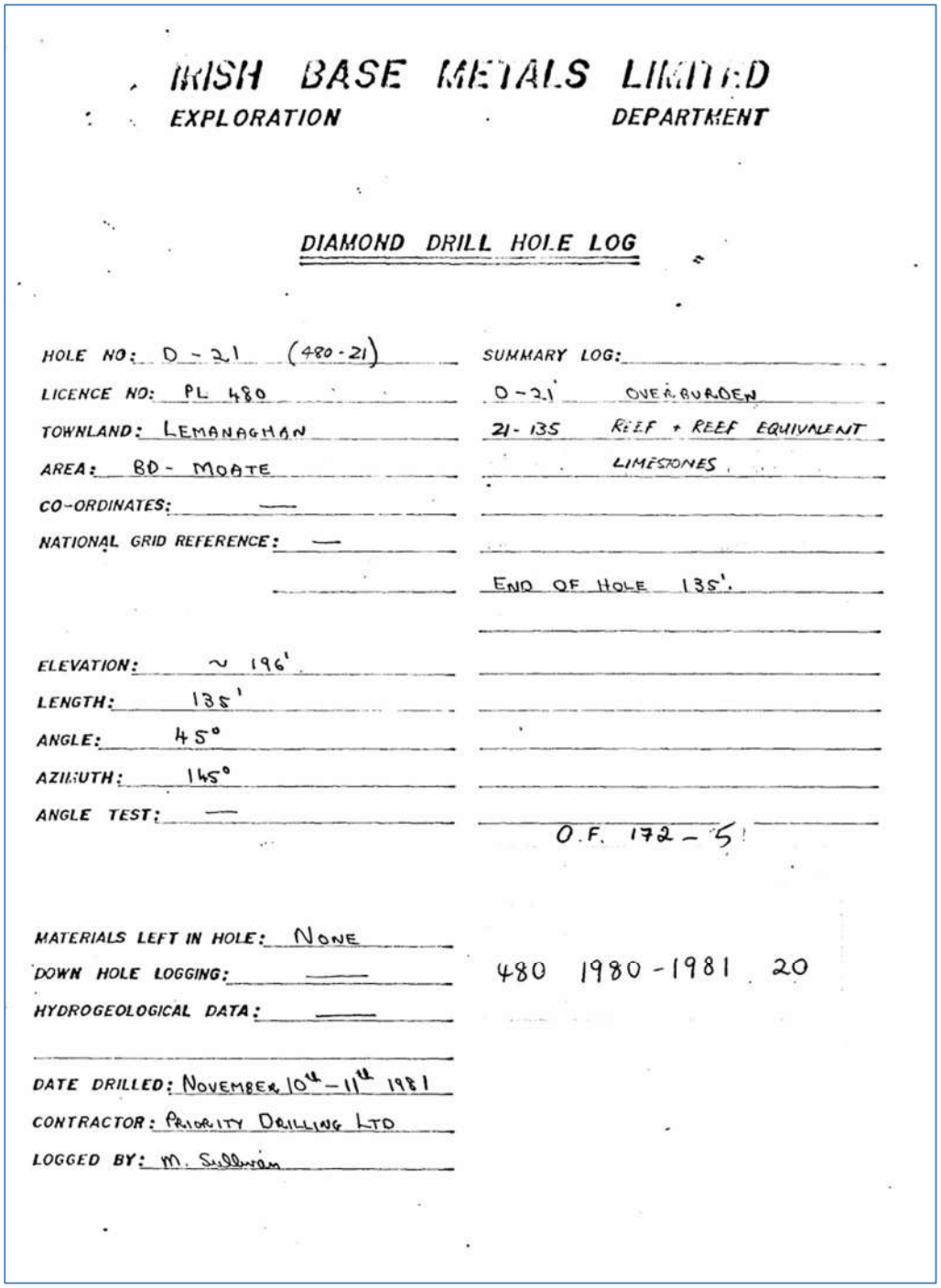


Figure 16-L2 – GSI mineral locality / marl record and verified boreholes, Lemanaghan Bog
Screenshot from **GSI public records** showing a recorded marl locality and verified borehole context in the Lemanaghan area. The record of shelly marl and associated sub-peat material is relied upon as contextual evidence that sub-peat stratigraphy may be relevant to the peat-stability and baseline assessment.



IRISH BASE METALS LIMITED
EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE LOG

HOLE NO: D-21 (480-21)
LICENCE NO: PL 480
TOWNLAND: LEMANAGHAN
AREA: BD - MOATE
CO-ORDINATES: —
NATIONAL GRID REFERENCE: —

ELEVATION: ~ 196'
LENGTH: 135'
ANGLE: 45°
AZIMUTH: 145°
ANGLE TEST: —

MATERIALS LEFT IN HOLE: NONE
DOWN HOLE LOGGING: —
HYDROGEOLOGICAL DATA: —

DATE DRILLED: NOVEMBER 10th – 11th 1981
CONTRACTOR: PRIORITY DRILLING LTD
LOGGED BY: M. Sullivan

SUMMARY LOG:
0-21' OVERBURDEN
21-135 REEF + REEF EQUIVALENT LIMESTONES.

END OF HOLE 135'.

O.F. 172-5

480 1980-1981 20

Figure 16-L3 – Historic drillhole record, Drillhole D-21, PL 480, Lemanaghan Townland,
Extract from historic Exploration and Mining Division / drillhole records showing subsurface information for the Lemanaghan area, including overburden and limestone context. This is relied upon as contextual evidence that historic subsurface data exists and may assist in understanding peat depth, overburden and sub-peat geology.

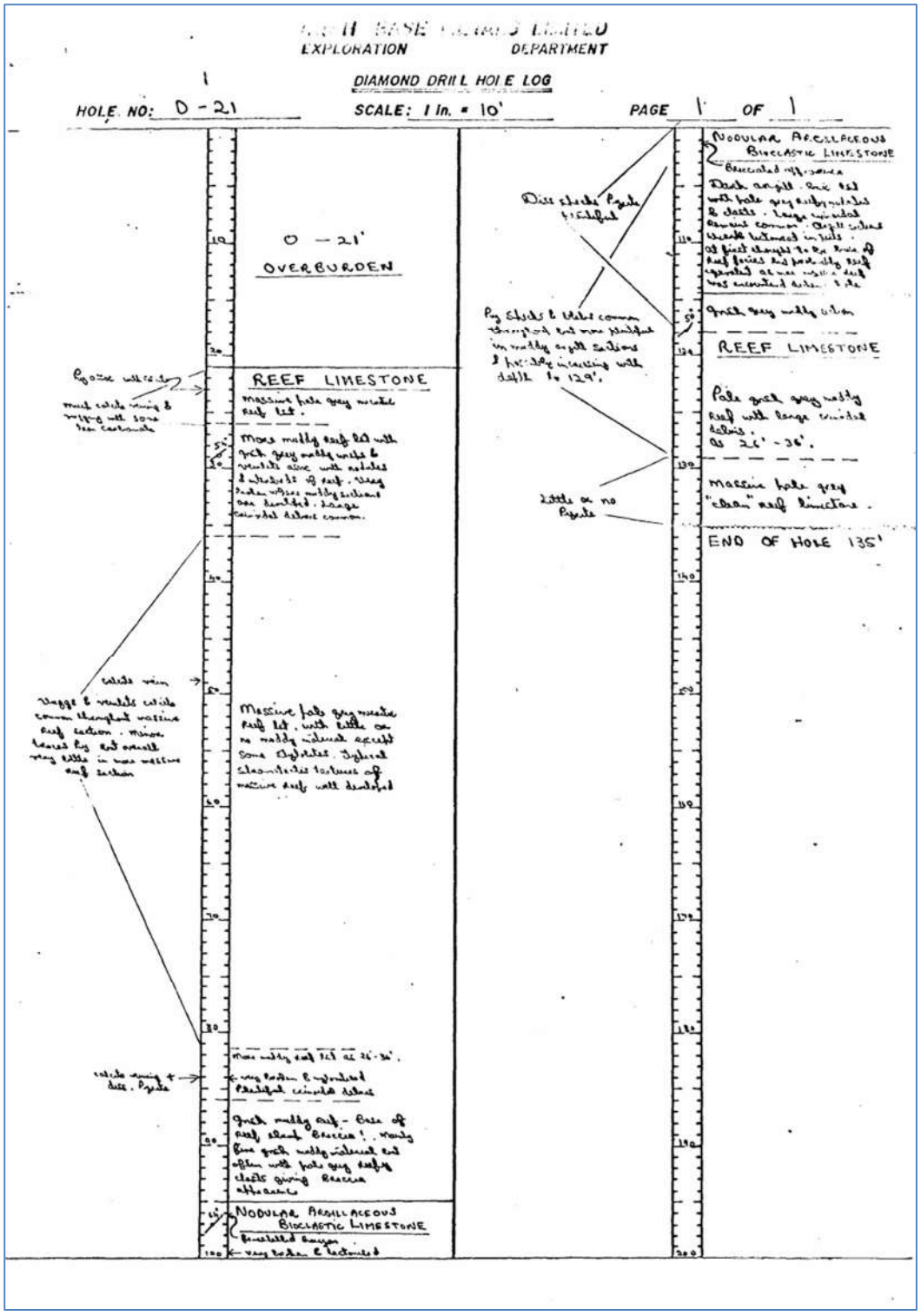


Figure 16-L4 – Historic drillhole record, Drillhole D-21, PL 480, Lemanaghan Townland
Extract from historic Exploration and Mining Division / drillhole records showing subsurface information for the Lemanaghan area, including overburden and limestone context. This is relied upon as contextual evidence that historic subsurface data exists and may assist in understanding peat depth, overburden and sub-peat geology.

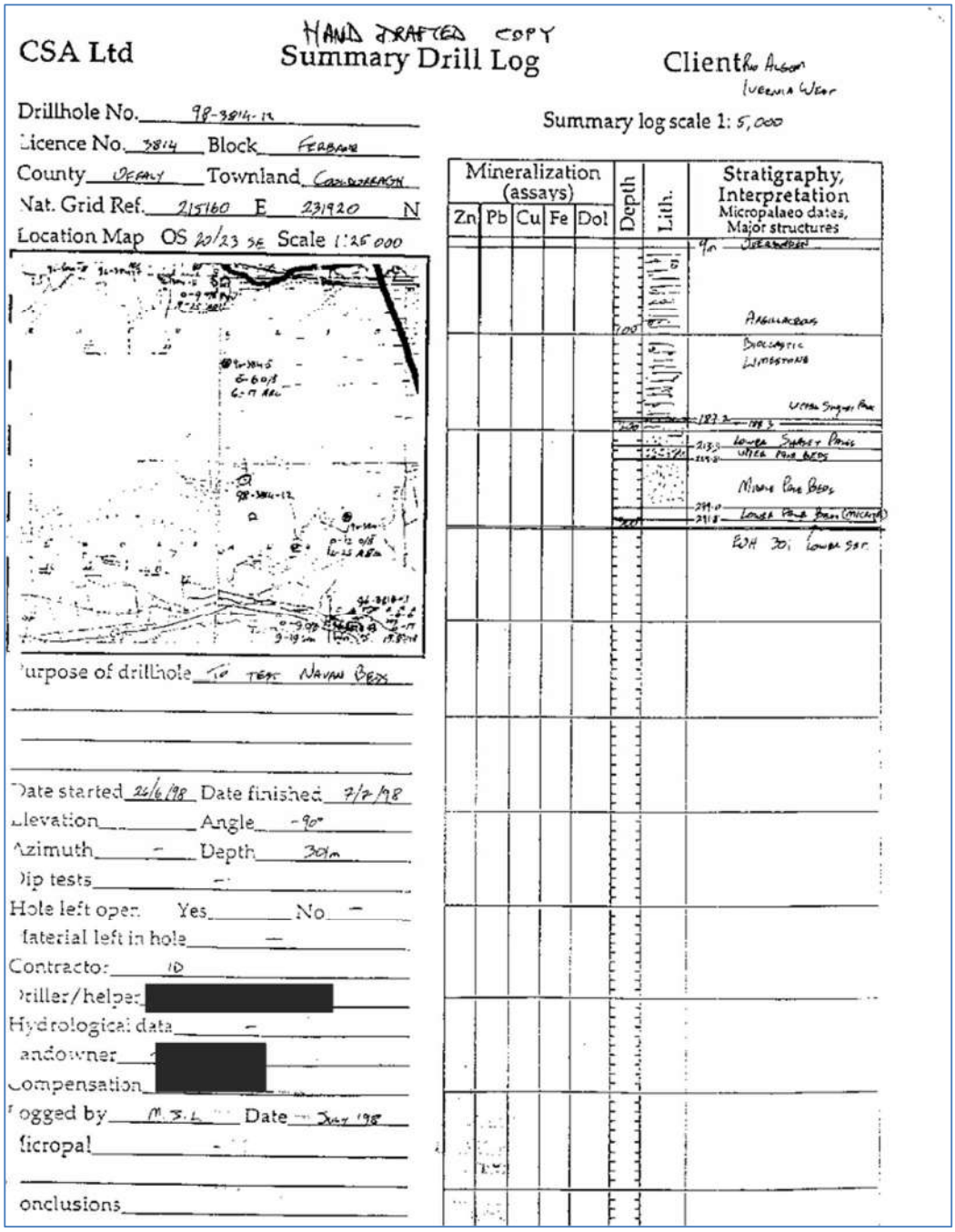


Figure 16-L5 – Historic summary drill log from wider Lemanaghan bog group area
Extract from historic drillhole records in the wider Lemanaghan bog group area. This is included only as contextual evidence that historic borehole and geological data exist for the wider bog landscape and may be relevant to baseline understanding.

Section 17: EIAR Chapter 17 REVIEW

Third Party Observer — An Coimisiún Pleanála RED III Application

Planning Observation Report

This Planning Observation Report (Chapter 12 – Noise and Vibration) is submitted on behalf of Lemanaghan Heritage & Conservation Group Ltd. in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161.

1.0 Introduction and Fundamental Legal Position

This submission relates to Chapter 12 – Noise and Vibration and Appendices 12.1 to 12.6 of the EIAR submitted in support of the proposed Lemanaghan Wind Farm.

This submission does not purport to make legal determinations. It is submitted to assist An Coimisiún Pleanála in its statutory assessment by identifying material concerns, omissions and deficiencies which may prevent the competent authority from reaching a fully informed and lawful reasoned conclusion on the likely significant effects of the proposed development.

Noise and vibration are central issues in the assessment of a wind energy development of this scale. The proposed project comprises 15 turbines of approximately 220 metres tip height, together with associated infrastructure including access tracks, hardstands, an onsite 220kV substation, overhead line cabling, peat deposition areas, borrow pits, temporary construction compounds and ancillary works.

The assessment must therefore do more than demonstrate theoretical compliance with numerical limits. It must clearly explain the likely lived acoustic environment for nearby residents, particularly during evening and night-time periods when quiet enjoyment, rest and sleep are expected.

The Key Planning Question

What will it be like to live beside this development, day and night, over the operational lifetime of the turbines? It is submitted that Chapter 12 does not adequately answer that question. The assessment relies heavily on predictive modelling, selected representative monitoring locations, derived background assumptions, and post-consent monitoring or complaint procedures. It does not provide a sufficiently clear, receptor-specific or precautionary assessment of likely effects on sleep, indoor amenity, low-frequency noise, tonal noise, amplitude modulation or long-term residential wellbeing.

Under Directive 2011/92/EU, as amended, likely significant effects on population and human health must be identified, described and assessed before consent is granted. It is submitted that Chapter 12 may not provide a sufficiently complete, precise, project-specific and reliable evidential basis to enable the competent authority to reach a fully informed reasoned conclusion.

This Chapter 12 objection should be read together with the Chapter 5 submission, where combined residential effects including shadow flicker, visual dominance and human health are addressed.

1.1 Executive Summary

This submission identifies a series of material deficiencies in Chapter 12. These deficiencies are relied upon both individually and cumulatively.

1.1.1 Reliance on near-threshold modelling

The EIAR relies on predictive modelling to conclude that operational noise will comply with applicable limits. However, several predicted levels fall extremely close to the relevant thresholds, including values in the region of 39.4 dB to 39.7 dB where a 40 dB limit is relied upon. This does not represent a robust margin of safety. In real-world conditions, minor variations in meteorology, turbine operation, wind shear, background sound, propagation conditions or source characteristics may materially affect what is experienced at a dwelling.

Modelled compliance within fractions of a decibel does not demonstrate acceptable residential amenity.

1.1.2 Failure to assess lived residential experience

Chapter 12 does not provide a clear assessment of how turbine noise will be experienced by residents inside their homes, particularly at night. It does not adequately assess whether residents may experience audible turbine noise in bedrooms, sleep disturbance, inability to open windows, persistent or pulsing sound, tonal or low-frequency characteristics, or cumulative disturbance over months and years.

1.1.3 Inadequate baseline characterisation

The Applicant relies on baseline monitoring at eight representative noise-sensitive locations. While representative monitoring may form part of a technical assessment, it does not remove the need to ensure that the receiving environment is accurately characterised at all relevant receptors. In a quiet rural area, small errors or assumptions in baseline sound levels can have significant consequences.

1.1.4 Failure to assess low-frequency noise and infrasound precautionarily

Chapter 12 discusses low-frequency noise and infrasound by reference to general literature and concludes that significant effects are not likely. However, the EIAR also states that no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR. Where residents may be exposed to large turbines in a quiet rural environment, low-frequency noise and infrasound concerns require careful and transparent assessment. Their omission as assessed criteria leaves a material gap.

1.1.5 Failure to properly assess amplitude modulation

Chapter 12 acknowledges amplitude modulation as a recognised feature of wind turbine noise and describes it as periodic audible fluctuation related to blade-pass frequency. It also recognises that "Other" or "Excessive" amplitude modulation may occur in some circumstances. However, the assessment does not provide a project-specific conclusion that such effects will not occur at Lemanaghan. It relies instead on general literature, general probability and post-consent complaint mechanisms.

1.1.6 Improper reliance on post-consent mitigation and complaint procedures

Appendix 12.6 and related mitigation provisions indicate that operational issues may be addressed after commencement through monitoring, complaints procedures and possible operational controls.

> **Post-consent complaint procedures are not a substitute for pre-consent assessment. They operate only after residents have already experienced harm. They should not be treated as curing an incomplete assessment at application stage.**

1.1.7 Failure to integrate Chapter 12 with Chapter 5 human health assessment

Chapter 5 relies on Chapter 12 to support conclusions that noise-related human health effects are not significant. However, if Chapter 12 is incomplete, uncertain or overly reliant on post-consent mechanisms, then the Chapter 5 conclusion is also undermined. Noise is not merely an amenity issue. It is a recognised pathway affecting sleep, stress, annoyance, quality of life and human wellbeing.

1.1.8 Failure to address real-world Offaly evidence

The FOI complaint records included at ATTACHMENT 5-A demonstrate that turbine noise, shadow flicker, sleep disturbance, impacts on children and unresolved enforcement concerns have already arisen in County Offaly in connection with operational wind turbines. Those records are directly relevant to Chapter 12 because they show that the risks are real, foreseeable and locally evidenced.

1.1.9 Failure to demonstrate full compliance with technical guidance

The Applicant's Chapter 12 identifies the IOA Good Practice Guide to ETSU-R-97 and EPA NG3 as guidance documents consulted. However, the EIAR does not clearly demonstrate, in an accessible and receptor-specific manner, how the assessment satisfies the key safeguards identified in those guidance documents, including background monitoring representativeness, exclusion of non-typical data, transparent reporting of modelling assumptions, cumulative assessment, tonal noise, worst-case modelling conditions and complaint and mitigation effectiveness.

1.2 Applicant's Own Material Confirming Key Matters Relied Upon

For clarity, this submission relies on the Applicant's own Chapter 12 and appendices for a number of key factual matters. The Applicant confirms that:

- the Proposed Project includes 15 wind turbines and associated infrastructure;
- baseline noise monitoring was carried out at eight representative noise-sensitive locations (NSLs);
- predicted operational turbine noise at the highest assessed receptors approaches the 40 dB daytime criterion;
- no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR;
- no tonal penalty has been applied to predicted noise levels; and
- AM and tonality issues are to be addressed through a complaint management protocol, monitoring and potential mitigation if issues arise after construction.

These matters are not speculative and arise from the Applicant's own assessment material.

1.3 Internal Inconsistencies and Apparent Errors in Chapter 12

Issue	Detail
Table 12-26 — decommissioning significance inconsistency	Table 12-26 appears to classify decommissioning noise effects as "Slight", whereas the body text refers to the same effects as "Not Significant". These terms are not identical in EIA terminology and the Applicant should clarify the actual significance conclusion relied upon.
Table 12-26 — incorrect mitigation cross-reference	Table 12-26 appears to refer to section 12.6.4 for decommissioning mitigation. However, section 12.6.4 appears to relate to monitoring rather than substantive mitigation. This should be corrected or explained.
Table 12-19 — apparent data error	Table 12-19 appears to contain an apparent numerical error in relation to a crane noise source, where the noise level appears as "7" rather than "76". This should be clarified by the Applicant.
Section 12.6.2.3 — apparent incorrect cross-reference	Section 12.6.2.3 appears to refer to section 12.3.2.6, which concerns vibration, as the fixed plant noise criterion. This appears to be an incorrect cross-reference and should be clarified.
Appendix 12-5 / Table 12-15 receptor criteria	Appendix 12-5 should be fully reconciled with Table 12-15 of Chapter 12. Clear consistency is essential because Appendix 12-5 contains receptor-specific operational noise predictions.

2.0 Legal and Policy Framework

The Commission's statutory obligation is to carry out its own assessment and not simply adopt the Applicant's conclusions. The legal framework directly relevant to this Chapter 12 objection includes:

EIA Directive — Articles 3, 5 and 8a

Article 3 of Directive 2011/92/EU, as amended by Directive 2014/52/EU, requires assessment of the direct and indirect significant effects of a project on population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, landscape and the interaction between those factors. This is highly relevant to Chapter 12. Noise interacts directly with population, human health, residential amenity, sleep, quiet enjoyment of the home and landscape experience.

Article 5 requires the developer to provide information sufficient to allow the competent authority to reach a reasoned conclusion on likely significant effects. In the present case, the EIAR does not provide adequate information on indoor noise, night-time audibility, sleep disturbance, low-frequency noise, infrasound, amplitude

modulation, tonal noise, vulnerable residents, cumulative lived experience or the effectiveness of complaint procedures.

Article 8a requires the competent authority to reach a reasoned conclusion on significant environmental effects. A reasoned conclusion may be legally vulnerable where important effects remain uncertain, unassessed or deferred to post-consent procedures.

Wells v Secretary of State for Transport, Case C-201/02

The Court of Justice confirmed the fundamental principle that environmental effects must be assessed before consent is granted. This is directly relevant because Chapter 12 relies materially on post-consent monitoring, complaint procedures and possible operational controls. Monitoring and complaint procedures cannot lawfully substitute for a complete pre-consent assessment. If key matters such as indoor audibility, sleep disturbance, low-frequency noise, amplitude modulation and tonal characteristics have not been adequately assessed before permission is granted, those omissions cannot be cured simply by requiring residents to complain after the turbines become operational.

Holohan and Others v An Bord Pleanála, Case C-461/17

Chapter 12 must not leave material questions unanswered. It must clearly explain the likely effects of the project on nearby residents and how those effects interact with human health, residential amenity and the wider receiving environment. A fragmented chapter-by-chapter assessment that treats noise in isolation from human health, shadow flicker, visual dominance and cumulative residential burden does not satisfy this requirement.

Precautionary Principle — Article 191 TFEU

Where there is scientific uncertainty and a plausible pathway of harm, the absence of full certainty is not a reason to avoid assessment. It is a reason to assess more carefully. This principle is directly engaged in relation to amplitude modulation, low-frequency noise, infrasound, sleep disturbance, long-term annoyance and cumulative rural soundscape impacts.

Recent Irish High Court Wind Turbine Noise Nuisance Authorities

In Webster & Anor v Meenacloghspar (Wind) Limited; Shorten & Anor v Meenacloghspar (Wind) Limited [2024] IEHC 136, the High Court considered amplitude modulation and recognised that wind turbine noise may be experienced as periodic "thumping" or "whoomphing" noise containing relatively low frequencies. This supports the submission that the character of turbine noise may be as important as the measured decibel level.

The later decision in Byrne & Anor v Abo Energy Ireland Limited & Ors [2025] IEHC 330 further reinforces the relevance of assessing the real-world effect of wind turbine noise on the use and enjoyment of residential property. Planning permission and technical compliance with numerical limits do not automatically mean that turbine noise will be acceptable in residential amenity terms. The Board should consider the character of noise, tonal or pulsing characteristics, low-frequency components, night-time audibility, sleep disturbance, duration of exposure and the ability of residents to enjoy their homes without persistent disturbance.

Article 8 ECHR and the Right to Respect for the Home

Article 8 of the European Convention on Human Rights protects the right to respect for private and family life and the home. In López Ostra v Spain, the European Court of Human Rights recognised that serious environmental nuisance may interfere with the enjoyment of the home. If turbine noise prevents residents from sleeping, opening windows, using their homes normally, or enjoying ordinary rural domestic life, that is not merely a technical planning inconvenience. It is capable of engaging fundamental rights relating to the home.

3.0 Core Planning Theme 1 — Operational Noise Predictions Within Narrow Compliance Margins

Appendix 12-5 confirms that several receptors are predicted to operate within extremely narrow margins of the applicable operational noise criterion. Approximately four dwellings are within approximately 1 dB of the applicable criterion, and approximately twenty dwellings are within 2 dB. Particular concern arises in respect of receptors H002, H012, H006 and H007, where predicted operational levels appear closest to the relevant criterion.

Objection

The concern is not that the EIAR necessarily predicts exceedance in all circumstances. The concern is that the compliance margins are so narrow that the conclusion depends heavily upon the accuracy and conservatism of the modelling assumptions, including:

- turbine sound power data and propagation assumptions;
- background sound and wind speed assumptions;
- wind shear, atmospheric stability, temperature inversions and ground absorption;
- receptor height, location and tonal or amplitude-modulated characteristics.

The Applicant's Appendix 12-3 confirms that the turbine noise predictions rely on modelling assumptions including receiver height, ground factor, ISO 9613 methodology and atmospheric attenuation assumptions. It also states that no meteorological corrections were applied to the calculations.

Key Finding

A predicted level marginally below a limit does not, of itself, demonstrate acceptable residential amenity. Residents do not experience a spreadsheet or acoustic model. They experience sound at a particular dwelling, under particular weather conditions, at particular times of day and night.

3.1 Worst-Case Noise Conditions

Although the EIAR describes its operational turbine noise model as precautionary, it does not clearly demonstrate, in a receptor-specific manner, that all relevant real-world worst-case conditions, uncertainty margins and night-time rural propagation scenarios have been fully addressed. A robust wind turbine noise assessment should clearly address, in a receptor-specific manner:

- downwind propagation conditions and night-time conditions;
- temperature inversions and stable atmospheric conditions;
- low ground-level wind with higher hub-height wind and wind shear;
- cumulative turbine noise and tonal or special audible characteristics;
- amplitude modulation and the sensitivity of quiet rural receptors.

4.0 Core Planning Theme 2 — Inadequate Baseline Noise Characterisation

The Applicant states that baseline noise levels were surveyed at eight representative noise-sensitive locations. Representative monitoring may be an accepted method in some circumstances, but it is not automatically sufficient in a quiet rural environment where individual dwellings may experience different sound conditions depending on distance, topography, exposure, wind direction and existing background sound.

> The IOA Good Practice Guide states that background monitoring locations should be selected with the objective of collecting sufficient data to enable background noise levels at each noise-sensitive receptor within the study area to be characterised.

Objection

The issue is not whether eight monitoring locations can ever be sufficient. The issue is whether the EIAR clearly demonstrates that those eight locations are genuinely representative of all relevant dwellings and sensitive

receptors in this particular rural environment. Where baseline levels are low, introduced mechanical noise may be much more noticeable. In such a setting, the issue is not simply whether a numerical threshold is exceeded. The issue is whether the existing quiet rural soundscape will be materially altered.

5.0 Core Planning Theme 3 — Failure to Assess Indoor Noise, Bedroom Exposure and Sleep Disturbance

Chapter 12 does not provide a proper assessment of internal noise levels within dwellings or night-time bedroom exposure.

Most Serious Omission

Wind turbine noise is most likely to affect residents during evening and night-time periods, when background noise is lower, when residents are indoors, and when the ordinary expectation is sleep and rest. It is therefore insufficient to assess outdoor levels alone without explaining what those levels mean inside homes.

The assessment should have addressed:

- whether turbine noise will be audible in bedrooms;
- whether windows can remain open during warmer months;
- whether sleep disturbance may occur and whether repeated awakenings or difficulty falling asleep may arise;
- whether vulnerable persons, children, older persons or persons with sensory sensitivities may be more affected;
- whether a persistent mechanical sound may become more intrusive at night; and
- whether low-frequency or amplitude-modulated characteristics may be perceived indoors.

A noise assessment which does not properly assess the potential for sleep disturbance is materially incomplete in human health and residential amenity terms.

6.0 Core Planning Theme 4 — Low-Frequency Noise, Infrasound, Tonal Noise and Amplitude Modulation

6.1 Low-frequency noise and infrasound

Chapter 12 discusses low-frequency noise and infrasound by reference to general literature and concludes that significant effects are not likely. However, the EIAR also states that no criteria are proposed for assessing low-frequency noise or infrasound as part of the EIAR. The legal question is not whether the omission is common practice. The legal question is whether the EIAR identifies, describes and assesses the likely significant effects of this particular project in this particular receiving environment.

In those circumstances, it is insufficient to dismiss low-frequency noise and infrasound on the basis of generalised literature. The Commission requires a project-specific assessment of whether such characteristics may arise at Lemanaghan and whether they may affect residents in a quiet rural area.

6.2 Tonal noise

The Applicant's own glossary defines tonal noise as sound containing a clearly audible tone, such as a whine, hiss, screech or hum. Tonal characteristics are often among the most intrusive forms of environmental noise. A sound may be numerically within a threshold but still be highly intrusive if it has a tonal, pulsing or identifiable mechanical character.

Chapter 12 does not adequately assess the possibility of tonal characteristics being experienced at receptors in real-world operating conditions. Chapter 12 states that no tonal penalty has been applied to the predicted noise

levels. This does not remove the need for the Commission to understand, at the pre-consent stage, whether tonal or special audible characteristics may affect residential amenity in practice.

6.3 Amplitude modulation

Chapter 12 acknowledges amplitude modulation and distinguishes between "Normal" amplitude modulation and "Other" or "Excessive" amplitude modulation. The EIAR further acknowledges that "Other" amplitude modulation may be heard at relatively large distances and may be perceived as periodic thumping or whoomphing at low frequencies.

> Appendix 12-6 confirms that the proposed approach to AM and tonality is complaint-led. It requires the complainant to record details and complete a noise complaint log or diary, after which the operator reviews the complaint. This confirms that the mechanism is reactive rather than preventative.

If amplitude modulation is difficult to predict before operation, that uncertainty should not be used to minimise the issue. Rather, it should trigger a more precautionary assessment. Pulsing, thumping or whoomphing sound can be more intrusive than steady sound at the same decibel level. It can attract attention, disturb sleep and become difficult to ignore.

Chapter 12 does not adequately assess whether amplitude modulation may occur at Lemanaghan, whether the layout, turbine scale, terrain or meteorology may increase risk, how such noise would affect night-time receptors, whether mitigation would be available before harm occurs, or whether residents would have effective protection if it arises.

Conclusion

It is submitted that the assessment of amplitude modulation is materially deficient. The Webster / Shorten judgment [2024] IEHC 136 supports the submission that thumping, whoomphing or amplitude-modulated turbine noise may substantially interfere with the use and enjoyment of homes and should be assessed as a real-world impact pathway, not managed reactively through post-consent complaints.

6.4 Shadow flicker as part of combined residential disturbance

This Chapter 12 objection should be read together with the Chapter 5 submission, where combined residential effects including shadow flicker, visual dominance and human health are addressed. Residents do not experience environmental effects in isolated chapters.

6.5 Noise and vibration effects on ecological, livestock and agricultural receptors

Lemanaghan is a rural, agricultural and ecological landscape. Noise and vibration may therefore be relevant not only to dwellings, but also to livestock, horses, farmyards, breeding or foraging birds, bats, otters, badgers and other sensitive fauna. Construction and operational noise may interact with ecological, livestock and agricultural receptors within the rural receiving environment. This dimension of impact is not adequately addressed in Chapter 12.

7.0 Core Planning Theme 5 — Post-Consent Mitigation is Not a Substitute for Pre-Consent Assessment

The EIAR relies on mitigation, monitoring and complaint procedures to address potential operational issues. A complaint procedure is, by its nature, reactive. It begins only after residents have already experienced disturbance. It does not prevent harm. It does not guarantee resolution.

The purpose of EIA is to identify, describe and assess likely significant effects before consent is granted. In Wells v Secretary of State for Transport, Case C-201/02, the Court of Justice confirmed that assessment must occur before

consent. The Commission should therefore treat reliance on complaint procedures as evidence of assessment uncertainty, not as a cure for that uncertainty.

Key Finding

The existence of an extensive complaint-response mechanism is itself indicative that the Applicant accepts the possibility of operational outcomes not fully resolved by the assessment presented at application stage. Monitoring and complaint procedures cannot lawfully substitute for a complete pre-consent assessment of likely significant effects.

8.0 Core Planning Theme 6 — Real-World Offaly Evidence of Wind Turbine Noise Impacts

The complaint records relied upon in this section were released under the Freedom of Information Act 2014 and are included at ATTACHMENT 5-A – Documented Noise, Shadow Flicker and Human Health Complaints. Personal data has been redacted where appropriate.

The FOI evidence demonstrates reported impacts including:

- persistent and intrusive turbine noise and low-frequency humming;
- tonal or mechanical noise described as "jet-like" or roaring;
- sleep disturbance and sleep deprivation affecting children and families;
- shadow flicker concerns and combined amenity impacts;
- anxiety, stress and loss of amenity;
- repeated complaints over time; and
- difficulties with enforcement, monitoring and resolution.

Significance

This evidence is directly relevant because Chapter 12 is largely predictive and model-based. It shows that turbine noise, sleep disturbance, shadow flicker and amenity impacts have already been reported in County Offaly and should therefore be carefully assessed before consent is granted. The comparison in turbine scale is also material. The proposed Lemanaghan turbines are approximately 220 metres in tip height — materially larger than turbines that have already generated complaints in the county. The Commission should approach the present proposal with particular caution.

9.0 Core Planning Theme 7 — Interaction with Chapter 5: Population and Human Health

Chapter 12 cannot be assessed in isolation. It directly informs the conclusions reached in Chapter 5 – Population and Human Health. Chapter 5 relies on the conclusions of the technical chapters, including Chapter 12, to conclude that human health effects will not be significant. If Chapter 12 is deficient, then the human health conclusion in Chapter 5 is also undermined.

Noise is not merely a technical environmental parameter. It is a human health pathway. It may affect:

- sleep, stress, concentration, mental wellbeing and family life;
- children's functioning, daily living conditions and quality of life; and
- residential amenity and the quiet enjoyment of the home.

Specific Chapter 5 Undermining

In particular, Chapter 5 is undermined by the following Chapter 12 deficiencies:

- no proper indoor noise assessment;
- no proper sleep disturbance assessment;

- no receptor-specific assessment of vulnerable residents;
- no project-specific low-frequency noise assessment;
- no precautionary assessment of amplitude modulation;
- reliance on post-consent complaint procedures; and
- failure to engage with real-world Offaly FOI evidence.

10.0 Core Planning Theme 8 — Cumulative Noise and Combined Effects

The Applicant refers to cumulative noise and indicates that limits are to relate to the contribution of all operational wind turbines. That wording is important, but it is not sufficient.

> The IOA Good Practice Guide states that where a proposed wind farm produces noise levels within 10 dB of an existing wind farm at the same receptor, cumulative noise impact assessment is necessary.

Objection

In the present case, the EIAR does not adequately assess cumulative effects in terms of combined turbine noise, noise character, night-time audibility, low-frequency components, amplitude modulation, interaction with other nearby wind farms, interaction with shadow flicker, or combined effect on sleep, stress and amenity.

Residents do not experience environmental effects in isolated chapters. The EIA Directive requires assessment of the interaction between environmental factors. A fragmented assessment which considers each topic separately may underestimate the true impact on the receiving community.

11.0 Core Planning Theme 9 — Construction, Decommissioning Noise and Vibration

Chapter 12 assesses construction and decommissioning noise by reference to guidance including BS 5228 and other standards. Construction at Lemanaghan would involve extensive works including access tracks, hardstands, borrow pits, compounds, internal roads and ancillary infrastructure. The Commission should be cautious in accepting conclusions of non-significance where the assessment relies on generalised thresholds and does not fully explain the lived effect of prolonged construction activity in a quiet rural environment.

11.1 Vibration Assessment

Chapter 12 is titled "Noise and Vibration", but the substance of the assessment appears to focus primarily on airborne noise. Vibration is addressed only to a limited extent. This is material because construction and decommissioning works may involve heavy plant, haulage, access track construction, borrow pit activity, foundation works, hardstand construction and movement of abnormal loads. These activities may give rise to vibration or ground-borne disturbance, particularly where works occur near dwellings, farmyards, livestock areas, older structures, roads, drains or sensitive peatland ground conditions.

The issue is also material in ecological terms. Lemanaghan Bog is identified as supporting sensitive bird species, including Curlew, which is critically endangered in Ireland and is recognised as highly disturbance-sensitive during breeding and nesting periods.

The Applicant should be required to clarify:

- the vibration criteria applied and the nearest receptors assessed for construction vibration;
- whether any dwellings, farmyards, heritage structures or sensitive agricultural receptors are close enough to experience vibration effects;
- whether vibration from heavy plant, haulage, borrow pits, foundation works and road works has been assessed;
- whether cumulative vibration from construction phases has been assessed;

- whether vibration impacts on sensitive ecological receptors, including ground-nesting birds, have been considered;
- whether seasonal restrictions or exclusion measures are proposed in relation to sensitive nesting periods; and
- what monitoring or limits would apply if vibration complaints or ecological concerns arise.

12.0 Summary of Material Deficiencies

The following table provides a short summary of the principal defects. A fuller supporting defects schedule is included at ATTACHMENT 12-B.

Issue	Defect	Legal / Planning Relevance
Near-threshold modelling	Predicted levels are very close to limits at four or more dwellings.	Does not demonstrate robust compliance or acceptable amenity.
Baseline assessment	Only representative monitoring relied upon.	May not reflect actual conditions at all receptors.
Indoor noise	Not properly assessed.	Prevents assessment of real home conditions and night-time exposure.
Sleep disturbance	Not properly assessed.	Direct human health and amenity pathway under WHO guidelines.
Low-frequency noise / infrasound	No project-specific criteria-based or receptor-specific assessment.	Material omission in quiet rural setting with 220m turbines.
Amplitude modulation	Acknowledged but not properly predicted or assessed.	Potentially intrusive and sleep-disturbing characteristic per Webster / Shorten [2024] IEHC 136.
Tonal noise	Not sufficiently assessed; no tonal penalty applied.	May be intrusive despite numerical compliance.
Post-consent complaint procedures	Relied upon to address unresolved operational issues.	May amount to an impermissible deferral where used to cure gaps in the pre-consent EIAR.
FOI Offaly evidence	Not adequately engaged with.	Shows real, foreseeable and locally evidenced wind turbine noise and amenity impacts.
Chapter 5 interaction	Health conclusions depend on Chapter 12.	Human health conclusions are undermined if Chapter 12 is deficient.
Webster / Shorten v Meenacloghspar [2024] IEHC 136	EIAR treats modelled compliance as effectively sufficient.	Supports the need to assess real-world noise character including thumping and whoomphing.

Byrne & Anor v Abo Energy [2025] IEHC 330	EIAR treats modelled compliance as effectively sufficient.	Reinforces that turbine noise may require serious remedies where it substantially interferes with residential amenity.
WHO public health guidance	EIAR does not translate WHO guidance into a project-specific health assessment.	WHO 2018 identifies wind turbine noise as a public-health and quality-of-life issue.
Worst-case modelling	Not clearly demonstrated in receptor-specific manner.	Weakens confidence in near-threshold predictions.
IOA GPG compliance	EIAR refers to the IOA Good Practice Guide but does not clearly demonstrate compliance.	Relevant to baseline monitoring, reporting transparency, wind/rain data and cumulative assessment.
EPA NG3 guidance	EIAR refers to EPA NG3 but does not clearly address its warnings.	EPA NG3 is relevant Irish technical guidance requiring specific assessment and reliable data.
Cumulative threshold	Cumulative wind turbine noise not clearly assessed per IOA GPG.	IOA GPG requires cumulative assessment where turbine noise is within 10 dB of existing wind farm.
Noise-constrained operation	EIAR does not clearly state whether noise-reduced modes or curtailment are required.	If constraints are required, they should be assessed before consent and considered in the planning balance.
Vibration	Not assessed in clear receptor-specific detail.	Relevant to dwellings, farmyards, sensitive ground conditions and ecological receptors.

13.0 Recommended Reasons for Refusal — Chapter 12

The core planning grounds arising from this Chapter 12 submission are as follows. These grounds are relied upon both individually and cumulatively.

13.1 Failure to Demonstrate Acceptable Operational Noise in Real-World Residential Conditions

The EIAR does not demonstrate that operational turbine noise will be acceptable in real-world residential conditions. Several predicted levels fall within approximately 1–2 dB of the applicable criterion, leaving no meaningful margin for uncertainty in modelling assumptions, meteorological variability, propagation conditions or tonal and amplitude-modulated characteristics. Near-threshold modelling compliance within fractions of a decibel does not demonstrate acceptable residential amenity.

13.2 Failure to Assess Indoor Noise, Bedroom Exposure and Sleep Disturbance

The EIAR does not provide a proper assessment of indoor noise levels at affected dwellings or night-time bedroom exposure. Sleep disturbance is not assessed as a specific human health and amenity pathway. This is a material omission where the development involves 220 metre turbines in a quiet rural area. The absence of an indoor and sleep disturbance assessment is contrary to the requirement to assess the likely significant effects on population and human health under Article 3 of the EIA Directive.

13.3 Failure to Provide a Project-Specific Assessment of Low-Frequency Noise, Infrasound, Tonal Noise and Amplitude Modulation

The EIAR states that no criteria are proposed for assessing low-frequency noise or infrasound. No tonal penalty is applied. Amplitude modulation is acknowledged but not predicted on a project-specific basis. Instead, the EIAR relies on post-consent complaint-led procedures for AM and tonality. This is a material deficiency in a quiet rural environment where 220 metre turbines are proposed. The precautionary principle under Article 191 TFEU requires a more rigorous approach where uncertainty exists regarding intrusive acoustic characteristics.

13.4 Unlawful Reliance on Post-Consent Complaint Procedures

The EIAR relies on post-consent monitoring, complaint procedures and possible operational controls to address potential issues arising from amplitude modulation, tonality and other acoustic characteristics. Under Wells v Secretary of State for Transport, Case C-201/02, environmental effects must be assessed before consent is granted. Complaint-led procedures are reactive and do not prevent residents from experiencing harm. Their use as a substitute for pre-consent assessment is not consistent with the EIA Directive.

13.5 Failure to Engage with Real-World Offaly FOI Evidence

The FOI complaint records at ATTACHMENT 5-A demonstrate that persistent turbine noise, low-frequency humming, sleep disturbance, shadow flicker and unresolved complaint processes have already arisen in County Offaly from turbines materially smaller than those proposed at Lemanaghan. Chapter 12 does not meaningfully engage with this locally evidenced material. The Commission cannot be satisfied that the assessment reflects the real foreseeable risk profile for this particular receiving community.

13.6 Chapter 5 Human Health Conclusions Undermined

Chapter 5 relies on Chapter 12 to support conclusions that noise-related human health effects are not significant. To the extent that Chapter 12 is deficient in respect of indoor noise, sleep disturbance, low-frequency noise, amplitude modulation, tonal characteristics and real-world Offaly evidence, the Chapter 5 human health conclusions are also deficient. Noise is a recognised pathway affecting sleep, stress, annoyance, quality of life and residential wellbeing.

13.7 Inadequate Cumulative Noise Assessment

The EIAR does not adequately assess cumulative noise effects including combined turbine noise, noise character, amplitude modulation, interaction with other nearby wind farms and combined effect on sleep, stress and amenity. The IOA Good Practice Guide requires cumulative noise assessment where turbine noise from the proposed development is within 10 dB of that from an existing wind farm at the same receptor. Residents experience their acoustic environment cumulatively, not in isolated modelling compartments.

13.8 Vibration Assessment Insufficiently Receptor-Specific

Chapter 12 does not provide a clear, receptor-specific assessment of construction and decommissioning vibration impacts on dwellings, farmyards, heritage structures, sensitive agricultural receptors or ecological receptors. Lemanaghan Bog supports critically endangered species including Curlew, which is highly sensitive to ground disturbance during breeding. The absence of a vibration assessment in ecological terms is a material gap.

14.0 Relief Sought

An Coimisiún Pleanála is respectfully requested to require the Applicant to provide the following clarification and further information before any decision is made:

- correction and clarification of the apparent internal inconsistencies and cross-reference errors identified in Section 1.3 above;
- reconciliation of Appendix 12-5 with Table 12-15;
- receptor-specific explanation of all dwellings predicted within approximately 1–2 dB of the applicable criterion;
- confirmation of the uncertainty allowance used in operational noise modelling;

- clarification of how meteorological effects, wind shear, temperature inversions and night-time propagation have been addressed;
- project-specific assessment of amplitude modulation risk at Lemanaghan;
- assessment of tonal or special audible characteristics at affected receptors;
- clarification of whether noise-reduced modes, directional curtailment or operational constraints are required and assessed;
- independent acoustic review of the operational noise assessment;
- strict construction noise conditions, including hours, monitoring, resident notification and complaint-response timeframes; and
- receptor-specific clarification of construction and decommissioning vibration impacts, including criteria, nearest receptors, monitoring, mitigation and ecological seasonal restrictions.

15.0 Final Conclusion

It is respectfully submitted that Chapter 12 does not provide the competent authority with a sufficiently reliable basis for concluding that the proposed development will not give rise to significant adverse effects on residential amenity, human health and the peaceful enjoyment of the home.

The assessment relies heavily on predictive modelling and threshold compliance. It does not adequately explain the real-world experience of residents living near turbines of approximately 220 metres tip height in a quiet rural receiving environment.

In particular, Chapter 12 does not provide a sufficiently robust assessment of:

- narrow receptor-level compliance margins without adequate safety margin;
- indoor noise, bedroom exposure and sleep disturbance;
- construction and decommissioning vibration, including potential effects on dwellings, farmyards, sensitive peatland ground conditions and ecological receptors;
- low-frequency noise, tonal noise and amplitude modulation;
- cumulative lived experience; and
- real-world Offaly evidence.

The reliance on post-consent complaint procedures is particularly concerning. Such procedures do not prevent harm. They respond only after residents have reported disturbance. The Offaly FOI evidence demonstrates that turbine-related complaints may persist over time and may not be easily resolved through enforcement or monitoring.

Core Submission

The deficiencies in Chapter 12 also undermine the conclusions reached in Chapter 5 on population and human health. Noise is a human health pathway, not merely a technical acoustic issue. For these reasons, it is respectfully submitted that the competent authority may not be in a position, on the basis of Chapter 12 as submitted, to reach a fully informed and lawful reasoned conclusion that significant adverse effects will not arise. These deficiencies weigh strongly against the grant of permission unless fully clarified and resolved before any decision is made.

ATTACHMENT Schedule

ATTACHMENT Reference	Title
ATTACHMENT 12-A	Cross-Reference to ATTACHMENT 5-A: Documented Noise, Shadow Flicker and Human Health Complaints (FOI Records). Evidence of reported turbine noise, sleep disturbance, shadow flicker and unresolved complaint processes from existing Offaly wind farms.
ATTACHMENT 12-B	Detailed Defects Schedule — full supporting schedule of defects in Chapter 12, including near-threshold modelling, indoor noise, sleep disturbance, low-frequency noise, amplitude modulation, tonal noise, post-consent procedures, real-world evidence and technical guidance compliance.
ATTACHMENT 12-C	Relevant Legal Framework and Case Law — Noise, Human Health, Residential Amenity and Wind Turbine Nuisance. Summarises the principal legal sources, case law and legal principles relied upon in this Chapter 12 submission.
ATTACHMENT 12-D	Technical Guidance Compliance Cross-Check: IOA GPG and EPA NG3. Focused cross-check of Chapter 12 against relevant technical guidance documents referred to in the Applicant's own assessment.

ATTACHMENT 12-B — Detailed Defects Schedule

This appendix provides a fuller supporting schedule of the principal defects identified in Chapter 12 of the EIAR.

Issue	Defect	Concern
Near-threshold modelling	Predicted levels extremely close to limits at four or more dwellings. Compliance within fractions of a dB.	Raises serious concerns about real-world compliance, particularly under adverse meteorological conditions not fully accounted for in the model.
Baseline assessment	Monitoring at only eight representative NSLs. No individual receptor-specific monitoring at all dwellings.	The actual baseline conditions at affected dwellings may not be accurately reflected.
Indoor noise	Chapter 12 provides no assessment of predicted indoor noise levels at affected dwellings.	Residents and the Commission cannot understand the likely acoustic experience inside homes, particularly at night.
Sleep disturbance	Chapter 12 does not assess sleep disturbance as a specific human health and amenity issue.	Sleep disturbance is a direct human health pathway. Its absence from the assessment is a material gap.

Low-frequency noise / infrasound	The EIAR states that no criteria are proposed for assessing low-frequency noise or infrasound.	Material omission in a quiet rural environment where 220m turbines are proposed.
Amplitude modulation	The EIAR acknowledges AM but does not provide a firm project-specific conclusion that excessive AM will not arise.	Pulsing or thumping sound may be intrusive and sleep-disturbing. The assessment is complaint-led rather than pre-consent.
Tonal noise	No tonal penalty applied to predicted levels. No receptor-specific assessment of potential tonal character.	Tonal noise may be more intrusive than broadband noise at the same dB level.
Worst-case noise conditions	Although described as precautionary, modelling does not clearly demonstrate assessment of all relevant worst-case conditions receptor-by-receptor.	Weakens confidence in near-threshold predictions.
Cumulative noise	Cumulative assessment is not adequately translated into real-world lived experience.	Residents experience the combined acoustic environment, not isolated model elements.
Post-consent complaint procedures	Complaint procedures are relied upon to address operational issues.	May amount to impermissible deferral where used to cure gaps in the pre-consent EIAR.
Real-world Offaly evidence	Local FOI complaints are not adequately engaged with in Chapter 12.	Shows turbine noise, shadow flicker and sleep disturbance are real, foreseeable and locally evidenced.
Chapter 5 interaction	Chapter 5 relies on Chapter 12 to conclude human health effects are not significant.	If Chapter 12 is deficient, the Chapter 5 human health conclusion is undermined.
Vulnerable receptors	Children, older persons and sensitive residents are not assessed in a sufficiently project-specific way.	Human health assessment must consider those most sensitive to disturbance.
Wildlife and livestock	Noise and vibration impacts on agricultural and ecological receptors are not adequately developed.	Lemanaghan is a rural, agricultural and ecological landscape.
Exceptional turbine scale	The EIAR does not adequately explain how 220m turbines will affect residents in a quiet rural area.	Scale and setting heighten the need for cautious, receptor-specific assessment.
Recent Irish nuisance case law	The EIAR treats modelled compliance as effectively sufficient.	Webster / Shorten and Byrne support the need to assess real-world interference with homes.

WHO public health guidance	The EIAR does not translate WHO guidance into a project-specific health assessment.	WHO 2018 identifies wind turbine noise as a public-health and quality-of-life issue.
IOA GPG compliance	The EIAR refers to the IOA Good Practice Guide but does not clearly demonstrate compliance.	Relevant to background monitoring, wind/rain data, calibration, excluded data, prediction assumptions, tonal content and cumulative issues.
EPA NG3 guidance	The EIAR refers to EPA NG3 but does not clearly address its warnings.	EPA NG3 is relevant Irish technical guidance requiring specific assessment and reliable, justifiable data.
Noise-constrained operation	The EIAR does not clearly state whether noise-reduced modes, directional curtailment or operational constraints are required.	If constraints are required, they should be assessed before consent and considered in the planning balance.

ATTACHMENT 12-C — Relevant Legal Framework and Case Law

Noise, Human Health, Residential Amenity and Wind Turbine Nuisance

This appendix summarises the principal legal sources, case law and legal principles relied upon in this Chapter 12 submission. It is provided to assist An Coimisiún Pleanála in identifying the legal basis for the objections raised.

Legal Source / Authority	Principle	Relevance to Chapter 12
Directive 2011/92/EU as amended by Directive 2014/52/EU	Requires likely significant environmental effects to be identified, described and assessed before development consent is granted.	Supports the objection that noise, vibration, human health and residential amenity effects must be fully assessed before permission is granted.
Article 3 of the EIA Directive	Requires assessment of direct and indirect significant effects on population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, landscape and the interaction between those factors.	Supports the argument that Chapter 12 cannot assess noise in isolation and must consider interaction with human health, residential amenity and biodiversity receptors.
Article 5 of the EIA Directive	Requires the developer to provide information necessary for assessment, including likely significant effects and mitigation measures.	Relevant where the EIAR does not provide adequate information on indoor noise, sleep disturbance, AM, low-frequency noise, tonal noise, vulnerable receptors and real-world lived impact.

Article 8a of the EIA Directive	Requires the competent authority to reach a reasoned conclusion on the significant effects of the project.	If key matters remain uncertain, unassessed or deferred to post-consent procedures, the competent authority may not be able to reach a lawful reasoned conclusion.
Wells v Secretary of State, Case C-201/02	Environmental effects must be assessed before consent is granted.	Supports the objection that monitoring, complaint procedures or future mitigation cannot substitute for complete pre-consent assessment.
Commission v Ireland, Case C-215/06	Reinforces the importance of proper and timely EIA compliance.	Relevant where the EIAR is said to be incomplete, deferred or insufficiently precise in relation to noise and human health effects.
Holohan v An Bord Pleanála, Case C-461/17	Supports the need for complete, precise and reliable information to enable lawful assessment.	Relevant to deficiencies in baseline data, receptor-specific assessment, cumulative effects and integration with Chapter 5 human health.
Article 191 TFEU — Precautionary Principle	Where there is scientific uncertainty and a plausible risk of harm, a precautionary approach is required.	Relevant to amplitude modulation, low-frequency noise, infrasound, sleep disturbance, long-term annoyance and vulnerable receptors.
Directive 2002/49/EC — Environmental Noise Directive	Recognises environmental noise as a matter affecting public health and quality of life.	Not relied upon as a direct wind-farm consent threshold, but supports the need for careful assessment of environmental noise, especially in quiet areas.
Planning and Development Act 2000, as amended	Requires proper planning and sustainable development, including consideration of residential amenity.	Supports the objection that numerical compliance does not automatically demonstrate acceptable residential amenity.
European Convention on Human Rights Act 2003 / Article 8 ECHR	Protects respect for private and family life and the home. López Ostra v Spain confirms environmental nuisance may engage Article 8 rights.	Relevant where turbine noise may affect sleep, rest and ordinary domestic life in the home.
Webster & Anor v Meenacloghspar (Wind) Limited; Shorten & Anor v Meenacloghspar (Wind) Limited [2024] IEHC 136	Wind turbine noise may substantially interfere with the use and enjoyment of homes; the character of noise including thumping and whoomphing may be important.	Supports the objection that modelled compliance alone is not enough. The Commission should assess real-world noise character, including thumping, whoomphing or amplitude modulation.
Byrne & Anor v Abo Energy Ireland Limited & Ors [2025] IEHC 330	Wind turbine noise may give rise to serious consequences where it substantially interferes with residential amenity.	Reinforces the importance of assessing actual lived impact, not merely predicted compliance with numerical thresholds.

IOA Good Practice Guide to ETSU-R-97	Provides technical good-practice guidance for wind turbine noise assessment.	Relevant to baseline monitoring, prediction methodology, cumulative noise, reporting transparency and AM considerations.
EPA NG3 Guidance	Provides Irish technical guidance relevant to wind turbine noise.	Relevant as Irish technical guidance recognising the specific character of wind turbine noise and the need for reliable, justifiable data.

Key Legal Principles Relied Upon

- **Assessment must occur before consent. Likely significant effects must be identified, described and assessed before permission is granted.**
- **Post-consent monitoring is not a substitute for assessment. Complaint procedures may assist enforcement, but they cannot cure an incomplete pre-consent EIAR.**
- **Noise is a human health and residential amenity pathway. Noise may affect sleep, stress, annoyance, quality of life and quiet enjoyment of the home.**
- **Numerical compliance is not the full planning test. Compliance with predicted limits does not automatically prove that residential amenity will be protected.**
- **Noise character matters. Tonal noise, low-frequency characteristics, pulsing, thumping and amplitude modulation may be more intrusive than steady broadband sound at the same measured level.**
- **A precautionary approach is required where uncertainty remains. Where predicted levels are close to limits or effects are difficult to predict, the assessment should be more robust, not less.**
- **The competent authority must be able to reach a reasoned conclusion. If material matters remain uncertain, unassessed or deferred, the Commission may not be in a position to reach a lawful reasoned conclusion.**

ATTACHMENT 12-D — Technical Guidance Compliance Cross-Check: IOA GPG and EPA NG3

This ATTACHMENT provides a focused cross-check of Chapter 12 against relevant technical guidance referred to in the Applicant's own assessment. The IOA Good Practice Guide to ETSU-R-97 and EPA NG3 are not relied upon as binding statutory law. They are relied upon as relevant technical guidance which assists in testing whether Chapter 12 provides sufficiently transparent, reliable and justifiable noise information for the purposes of EIA and planning assessment.

Technical Issue	Relevant Guidance Concern	Concern in Chapter 12
Representative baseline monitoring	Background monitoring should be sufficient to characterise receptors within the study area.	Monitoring at eight representative NSLs may not demonstrate actual baseline conditions at all affected dwellings.
Monitoring location transparency	Good practice supports clear reporting of monitoring locations, equipment, photographs, calibration and siting rationale.	The Commission and public should be able to understand why the chosen locations are representative.
Excluded data	Rain-affected, atypical or contaminated data should be clearly identified and excluded where appropriate.	The assessment should clearly show how excluded data were treated.
Wind speed and wind direction	Wind turbine noise varies with wind conditions and requires careful wind-related analysis.	Receptor-level predictions should clearly address wind speed, wind direction and wind shear.
Meteorological conditions	Modelling assumptions should address conditions relevant to propagation.	Appendix 12-3 states that no meteorological corrections were applied. This requires clarification where predictions are close to limits.
Worst-case propagation	Assessment should consider likely worst-case scenarios, especially where levels approach criteria.	Near-threshold results require clear explanation of modelling conservatism and uncertainty.
Receiver height and ground factor	Prediction assumptions should be transparent and justified.	The use of receiver height, ground factor and ISO 9613 assumptions should be clearly explained in relation to local conditions.
Cumulative noise	Cumulative assessment required where relevant wind turbine sources may contribute at the same receptor.	The EIAR should clearly demonstrate how cumulative turbine noise has been assessed at affected receptors.
Tonal noise	Tonal characteristics may make noise more intrusive and require assessment and control.	No tonal penalty appears to have been applied to predicted levels.
Amplitude modulation	AM is a recognised characteristic of wind turbine noise and may be difficult to predict or control.	The proposed approach appears substantially complaint-led rather than a complete pre-consent assessment.

Noise-reduced modes / curtailment	Constraints may be needed at certain wind speeds or directions.	The EIAR should clarify whether noise-reduced modes or directional curtailment are required and assessed.
Complaint procedures	Complaint systems may assist post-consent enforcement.	They should not be relied upon to cure unresolved assessment gaps before consent.
Reporting transparency	Technical assessment should be intelligible and capable of public participation.	Highly technical modelling should be presented clearly enough for the Commission and public to understand the basis of conclusions.

Conclusion to ATTACHMENT 12-D

The Applicant refers to technical guidance in support of Chapter 12. However, where guidance is relied upon to support conclusions of non-significance, the EIAR should clearly demonstrate compliance with the substance of that guidance. In particular, the Commission should require clarification regarding receptor-specific baseline representativeness, modelling uncertainty, meteorological assumptions, cumulative noise, tonal noise, amplitude modulation, complaint-led mitigation, noise-reduced modes or curtailment, and the treatment of receptors close to applicable criteria.

In the absence of such clarification, Chapter 12 may not provide sufficiently complete, precise and reliable technical information to support a fully informed reasoned conclusion on likely significant noise effects.

Section 18: APPROPRIATE ASSESSMENT SCREENING REPORT AND NATURA IMPACT STATEMENT

Third Party Observer — An Coimisiún Pleanála RED III Application

Planning Observation Report

Third Party Planning Observation Report in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161 – Lemanaghan Wind Farm – 15 no. wind turbines, 220m tip height, 220kV on-site substation and associated infrastructure, Lemanaghan Bog, Co. Offaly.

Appropriate Assessment Screening Report and Natura Impact Statement — Formal Planning Objection

This document has been prepared solely for submission to An Coimisiún Pleanála in respect of Case Reference PAX19.324161. This objection deliberately uses planning-safe wording: apparent deficiency, insufficiently evidenced, material uncertainty, not demonstrated, and cannot safely be concluded. It does not allege intentional falsehood unless independently proven. The central request is refusal, or in the alternative a fundamentally revised NIS and independent expert review before any favourable Appropriate Assessment conclusion could lawfully be reached.

1.0 Introduction and Standing of the Objector

The Lemanaghan Heritage & Conservation Group submits this formal planning objection to the Appropriate Assessment Screening Report and Natura Impact Statement ("AASR/NIS") prepared by MKO on behalf of Lemanaghan Wind Farm DAC in support of the proposed Lemanaghan Wind Farm, Co. Offaly.

The proposed development comprises 15 no. wind turbines of 220m tip height, a 220kV on-site substation, overhead-line grid connection works, turbine foundations, hardstands, access roads, borrow pits, temporary construction compounds, peat and spoil management, drainage infrastructure, amenity tracks and ancillary works. The Applicant's AASR/NIS defines the "Proposed Wind Farm" as including turbines and foundations, hardstanding areas, meteorological mast, internal roads, amenity track, compounds, underground cabling, peat and spoil management, borrow pits, site drainage, biodiversity mitigation and enhancement, turbine delivery works and ancillary works. It also defines the "Proposed Grid Connection" as including the 220kV substation, control building, gantries, crane pads, tower pads, masts, telecommunications tower, temporary access track and overhead-line connection.

This objection is directed specifically at the adequacy of the AASR/NIS under Article 6(3) of the Habitats Directive, Part XAB of the Planning and Development Act 2000, the European Communities (Birds and Natural Habitats) Regulations 2011, the Birds Directive and related Irish and EU environmental law.

The Group recognises the importance of climate action and renewable energy. The issue is not whether Ireland requires renewable energy. The issue is whether this particular project, of this scale, in this peatland, hydrological, ecological, archaeological and community landscape, has been demonstrated to be acceptable under the strict Appropriate Assessment test. It is respectfully submitted that it has not.

2.0 Executive Planning Case and Core Request

It is respectfully submitted that permission should be refused because the AASR/NIS does not provide a sufficiently complete, precise, definitive and precautionary basis upon which An Coimisiún Pleanála can lawfully conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of any European Site, either alone or in combination with other plans or projects.

In the alternative, if the Commission is not minded to refuse permission at this stage, the Commission should require a fundamentally revised NIS, a comprehensive hydrological and hydrogeological assessment, independent ornithological and ecological review, and a full in-combination assessment with substitute consent, EPA rehabilitation, PCAS, Bellair and other wind energy/grid projects before any favourable AA conclusion could be contemplated.

Core Issue	Planning / AA Significance
Stage 2 AA required	The Applicant accepts that likely significant effects cannot be excluded for River Shannon Callows SAC and Middle Shannon Callows SPA.
Ferbane Bog SAC screened out	The nearest Natura 2000 site is screened out on an asserted absence of surface-water or groundwater connection. This conclusion requires independent hydrogeological scrutiny.
Hydrological pathway admitted	The AASR/NIS confirms a hydrological connection to River Shannon Callows SAC and Middle Shannon Callows SPA via the Brosna and Shannon over approximately 9.9km.
Water-quality risk admitted	Sedimentation, cementitious materials, hydrocarbons, eutrophication, altered pH and fish-kill risks are identified in the AASR/NIS.
Major peat disturbance	The AASR/NIS records approximately 438,449m^3 of peat and mineral subsoil excavation, creating multiple sediment and pollution pathways.
SPA bird use of project lands	Whooper Swan, Golden Plover and Lapwing records show that the site cannot be treated as ecologically irrelevant to SCI bird species.
Incomplete project description	Chapter 4-related uncertainty regarding final turbine model, foundation design, drainage, cabling and lighting undermines the certainty required for AA.
Full infrastructure footprint	Roads, borrow pits, crane pads, substation, grid works, cabling, drainage and amenity infrastructure must be assessed as part of the same AA project.
Mitigation reliance	The NIS repeatedly relies on design, mitigation and best practice. Stage 2 mitigation is only lawful where certainty and effectiveness are demonstrated.
Cumulative effects	Substitute consent, EPA rehabilitation, PCAS, Bellair and other wind farms are not adequately integrated into a real-world cumulative AA.
WFD interaction	Water-quality pathways central to the AA also engage WFD deterioration and environmental-objective obligations.
Peat fire risk	Documented peat fire risk should be considered as a foreseeable pathway affecting water quality, air quality, drainage, sediment, emergency response and peat stability.
Restoration baseline	Peatland restoration is not merely a "do nothing" scenario. It is a positive environmental baseline relevant to hydrology, carbon, biodiversity and cumulative effects.

T05 and protective buffer	The Applicant's own Appendix 13-5 confirms that T05 is approximately 1.9m within the protective buffer / outside the "Open to Consideration" zoning linked to protection of the monastic site.

Fig. 1: Executive summary of core Appropriate Assessment concerns.

2.1 Tiering of Grounds

To assist the Commission in prioritising its review, the grounds in this objection are tiered as follows.

- Grounds 1, 3, 4, 5, 7, 8 and 10 are each individually capable of supporting a refusal of permission or a requirement for a fundamentally revised NIS.
- Grounds 2, 6, 9, 11, 12 and 13 are strong cumulative grounds which, taken together with the primary grounds, reinforce the conclusion that the NIS does not meet the Article 6(3) standard.
- Grounds 14, 15 and 18 are presented as precautionary and further-information grounds: they identify gaps which, while not each individually determinative, support the overall conclusion that the NIS is incomplete and that further scrutiny is required before any favourable AA determination.

3.0 Applicant's Own Appropriate Assessment Admissions

The Applicant's own AASR/NIS contains important admissions that materially assist the Commission in identifying the legal risk. These are not speculative objections. They arise from the Applicant's own assessment.

> "It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the Proposed Project, individually or in combination with other plans and projects, will have a significant effect on the following European Sites... River Shannon Callows SAC [000216]... Middle Shannon Callows SPA [004096]."
> **Source: AASR/NIS, Section 4.2, report p.74.**

The same screening conclusion states that mitigation and best-practice measures were not taken into account at screening stage. That is important because the Applicant therefore accepts that Stage 2 AA is required for River Shannon Callows SAC and Middle Shannon Callows SPA.

> "The SAC is located 8.3km overland from the Proposed Project site and is hydrologically connected to the Proposed Project site via the Brosna River and River Shannon over a hydrological distance of approximately 9.9km."
> **Source: AASR/NIS, Section 5.1.1, report p.76.**

> "Such impacts include pollution as result of sedimentation, cementitious materials and hydrocarbons."
> **Source: AASR/NIS, Section 5.1.1, report p.76.**

The AASR/NIS further recognises that such pollution events may cause eutrophication, deoxygenation, pH alteration, toxicity effects, fish kills and clogging of fish gills due to siltation.

> "Construction phase activities... will involve extensive earthworks and the excavation of approximately 438,449 m^3 of peat and mineral subsoil."
> **Source: AASR/NIS, Section 6.2.1.1, report p.104.**

> "Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures..."
>
> **Source: AASR/NIS, Section 9, report p.130.**

These passages confirm that there are identified pathways to European Sites, that the project involves extensive peatland construction works, and that the Applicant's favourable conclusion depends heavily on the asserted success of avoidance, design and mitigation measures. The question for the Commission is whether those measures are sufficiently certain, specific, effective and enforceable to remove all reasonable scientific doubt.

4.0 Legal and Planning Framework

Article 6(3) of Council Directive 92/43/EEC, the Habitats Directive, requires any plan or project not directly connected with or necessary to the management of a European Site, but likely to have a significant effect thereon either individually or in combination with other plans or projects, to be subject to Appropriate Assessment in view of the site's conservation objectives.

In Irish planning law, Part XAB of the Planning and Development Act 2000 requires the competent authority to carry out its own Appropriate Assessment where required and to determine whether the proposed development would adversely affect the integrity of any European Site. The Commission cannot simply adopt the Applicant's conclusions without carrying out its own assessment.

4.1 Correct Legal Position on Mitigation

People Over Wind prevents mitigation measures intended to avoid or reduce harmful effects from being relied upon at Stage 1 screening in order to avoid the need for Appropriate Assessment. The Applicant's own screening conclusion states that mitigation and best-practice measures were not taken into account at screening. The issue here is therefore not that mitigation is mentioned at Stage 2. The issue is whether the Stage 2 mitigation relied upon by the Applicant is sufficiently certain, detailed, effective, enforceable and capable of removing all reasonable scientific doubt.

At Stage 2 AA, mitigation can be considered. However, general best practice, future construction-stage procedures, outline management plans, assumptions of successful operation, or vague commitments cannot substitute for complete, precise and definitive findings. The Commission must be satisfied that the proposed mitigation will actually prevent adverse effects on the integrity of the European Sites in real-world peatland construction, operation and decommissioning conditions.

4.2 Core Case Law Relied Upon

- Case C-127/02 Waddenzee: consent may only be granted where no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of the site.
- Case C-258/11 Sweetman: the integrity of a European Site concerns the lasting preservation of its constitutive characteristics connected to the relevant qualifying interests.
- Case C-323/17 People Over Wind: mitigation measures cannot be relied upon at the screening stage to avoid Stage 2 Appropriate Assessment.
- Case C-461/17 Holohan: AA must identify all aspects of the project capable of affecting conservation objectives and must contain complete, precise and definitive findings with no lacunae.
- Case C-164/17 Grace and Sweetman: measures that are compensatory in character cannot be used as if they were mitigation at Article 6(3) stage.
- Case C-721/21 Eco Advocacy CLG v An Bord Pleanála: standard features of a project that are incorporated irrespective of any effect on a European Site may be taken into account at Article 6(3) screening stage. This is a narrow and strictly defined exception. The case does not diminish the obligation to carry out a complete, precise and definitive AA where likely significant effects cannot be excluded.
- Connelly v An Bord Pleanála [2018] IESC 31: confirms the need for rigorous, evidence-based AA findings supported by clear reasons.
- Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5 (Supreme Court, 4 February 2026): the Court confirmed that Section 15 of the Climate Action Act creates a real and binding obligation, but rejected

any proposition that climate goals automatically override other planning considerations. The decision does not disapply Article 6(3) of the Habitats Directive.

4.3 Key Legal Point for the Commission

Core Legal Position

Renewable-energy policy, RED III permitting timelines and climate objectives do not disapply Article 6(3). The legal gateway remains: no grant of permission unless adverse effects on European Site integrity are excluded beyond reasonable scientific doubt, unless the separate Article 6(4) derogation route is lawfully invoked and satisfied.

GROUND 1 — STAGE 2 AA REQUIRED AND THE STRICT LEGAL CONSEQUENCE

5.0 Ground 1 — Stage 2 AA Required and the Strict Legal Consequence

The Applicant's own Stage 1 conclusion screens in River Shannon Callows SAC and Middle Shannon Callows SPA. This is a material legal threshold. Once Stage 2 AA is required, the test is no longer whether significant effects are possible; it is whether adverse effects on site integrity can be excluded beyond reasonable scientific doubt.

The difficulty is that the AASR/NIS does not, in substance, meet the strict legal standard. It identifies multiple pathways to European Sites and then relies on mitigation, general design commitments and conclusions that pathways are "robustly blocked". That approach cannot support consent unless the Commission is satisfied that the evidence is complete and the mitigation is proven, specific and enforceable.

GROUND 2 — SCREENING OUT OF FERBANE BOG SAC IS INSUFFICIENTLY EVIDENCED

6.0 Ground 2 — Screening Out of Ferbane Bog SAC is Insufficiently Evidenced

Ferbane Bog SAC [000575] is the nearest Natura 2000 site to the Proposed Wind Farm, identified as approximately 1.2km from the project site at its nearest point. Its qualifying interests include active raised bogs, degraded raised bogs still capable of natural regeneration and depressions on peat substrates of the Rhynchosporion.

The Applicant's conclusion is that there is no hydrological connection between the Proposed Project and Ferbane Bog SAC via surface water or groundwater. That conclusion is a central screening finding and should not be accepted without independent scrutiny. Against a background of extensive drainage, excavation, roads, foundations, borrow pits, substation works, cabling, turbine foundations and peat/spoil management, a bare assertion of no surface-water or groundwater connection to the nearest raised-bog SAC is not enough.

The Commission should require a clear, site-specific hydrogeological explanation of how the absence of a surface-water or groundwater pathway has been established, including groundwater flow direction, peat/subsoil permeability, drains, pumping, outfalls, hydraulic boundaries, possible preferential flow paths and the relationship between the proposed works and Ferbane Bog SAC's hydrological regime.

GROUND 3 — HYDROLOGICAL AND WATER-QUALITY RISK TO RIVER SHANNON CALLOWS SAC

7.0 Ground 3 — Hydrological and Water-Quality Risk to River Shannon Callows SAC

The AASR/NIS confirms a hydrological connection from the Proposed Project site to River Shannon Callows SAC via the Brosna River and River Shannon over approximately 9.9km. It also identifies pollution risks from sedimentation, cementitious materials and hydrocarbons. The same section identifies that pollution events could lead to eutrophication, deoxygenation, altered pH, toxicity effects, fish kills and siltation effects.

The AASR/NIS also identifies otter as a relevant qualifying interest. It acknowledges that, while no otter evidence was recorded during surveys, on a precautionary basis otters using watercourses downstream of the site may be associated with River Shannon Callows SAC. Otter impacts are not limited to direct holt loss. Deterioration in water

quality, sediment loading, pH change, hydrocarbon contamination, reduced fish/prey resources, disturbance and altered riparian conditions can all affect otter-related conservation objectives.

Particular scrutiny is required in relation to concrete works, piling/foundations, excavation drainage, borrow pits, peat deposition areas, foul water storage, substation works, extreme rainfall, settlement ponds, outfall capacity, suspended solids, high-pH run-off, emergency response procedures and any failure scenario affecting the Brosna/Shannon hydrological pathway.

GROUND 4 — MIDDLE SHANNON CALLOWS SPA: SCI BIRDS AND FUNCTIONALLY LINKED LAND

8.0 Ground 4 — Middle Shannon Callows SPA: SCI Birds and Functionally Linked Land

The AASR/NIS confirms that Middle Shannon Callows SPA is hydrologically connected to the Proposed Project via the Brosna River and River Shannon over approximately 9.9km. It records regular Whooper Swan roosting within the Proposed Project site across five winter seasons, with five roost locations identified within the site.

The AASR/NIS then concludes that the Whooper Swan activity is associated with roost locations within the Proposed Project site rather than with the SPA, and states that there is no evidence of connectivity between the Middle Shannon Callows SPA population and the Proposed Project site. However, the same section confirms that a direct hydrological connection of approximately 9.9km has been established between the Proposed Project site and the SPA, and that potential changes in water quality could affect supporting habitats and food resources for Whooper Swan.

Even if the Applicant disputes SPA population connectivity for direct collision/displacement pathways, the project site is plainly used by wetland bird species and is hydrologically connected to the SPA. The Commission should require a precautionary and independently reviewed assessment of whether lands within the project site function as supporting or functionally linked habitat for SPA SCI species. Under Holohan, effects on habitats and species outside a European Site may still be relevant where they affect the conservation objectives of the protected site.

GROUND 5 — COLLISION RISK ASSESSMENT AND CUMULATIVE MORTALITY UNCERTAINTY

9.0 Ground 5 — Collision Risk Assessment and Cumulative Mortality Uncertainty

The collision-risk assessment is one of the most important elements of the NIS because Golden Plover and Lapwing are Special Conservation Interest species of Middle Shannon Callows SPA and are recorded using or flying through the project site.

The NIS assesses predicted collision mortality against a wider county wintering population, while recognising that only a proportion of birds recorded within the Proposed Project site would be associated with Middle Shannon Callows SPA. This creates a material AA uncertainty. The Article 6(3) test is focused on the European Site and its conservation objectives. Assessing mortality against a wider county population may dilute the potential effect on the SPA population unless the Applicant quantifies, with precautionary certainty, what proportion of predicted collision mortality may be attributable to birds associated with the SPA.

The reliance on a recently developed avoidance rate for Golden Plover derived from a limited number of UK wind farms should be independently reviewed. The cumulative collision figures are significant: Table 8-3 of the NIS records cumulative predicted collision mortality of 26.274 Golden Plover and 37.65 Lapwing per annum from existing, permitted and proposed wind farms within 25km. The avoidance rate applied to Golden Plover is understood to be 99.6%, derived from studies of turbines with a maximum rotor diameter of 92m. The proposed turbines have rotor diameters of up to 150m — a materially different scale that the reference avoidance-rate data does not address.

9.1 Turbine Scale and Bird Risk

The proposed turbines at 220m represent a material step-change from existing Offaly wind farms, which are generally within the 149m–185m range. This is directly relevant to Appropriate Assessment because turbine scale affects collision-risk modelling, potential barrier effects, displacement and the ecological interpretation of SCI bird movements through or over the Proposed Project site. The Commission should be satisfied that the collision-risk assessment has been based on the full worst-case turbine envelope and that any final turbine model would not increase risk beyond that assessed.

9.2 Bellair and Incomplete Cumulative Modelling

The proposed Bellair Wind Farm is indicatively located approximately 2.73km from the Proposed Project and within the same broader peatland landscape. Bellair appears to have been excluded from the cumulative collision assessment because no turbine locations or dimensions are available. That exclusion cannot be justified in a precautionary AA context. In a precautionary AA context, the Commission should not accept a conclusion of no cumulative adverse effect merely because a closely related proposed project is at an early stage.

GROUND 6 — PEAT HYDROLOGY, DRAINAGE AND INTERNAL BOG FUNCTION NOT ADEQUATELY ASSESSED

10.0 Ground 6 — Peat Hydrology, Drainage and Internal Bog Function

The proposed development is a major intervention into a peatland hydrological system, including 15 turbine foundations, roads, hardstands, borrow pits, cabling, crane pads, construction compounds, drainage, a 220kV substation, overhead-line works and peat/spoil management. The AASR/NIS records approximately 438,449m^3 of peat and mineral subsoil excavation.

The AASR/NIS does not provide a sufficiently integrated hydrological model of the bog as a whole, showing how the construction and long-term presence of the development will alter water levels, flow timing, flow direction, runoff rates, drain behaviour, recharge, groundwater/surface-water interaction and pollutant transport to downstream European Sites. A flat or historically drained bog is not automatically a hydrologically low-risk receiving environment. The Commission should require a site-wide hydrology and hydrogeology assessment capable of addressing worst-case conditions and cumulative interactions.

GROUND 7 — CHAPTER 4 PROJECT DESCRIPTION: INCOMPLETE DESIGN PARAMETERS UNDERMINE AA CERTAINTY

11.0 Ground 7 — Chapter 4 Project Description: Incomplete Design Parameters

Chapter 4 of the EIAR is the foundation upon which the entire environmental assessment, including Appropriate Assessment, depends. The Chapter 4 review identifies uncertainty regarding final turbine model, foundation design, cabling configuration, aviation lighting and drainage design. Where key design elements remain undefined, the assessment built upon that description is correspondingly unreliable.

These are directly relevant to Appropriate Assessment because foundation type and depth affect peat excavation, groundwater interaction, sediment mobilisation and drainage effects; drainage design affects the water-quality pathway to the Brosna River, River Shannon Callows SAC and Middle Shannon Callows SPA; turbine dimensions affect collision-risk modelling, displacement and barrier effects; and construction sequencing affects sediment release, concrete works, hydrocarbon management, peat stability and emergency-response arrangements.

It is respectfully submitted that the Commission cannot safely reach a favourable Appropriate Assessment conclusion unless it is satisfied that the AASR/NIS assesses either the final project design or a clearly defined and consistently applied worst-case design envelope.

GROUND 8 — THE FULL PROJECT INFRASTRUCTURE MUST BE ASSESSED FOR AA, NOT THE TURBINES IN ISOLATION

12.0 Ground 8 — Full Project Infrastructure Must Be Assessed for AA

The AASR/NIS cannot lawfully assess the turbines alone. It must assess the combined effect of the full project infrastructure on all relevant pathways to River Shannon Callows SAC and Middle Shannon Callows SPA. This includes the interaction between:

- turbine foundations, crane hardstands and floating/excavated roads;
- borrow pits, temporary construction compounds and substation and grid infrastructure;
- underground cabling, surface-water drainage and peat and spoil management;
- amenity tracks and car parks, watercourse crossings and operational maintenance traffic; and

- decommissioning works.

It is respectfully submitted that the full industrial infrastructure footprint materially increases the AA risk profile. The Commission should require a clear demonstration that each project component, and the interaction between components, has been assessed for direct, indirect and in-combination effects on European Site integrity.

GROUND 9 — OVER-RELIANCE ON STAGE 2 MITIGATION WITHOUT DEMONSTRATED CERTAINTY

13.0 Ground 9 — Over-Reliance on Stage 2 Mitigation Without Demonstrated Certainty

The AASR/NIS repeatedly concludes that pathways are "robustly blocked" by avoidance, design, mitigation and best practice. Such language does not, by itself, satisfy Article 6(3). The objection is not that mitigation can never be considered at Stage 2. The objection is that the NIS does not demonstrate, in a complete and definitive manner, that the mitigation will remain effective under real-world and worst-case conditions, including:

- extreme rainfall, high water tables, blocked drains and settlement system failure;
- construction sequencing, concrete works and hydrocarbon spill events;
- winter working, peat instability and peat fire events;
- turbine foundation settlement, road settlement and long-term drainage maintenance;
- operational-phase deterioration and decommissioning-phase disturbance.

Where a project is only acceptable because mitigation is assumed to operate successfully, the detail, enforceability and failure consequences of that mitigation become central to the AA. Such matters cannot be left to general future construction-stage discretion.

GROUND 10 — BIODIVERSITY ENHANCEMENT, HABITAT CREATION AND POTENTIAL COMPENSATION

14.0 Ground 10 — Biodiversity Enhancement, Habitat Creation and Potential Compensation

The AASR/NIS refers to biodiversity mitigation and enhancement measures, including habitat creation/management proposals for bird species and other ecological features. The NIS must clearly distinguish between true mitigation, which prevents or avoids harm to a European Site, and compensation or enhancement, which seeks to offset harm or provide ecological benefits elsewhere.

To the extent that flooded areas, lake-shore habitat, Lapwing management, Whooper Swan habitat provision, marsh fritillary measures, woodland or hedgerow planting are relied upon to offset habitat loss, disturbance, displacement or collision effects, they are potentially compensatory or enhancement measures. Under Grace and Sweetman, compensatory measures cannot be used as if they were mitigation to support a favourable Article 6(3) conclusion.

The Commission should require the Applicant to identify each ecological measure, classify it as avoidance, mitigation, enhancement or compensation, and explain whether the no-adverse-effect conclusion depends on it. If the conclusion depends on compensation or unproven enhancement, the Article 6(3) conclusion is unsafe.

GROUND 11 — SUBSTITUTE CONSENT, IPC REHABILITATION AND PCAS CUMULATIVE EFFECTS

15.0 Ground 11 — Substitute Consent, IPC Rehabilitation and PCAS Cumulative Effects

The same bog is the subject of historic peat extraction, an EPA IPC licence context, a Draft Cutaway Bog Decommissioning and Rehabilitation Plan, PCAS-type peatland rehabilitation measures and a separate substitute consent context. These processes are not ecologically neutral background facts. They are central to the receiving environment and to hydrology, water quality, peat stability and cumulative effects.

Treating rehabilitation, PCAS and substitute consent as separate administrative processes does not prove ecological separation. Rewetting, drain blocking, rehabilitation, wind farm drainage, road construction, borrow pits,

foundations, peat management and long-term maintenance all operate within the same peatland hydrological system. The Commission should require a single integrated assessment of the wind farm, substitute consent context, IPC rehabilitation, PCAS measures and other relevant projects/plans, addressing cumulative sediment risk, water-quality risk, altered hydrology, wetland habitat change, bird use, otter prey availability and downstream European Site integrity.

GROUND 12 — PROJECT SEGMENTATION, BELLAIR AND THE EMERGING BOORA RENEWABLE-ENERGY HUB

16.0 Ground 12 — Project Segmentation, Bellair and the Emerging Boora Renewable-Energy Hub

The wider project documentation raises a material concern that the Lemanaghan application may be assessed as an isolated standalone project when it may form part of a wider renewable-energy and transmission infrastructure strategy across the Boora peatland complex. Article 6(3) expressly requires assessment of a project individually or in combination with other plans or projects.

The Commission should therefore consider whether the NIS has adequately assessed the real-world in-combination picture, including Lemanaghan Wind Farm, Bellair Wind Farm, the 220kV substation and loop-in grid infrastructure, other existing and proposed wind farms within the wider Boora peatland complex, substitute consent and EPA rehabilitation, PCAS rewetting and revegetation, and associated road, drainage and grid infrastructure.

The relevant AA question is whether the proposed development, in combination with existing, permitted and reasonably foreseeable wind energy, grid, rehabilitation and peatland projects, may affect European Site integrity through shared ecological pathways — cumulative collision risk, displacement and barrier effects for SCI bird species, cumulative drainage alteration, cumulative sediment and water-quality pressure, cumulative disturbance, and cumulative effects on wetland habitat use within the wider Midlands peatland landscape.

GROUND 13 — WATER FRAMEWORK DIRECTIVE AND APPROPRIATE ASSESSMENT INTERACTION

17.0 Ground 13 — Water Framework Directive and Appropriate Assessment Interaction

The Water Framework Directive is directly relevant because the identified Natura 2000 pathways are water-dependent. River Shannon Callows SAC and Middle Shannon Callows SPA may be affected through water quality, sedimentation, pH alteration, hydrocarbons, nutrient release, altered flows and degradation of supporting habitat and prey resources.

The Commission should not reach a favourable AA conclusion unless it is also satisfied that the project will not cause deterioration in water-body status or compromise the achievement of environmental objectives. The AA and WFD issues should be assessed together, not in isolated chapters. A project which risks deterioration in hydrological or water-quality conditions may also risk adverse effects on European Site integrity. A failure to demonstrate WFD compliance also undermines confidence in the Article 6(3) conclusion where water is the pathway.

GROUND 14 — PEAT FIRE RISK AS A FORESEEABLE WATER-QUALITY AND PEATLAND PATHWAY

18.0 Ground 14 — Peat Fire Risk as a Foreseeable Water-Quality and Peatland Pathway

Peat fire risk is a foreseeable peatland hazard and should be treated as a relevant environmental pathway requiring integration into the AA and WFD assessment. Peat fire events may result in ash, sediment, nutrients, hydrocarbons or firewater entering drains and watercourses. Construction access, exposed peat, drainage alteration, fuel storage, machinery and long-term maintenance activity may alter the likelihood or consequences of such events.

This is not a claim that a peat fire will occur. It is a precautionary AA point that a foreseeable peatland risk should not be omitted where water-quality pathways to European Sites are already accepted. Particular matters requiring assessment include exposed peat during construction, drainage-related drying of peat, borrow pits and peat deposition areas, fuel and hydrocarbon storage, emergency firewater runoff, ash and sediment entering drainage

networks, water-chemistry effects after fire, damage to rehabilitating wetland habitat, and cumulative effects with climate-change-related drought or heatwave conditions.

GROUND 15 — REASONABLE ALTERNATIVES, RESTORATION BASELINE AND AA UNCERTAINTY

19.0 Ground 15 — Reasonable Alternatives, Restoration Baseline and AA Uncertainty

Peatland restoration should not be treated merely as a negative "do nothing" scenario. On this site, restoration may involve rewetting, drain-blocking, carbon recovery, biodiversity gain, hydrological stabilisation and protection of the archaeological and cultural landscape. The AASR/NIS assesses the wind farm against a baseline which is itself transitional — subject to rehabilitation, rewetting, drainage changes, substitute consent context and EPA licence obligations.

The Commission should require the Applicant to address whether the proposed wind farm infrastructure is compatible with the restoration-led baseline and whether the wind farm would alter, delay, fragment or constrain rehabilitation outcomes in a manner relevant to European Sites, including effects on drainage and rewetting, water quality and sediment pathways, flood attenuation, wetland habitat recovery, otter prey availability, SPA bird use of flooded or rewetted areas, and downstream River Shannon Callows SAC and Middle Shannon Callows SPA receptors.

GROUND 16 — T05, WIND ENERGY ZONING AND THE PROTECTIVE MONASTIC BUFFER

20.0 Ground 16 — T05, Wind Energy Zoning and the Protective Monastic Buffer

20.1 Applicant's Own Chapter 2 Position

> "The layout of the Proposed Wind Farm has been strategically developed, with the Proposed Wind Farm turbines being located in an area classified as 'Areas Deemed Open for Consideration for Wind Energy Developments' within the WES, with the exception of T05 which is located on the border of an area designated 'Not Deemed Suitable for Wind Energy Developments'. The overlap of T05 with the border of the 'Areas Not Deemed Suitable for Wind Energy Developments' is minor and as demonstrated by this EIAR, will not give rise to any significant effects on the environment."
>
> **Source: Chapter 2, Section 2.6.4.2.**

20.2 Appendix 13-5 Confirms the 1.9m Issue

> "Only 1 no. proposed turbine (T05), is located at the boundary of this area between 'Open to Consideration' and 'Area not Deemed Suitable'. The hardstand and infrastructure of turbine T05 is located approximately 1.9m outside of the 'Open to Consideration' zoning."
>
> **Source: Appendix 13-5, Section 1.5.2, report p.25.**

Appendix 13-5 also states that the Proposed Wind Farm is set back beyond the buffer specifically created to mitigate impacts on the Lemanaghan Monastic Site, "with the exception of turbine T05, which is only located approximately 1.9m within the buffer." This is not a neutral point. It is the Applicant's own evidence that T05 and/or its associated infrastructure intrudes into an area not deemed suitable for wind energy development.

20.3 The Buffer Was Created Specifically to Protect the Monastic Site

Appendix 13-5 confirms that the Offaly Wind Energy Strategy was updated and amended in 2021 to account for the Monastic Complex specifically and to "protect the character of the monastic site." The amended zoning excluded an area from the "Open for Consideration" designation for that protective purpose. This is not an arbitrary mapping line. It is a deliberate protective planning boundary.

20.4 The "Minor Overlap" Argument Should Be Rejected

A protective planning boundary does not become irrelevant because the breach is measured in metres. Planning buffers, zoning boundaries and exclusion areas often do not correspond to a visible physical change on the ground. Their significance lies in the planning purpose for which they were adopted. The relevant question is not whether the cutaway bog looks similar on both sides of the line. The relevant question is whether the Applicant has respected the protective Wind Energy Strategy boundary created to protect the character of the Lemanaghan Monastic Site. On the Applicant's own evidence, it has not.

20.5 Relevance to Appropriate Assessment

This issue demonstrates that the layout has pushed infrastructure into a known protective exclusion/buffer area, undermines confidence in the Applicant's assertion that the layout has been carefully and conservatively designed around sensitive receptors, reinforces the need to examine whether layout alternatives including omission or relocation of T05 would reduce environmental risk, and is relevant to the credibility of the Applicant's wider approach to avoidance and mitigation. If a protective planning boundary created for a sensitive landscape is treated as a minor inconvenience, the Commission should be slow to accept broad assurances that other pathways have been "robustly blocked".

Planning Conclusion on T05

It is respectfully submitted that T05 should be omitted or relocated outside the "Not Deemed Suitable" area. For the purpose of this AA objection, the T05 issue also supports the need for a revised layout and a revised NIS, because any omission, relocation or micrositing of T05 could alter collision risk, hydrology, drainage, peat disturbance, access roads, construction sequencing, visual context and cumulative assessment.

GROUND 17 — NPWS/DAU CONSULTATION GAP AND NEED FOR INDEPENDENT REVIEW

21.0 Ground 17 — NPWS/DAU Consultation Gap and Need for Independent Review

The AASR/NIS records that the Department/NPWS provided no response to the 2021 scoping exercise, a 2024 response relating to archaeological assessment only, and that a November 2025 NPWS meeting raised matters relating to robust bird collision risk assessment and cumulative effects.

Given that collision risk, cumulative effects and SPA bird use are central issues in this application, the Commission should invite a detailed NPWS/DAU submission on the completed AASR/NIS before making any favourable AA determination. The Commission should also consider independent ornithological and hydrological review rather than relying solely on the Applicant's consultants.

GROUND 18 — BEST AVAILABLE SCIENTIFIC KNOWLEDGE AND ARTICLE 17 / CONSERVATION INFORMATION

22.0 Ground 18 — Best Available Scientific Knowledge and Article 17 / Conservation Information

The AASR/NIS refers to published NPWS site-specific conservation objectives and to Article 17 reports. It is not enough merely to cite such material. The Commission must be satisfied that the most recent conservation-status information and pressure/threat data have been considered where relevant to qualifying interests, supporting habitats, wetland bird populations, otter, aquatic ecology and peatland habitats.

Where conservation status is unfavourable, declining or uncertain, the degree of caution required under Article 6(3) is heightened. The Commission should require the Applicant to show that the assessment reflects the best available scientific knowledge at the date of decision, not merely the existence of older conservation objective documents.

23.0 Overall Planning Conclusion

The AASR/NIS is not merely a technical appendix. It is the legal foundation upon which the Commission would have to carry out its Appropriate Assessment. The Applicant's own material identifies hydrological pathways, water-quality risks, SCI bird-use pathways, collision risk, displacement/barrier effects, ex situ habitat issues, otter-

related pathways and cumulative-effect issues. A favourable AA conclusion can only lawfully be reached where the evidence is complete, precise and definitive and no reasonable scientific doubt remains.

It is respectfully submitted that this threshold is not met. The NIS depends on asserted mitigation success, broad conclusions of pathway blocking, unquantified SPA apportionment, insufficiently evidenced screening-out of Ferbane Bog SAC, incomplete cumulative treatment of substitute consent/rehabilitation/PCAS/Bellair, insufficiently integrated peatland hydrological assessment, and an incomplete project description which undermines certainty around relevant AA pathways.

The T05 evidence also strengthens the overall planning objection. The Applicant's own Appendix 13-5 confirms that T05 is approximately 1.9m within the buffer/outside the "Open to Consideration" zoning, and that the buffer was created to protect the character and setting of the Lemanaghan Monastic Site. The proper planning response is refusal. At minimum, the Commission should require substantial further information, a revised layout, a revised NIS and independent expert review before any grant of permission could lawfully be contemplated.

24.0 Recommended Reasons for Refusal

Reason 1 Failure to Demonstrate Compliance with Article 6(3)

The Applicant has failed to provide a sufficiently complete, precise and definitive AASR/NIS capable of enabling the Commission to ascertain, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of any European Site, either alone or in combination with other plans or projects.

Reason 2 Inadequate Assessment of Hydrological and Water-Quality Pathways

Having regard to the scale of peat excavation, drainage alteration, borrow pits, roads, foundations, substation works and hydrological connectivity to River Shannon Callows SAC and Middle Shannon Callows SPA, the Applicant has not adequately assessed or excluded adverse effects arising from sediment, hydrocarbons, cementitious materials, pH alteration, altered flows and cumulative water-quality impacts.

Reason 3 Insufficiently Evidenced Screening-Out of Ferbane Bog SAC

The screening-out of Ferbane Bog SAC is not supported by sufficiently transparent hydrological and hydrogeological evidence, particularly given the proximity of the SAC, its raised-bog qualifying interests and the peatland hydrological context of the proposed development.

Reason 4 Functionally Linked Land and SCI Bird Uncertainty

The Applicant has not adequately assessed whether the proposed project site constitutes supporting or functionally linked habitat for SCI bird species of Middle Shannon Callows SPA, including Whooper Swan, Golden Plover and Lapwing, nor has it adequately addressed ex situ habitat loss, disturbance, displacement and barrier effects.

Reason 5 Collision Risk and Cumulative Mortality Uncertainty

The collision-risk assessment relies on assumptions and reference populations which do not remove reasonable scientific doubt regarding effects on the SPA population. The cumulative collision figures for Golden Plover and Lapwing require a precautionary SPA-specific apportionment and independent review.

Reason 6 Incomplete Project Description and Undefined Design Parameters

The Applicant has not demonstrated that the NIS assesses a complete and definitive project description or a clearly defined worst-case scenario for all AA-relevant pathways, including foundation design, drainage, cabling, turbine model, lighting, peat excavation and long-term operational infrastructure.

Reason 7 Failure to Assess the Full Infrastructure Footprint as One AA Project

The Applicant has not adequately demonstrated that the combined effects of turbines, roads, hardstands, borrow pits, compounds, substation, grid infrastructure, cabling, drainage, amenity infrastructure and decommissioning works have been assessed as a single integrated project for AA purposes.

Reason 8 Over-Reliance on Mitigation and Best Practice

The NIS relies heavily on avoidance, design, mitigation and best-practice measures, but does not demonstrate with sufficient certainty that those measures are specific, effective, enforceable and capable of operating successfully under worst-case peatland construction, operational and decommissioning conditions.

Reason 9 Inadequate Cumulative Assessment with Substitute Consent, IPC Rehabilitation, PCAS and Other Projects

The Applicant has not adequately assessed cumulative and in-combination effects with the substitute consent context, EPA IPC rehabilitation, PCAS rewetting/revegetation, Bellair Wind Farm and other wind energy/grid infrastructure affecting the same peatland and downstream European Sites.

Reason 10 Project Segmentation and Wider Renewable-Energy Hub Uncertainty

The NIS does not adequately address whether the proposed development forms part of a wider renewable-energy and transmission infrastructure pattern across the Boora peatland complex, and whether those combined projects may give rise to cumulative effects on European Sites.

Reason 11 Water Framework Directive Interaction Not Resolved

The Applicant has not demonstrated that the proposed development will avoid deterioration in water status and avoid compromising environmental objectives where water-quality pathways are central to the AA conclusion.

Reason 12 Peat Fire Risk Not Integrated into AA

The Applicant has not adequately assessed peat fire risk as a foreseeable environmental pathway capable of affecting water quality, sediment mobilisation, emergency drainage, air deposition and downstream ecological receptors.

Reason 13 Restoration-Led Baseline and Rehabilitation Uncertainty

The Applicant has not adequately demonstrated that the proposed wind farm is compatible with peatland rehabilitation, rewetting, restoration and long-term hydrological recovery, or that it will not constrain or fragment those processes in a manner relevant to European Site integrity.

Reason 14 T05 and Failure to Respect Protective Wind Energy Strategy Boundary

The Applicant's own documentation confirms that T05 and/or its associated infrastructure is approximately 1.9m outside the "Open to Consideration" zoning and within the protective buffer linked to the "Not Deemed Suitable" designation. This undermines the Applicant's claim that the layout has been strategically developed to respect sensitive constraints and supports the need for omission or relocation of T05, followed by a revised NIS.

25.0 Relief Sought

1. Refuse permission for the proposed Lemanaghan Wind Farm on the basis that the AASR/NIS does not satisfy the requirements of Article 6(3) of the Habitats Directive, Part XAB of the Planning and Development Act 2000 and the precautionary principle.
2. In the alternative, require the Applicant to submit a fundamentally revised NIS addressing all hydrological, hydrogeological, ornithological, otter, water-quality, WFD, peat fire, restoration, cumulative and in-combination issues identified in this objection.
3. Require a comprehensive site-wide hydrological and hydrogeological model of Lemanaghan Bog, including surface water, groundwater, peat hydrology, drainage, pumping, outfalls, rehabilitation/rewetting and worst-case rainfall/failure scenarios.
4. Require a clear, finalised project description or legally robust worst-case design envelope demonstrating how foundation type, cabling, drainage, turbine model, lighting and construction sequencing have been assessed for AA purposes.

5. Require a full-project AA pathway assessment which integrates turbines, foundations, roads, hardstands, borrow pits, cabling, substations, grid works, drainage, amenity infrastructure and decommissioning works.
6. Require a SPA-specific collision-risk assessment and cumulative mortality assessment for Golden Plover and Lapwing, including transparent apportionment of risk to Middle Shannon Callows SPA and sensitivity analysis.
7. Require the Applicant to clearly distinguish avoidance, mitigation, enhancement and compensation measures, and to identify whether the favourable AA conclusion depends on any measure that is compensatory or uncertain.
8. Require a full in-combination assessment with Bellair Wind Farm, the wider Boora peatland complex, substitute consent, IPC rehabilitation, PCAS, grid infrastructure and all relevant wind energy projects.
9. Require a specific peat fire risk assessment addressing interaction with drainage, construction, fuel storage, exposed peat, emergency response, water quality and downstream European Sites.
10. Require T05 to be omitted or relocated fully outside the "Not Deemed Suitable" / protective buffer area, with a revised NIS and revised cumulative assessment to address any consequential changes to access, drainage, peat disturbance, bird collision risk and project layout.
11. Invite a detailed submission from NPWS/DAU on the completed NIS before determining the application.
12. Commission independent hydrological, ecological and ornithological review before any favourable AA determination is made.
13. Ensure that any further information is subject to meaningful public participation before a decision is made.

26.0 Key Legal and Source References

- Appropriate Assessment Screening Report and Natura Impact Statement, Lemanaghan Wind Farm, Co. Offaly, MKO, Final Issue dated 19 March 2026, Ref: AASR NIS – F – 2026.03.19 – 200804.
- Appendix 13-5, Lemanaghan Monastic Complex: Historical, Landscape and Visual Context, MKO, Final Issue dated 19 March 2026.
- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, Habitats Directive, Article 6(3) and Article 6(4).
- Directive 2009/147/EC on the conservation of wild birds, Birds Directive.
- Planning and Development Act 2000, as amended, Part XAB, including section 177V.
- European Communities (Birds and Natural Habitats) Regulations 2011, S.I. No. 477/2011.
- Directive 2000/60/EC establishing a framework for Community action in the field of water policy, Water Framework Directive.
- Directive 2011/92/EU, as amended by Directive 2014/52/EU, EIA Directive.
- Case C-127/02 Waddenzee.
- Case C-258/11 Sweetman.
- Case C-323/17 People Over Wind and Sweetman v Coillte Teoranta.
- Case C-461/17 Holohan v An Bord Pleanála.
- Case C-164/17 Grace and Sweetman v An Bord Pleanála.
- Case C-721/21 Eco Advocacy CLG v An Bord Pleanála [2023] ECLI:EU:C:2023:484.
- Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5 (Supreme Court, 4 February 2026).
- Connelly v An Bord Pleanála [2018] IESC 31.
- NPWS site-specific conservation objectives and relevant Article 17 reporting / conservation status information.
- Offaly County Development Plan 2021–2027 and associated Wind Energy Strategy.

27.0 Declaration

This objection is submitted in good faith and for the purpose of assisting An Coimisiún Pleanála in carrying out its statutory planning and Appropriate Assessment functions.

It is respectfully submitted that the legal threshold for granting permission has not been met on the basis of the AASR/NIS as submitted.

Core Submission

An Coimisiún Pleanála is respectfully requested to refuse permission on the basis that the AASR/NIS does not provide a sufficiently complete, precise and definitive basis upon which the Commission can lawfully conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of any European Site, either alone or in combination with other plans or projects.

Section 19: AQUATIC ECOLOGY, FISHERIES AND HYDROLOGICALLY CONNECTED NATURA 2000 SITES

Third Party Observer — An Coimisiún Pleanála RED III Application

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Planning Observation Report

Aquatic Ecology, Fisheries and Hydrologically Connected Natura 2000 Sites — Objection to Appendix 4 of the NIS (Aquatic Baseline Report)

Third Party Planning Observation Report in respect of An Coimisiún Pleanála RED III planning application – Case reference: PAX19.324161 – Lemanaghan Wind Farm, Co. Offaly.

This document has been prepared solely for submission to An Coimisiún Pleanála in respect of Case Reference PAX19.324161. All references to the Applicant's documents are to documents published on the planning register and publicly available at www.lemanaghanwindfarmplanning.ie.

1.0 Introduction and Scope

This submission is made in respect of Appendix 4 of the Natura Impact Statement, Aquatic Baseline Report, prepared by Triturus Environmental Ltd. for MKO in connection with the proposed Lemanaghan Wind Farm, Co. Offaly.

The purpose of this section is to assist An Coimisiún Pleanála in assessing whether the Applicant has provided a complete, precise and legally robust assessment of aquatic ecology, fisheries, water quality, protected aquatic species, hydrological connectivity, and likely significant effects on downstream receptors, including European sites.

Appendix 4 confirms that the proposed project has downstream hydrological connectivity with the River Shannon Callows SAC and Middle Shannon Callows SPA via watercourses draining the site. Importantly, Appendix 4 expressly accepts this:

> "Whilst not located within a European site, the Proposed Project site (via several watercourses) shared downstream hydrological connectivity with the River Shannon Callows SAC (000216) and Middle Shannon Callows SPA (004096)."

This is a material admission. The issue for the Commission is therefore not whether a pathway exists; the Applicant's own documentation confirms that it does. The legal question is whether the NIS and EIAR contain complete, precise and definitive findings capable of excluding adverse effects on the integrity of those European sites beyond reasonable scientific doubt.

This objection section should be read together with Chapter 9 – Water, which confirms that the proposed project includes substantial drainage, road, borrow pit, turbine, substation, hardstanding and construction compound works, all with potential hydrological pathways to receiving streams and rivers.

2.0 Executive Summary of Core Findings

Appendix 4 does not remove aquatic or Natura 2000 risk. On the contrary, it confirms that the receiving environment contains aquatic receptors of conservation value and is already under ecological pressure. The key issues are as follows:

- The Applicant's own Appendix 4 accepts downstream hydrological connectivity with the River Shannon Callows SAC and Middle Shannon Callows SPA via the Ballynahown and Brosna Rivers.
- Appendix 4 records or detects white-clawed crayfish, Lampetra sp. lamprey, brown trout, European eel, smooth newt, common frog, red-listed duck mussel, and an example of Annex I hydrophilous tall herb habitat. A summary of these aquatic receptors is provided at ATTACHMENT A, with legal and conservation status at ATTACHMENT D.
- The biological water-quality baseline is weak. Several sites recorded Q3 Poor Status, and several Q-ratings are expressly stated to be tentative because of poor flows or lack of suitable riffle habitat. The relevant Q-rating and WFD status information is summarised at ATTACHMENT C.
- Chapter 9 confirms multiple surface-water outfalls from the site, with all surface-water discharge ultimately reaching the River Shannon. The drainage and outfall pathways are summarised at ATTACHMENT B and ATTACHMENT E.
- The Applicant's "no significant effects" conclusion relies heavily on mitigation and standard best-practice measures, without sufficiently integrating the degraded biological baseline, protected species records, WFD risk status, and cumulative effects with ongoing peatland rehabilitation.
- A fully signed Collective Statement of Lemanaghan Farmers and Landowners is attached as a supporting document. It confirms that a natural brook/stream flows from the Lemanaghan Bog area through downstream private lands towards the River Brosna at Dernagun and is used locally as a freshwater source for livestock. This strengthens the source-pathway-receptor case by identifying real downstream agricultural receptors, not merely ecological receptors on a map.

Core Finding

The Commission should not accept Appendix 4 as a neutral baseline document. It should be treated as evidence that the project drains into a sensitive, already pressured aquatic network containing protected and red-listed species, poor/tentative biological water quality, and confirmed hydrological connectivity to European sites.

3.0 Relevant Legal and Policy Framework

The legal tests applicable to this objection are not limited to whether a pollution event is likely. The relevant questions for the Commission are whether the Applicant has provided sufficient scientific information to allow a lawful EIA reasoned conclusion, a lawful Appropriate Assessment conclusion that adverse effects can be excluded beyond reasonable scientific doubt, a lawful WFD conclusion that the proposed development will not cause deterioration, and a lawful species-protection and fisheries assessment in respect of protected and red-listed aquatic receptors recorded or detected in Appendix 4.

3.1 EIA Directive and Irish EIA Law

The EIA process must identify, describe and assess the direct and indirect significant effects of the proposed development, and the competent authority must reach a reasoned conclusion on those effects. Appendix 4 cannot be treated as a stand-alone ecological survey. Its findings must be fully integrated into Chapter 9 (Water), Chapter 6 (Biodiversity), the NIS, the WFD Compliance Assessment, the Peat and Spoil Management Plan, the Construction Environmental Management Plan, drainage design, and cumulative effects assessment. This is consistent with section 171A of the Planning and Development Act 2000, as amended. The Applicant should not be permitted to rely on post-consent monitoring, construction-stage detail or general mitigation wording to cure gaps in the pre-consent EIA assessment.

3.2 Habitats Directive, Appropriate Assessment and Irish Habitats Regulations

Under Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, appropriate assessment is required where it cannot be excluded, on the basis of objective scientific information, that a plan or project will have a significant effect on a European site. Under section 177V of the Planning and Development Act 2000, consent may only be granted after the competent authority has determined that the proposed development will not adversely affect the integrity of a European site.

The CJEU in Waddenzee (C-127/02) confirmed that consent may only be granted where there is no reasonable scientific doubt as to the absence of adverse effects on site integrity. Holohan v An Bord Pleanála (C-461/17) confirms that an Appropriate Assessment may not contain lacunae and must contain complete, precise and definitive findings and conclusions. People Over Wind (C-323/17) reinforces the need for full Appropriate Assessment rather than a conclusory finding of no effects where mitigation is central to excluding effects.

3.3 Water Framework Directive and No-Deterioration Principle

The Water Framework Directive requires protection and improvement of water status. In Weser (C-461/13), the CJEU confirmed that authorisation must not be granted where a project may cause deterioration in the status of a water body or jeopardise the achievement of good status. This is directly relevant because Chapter 9 records that waterbodies in the receiving catchment include Moderate, Poor, At Risk and Under Review WFD classifications. Appendix 4 also records poor biological water quality at multiple aquatic survey sites.

3.4 Protected Species and Fisheries Law

White-clawed crayfish is listed on Annex II and Annex V of the Habitats Directive and is protected in Ireland under the Wildlife Acts. NPWS records that Ireland has international responsibility for the species. European eel is critically endangered. Lamprey species are relevant under the Habitats Directive framework. Inland Fisheries Ireland's 2016 Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Watercourses

are directly applicable, as identified by Chapter 9 itself. The protected aquatic receptors and relevant status are summarised at ATTACHMENT D, and relevant guidance materials are listed at ATTACHMENT G.

3.5 Birds Directive and Middle Shannon Callows SPA

The Middle Shannon Callows SPA is protected under the Birds Directive framework. Although Appendix 4 is an aquatic baseline report, hydrological impacts on water quality, sedimentation, nutrient loading, aquatic invertebrates, wetland habitats and riverine ecological condition may indirectly affect the ecological functioning of downstream SPA habitats. The Applicant's own confirmation of hydrological connectivity to the Middle Shannon Callows SPA means that the NIS must clearly assess whether aquatic deterioration, sediment mobilisation, peat silt, altered drainage or construction-related pollution could affect the conservation objectives and supporting ecological conditions of that SPA.

3.6 Surface Water, Groundwater, Salmonid Waters and Water Pollution Law

The relevant legal framework also includes the Environmental Objectives (Surface Waters) Regulations 2009, the Environmental Objectives (Groundwater) Regulations 2010, the Quality of Salmonid Waters Regulations 1988, and the Local Government (Water Pollution) Acts 1977 to 1990. Chapter 9 itself identifies the Surface Water Regulations, Groundwater Regulations, Salmonid Waters Regulations and Freshwater Pearl Mussel Regulations as relevant. These instruments are relevant because Appendix 4 records poor/tentative biological water quality, salmonid and lamprey habitat, brown trout, Lampetra sp., European eel, white-clawed crayfish and red-listed duck mussel.

GROUND 1 — APPENDIX 4 CONFIRMS SENSITIVE AQUATIC RECEPTORS RATHER THAN REMOVING RISK

4.0 Ground 1 — Appendix 4 Confirms Sensitive Aquatic Receptors

Appendix 4 identifies survey sites on the Ballynahown River, Fortified House Castlearmstrong Stream, Lemanaghan Stream, River Brosna, Kilcolgan Beg Stream, Ferbane Stream and three ponds. It expressly states that downstream hydrological connectivity exists with the River Shannon Callows SAC and Middle Shannon Callows SPA via the Ballynahown and Brosna Rivers.

Appendix 4 states that all freshwater watercourses which could be affected directly or indirectly by the Proposed Project were considered, and that 13 riverine and 3 pond sites were selected. That is significant because the Applicant cannot now minimise these sites as remote or irrelevant. By its own selection methodology, they are watercourses and ponds capable of being affected directly or indirectly by the Proposed Project.

Appendix 4 records aquatic receptors of conservation value, including:

- white-clawed crayfish recorded / detected in the Ballynahown system;
- Lampetra sp. lamprey recorded at A2, B2 and B3;
- brown trout recorded or detected in river and pond sites;
- European eel detected by eDNA at pond site P1;
- smooth newt detected by eDNA at pond site P3;
- common frog recorded at B5;
- red-listed duck mussel recorded at B3 and B5;
- Annex I hydrophilous tall herb habitat 6430 recorded at B3; and
- the River Brosna identified as a county-importance ecological corridor.

These receptors are summarised in ATTACHMENT A, and their relevant legal or conservation status is summarised in ATTACHMENT D. These findings should have led to a highly precautionary, receptor-specific assessment. Instead, the Applicant's overall conclusion appears to move too quickly from "risk exists" to "risk will be mitigated", without adequately demonstrating that the proposed mitigation will be sufficiently certain, enforceable and effective for each identified aquatic receptor and outfall pathway.

GROUND 2 — BIOLOGICAL WATER QUALITY IS ALREADY POOR OR UNCERTAIN

5.0 Ground 2 — Biological Water Quality Is Already Poor or Uncertain

Appendix 4 records that multiple sites achieved Q3 Poor Status, including sites on the Ballynahown River, Fortified House Castlearmstrong Stream, Lemanaghan Stream, River Brosna and Kilcolgan Beg Stream. It also records that several Q-ratings were tentative because of poor summer flows and absence of suitable riffle areas for sampling. The Appendix 4 Q-rating results and relevant WFD status information are summarised in ATTACHMENT C.

A "tentative" Q4 rating should not be treated as a robust good-status baseline where the methodology itself records sampling limitations. Where Q3 Poor Status is recorded at multiple sites, the receiving environment cannot be treated as having spare ecological capacity to absorb additional sediment, hydrocarbons, cement washout, altered flows or peat disturbance.

Under the Water Framework Directive, the assessment must demonstrate not merely that catastrophic pollution is unlikely, but that the proposed development will not cause deterioration in any relevant waterbody status or quality element and will not jeopardise the achievement of good status.

GROUND 3 — THE NIS AND CHAPTER 9 DO NOT ADEQUATELY RECONCILE HYDROLOGICAL CONNECTIVITY WITH NATURA 2000 RISK

6.0 Ground 3 — NIS and Chapter 9 Do Not Adequately Reconcile Hydrological Connectivity

> "The Proposed Project and all associated infrastructure are not located within a European Site, although downstream hydrological connectivity exists with the River Shannon Callows SAC (000216) and the Middle Shannon Callows SPA (004096) via the Ballynahown and Brosna Rivers."
>
> **Source: Appendix 4, Section 2.1.**

Chapter 9 provides further detail on the two hydrological pathways. It states that the Proposed Project site is connected to the River Shannon Callows SAC and Middle Shannon Callows SPA via the Ballynahown Stream (receiving discharge from SW22D, approximate flowpath 10.5 km) and via tributaries of the Brosna River (receiving discharge from SW22, SW22A, SW22B, SW22C, SW19, SW19A and SW19B, approximate flowpath 22.1 km). The relevant Applicant extracts are included at ATTACHMENT E.

Distance alone is not a sufficient legal answer where hydrological connectivity is accepted, all site surface water ultimately reaches the River Shannon, the receiving catchment contains poor and moderate biological status, the proposed works involve peat excavation, borrow pits, dewatering, new roads, hardstands and drainage, and protected aquatic species are recorded within the connected water network. In planning and Appropriate Assessment terms, distance is relevant only insofar as it informs the scientific assessment of the pathway and likely effect. It is not, in itself, mitigation.

GROUND 4 — APPENDIX 4 AND CHAPTER 9 ARE NOT SUFFICIENTLY INTEGRATED

7.0 Ground 4 — Appendix 4 and Chapter 9 Are Not Sufficiently Integrated

Chapter 9 confirms that the proposed wind farm includes 15 turbines, hardstands, five temporary construction compounds, four borrow pits, approximately 20.8 km of new road/amenity track, a 220 kV substation, overhead line infrastructure and all associated drainage works. It acknowledges that excavation dewatering, sediment-laden runoff and poor water quality may affect aquatic habitats and species, and that hydrocarbon spillages can deplete dissolved oxygen resulting in death of aquatic organisms.

The documentation does not appear to provide a sufficiently clear, receptor-by-receptor matrix showing each outfall, the receiving watercourse, the protected aquatic species or habitat downstream, the WFD status and Q-value of the receiving water, the construction activity creating risk, the specific mitigation measure, the monitoring

location, the trigger value, the stop-work threshold, the responsible party, and the remedial action if deterioration occurs. A proposed structure for this missing matrix is included at ATTACHMENT F.

GROUND 5 — SURVEY LIMITATIONS AND UNCERTAINTY REQUIRE A PRECAUTIONARY APPROACH

8.0 Ground 5 — Survey Limitations and Uncertainty Require a Precautionary Approach

Appendix 4 contains useful survey information, but it also records limitations which must not be understated. The Applicant's own methodology was not a casual walkover: Appendix 4 states that the survey approach was intended to ensure that habitats and species of high conservation value would be detected to inform mitigation. That statement makes the recorded findings more significant. If the Applicant says the survey approach was designed to detect high-value habitats and species, then the actual records of white-clawed crayfish, Lampetra sp., European eel, brown trout, smooth newt, common frog, red-listed duck mussel, Annex I habitat and poor/tentative Q-values must be treated as central to the assessment.

Notable limitations include: Site B6 was dry at the time of survey, so biological water-quality sampling was not possible; several Q-ratings were tentative due to poor flows or absence of suitable riffle areas; eDNA sampling was targeted at limited locations and is not quantitative; and no otter signs were recorded at the survey sites, but Appendix 4 also records historic otter presence in the wider survey area and identifies the River Brosna as highly suitable for otter.

The Applicant should not be permitted to convert "not detected during survey" into "no risk". In a legally robust Appropriate Assessment and EIA, absence of survey evidence is not the same as evidence of absence, particularly where hydrological connectivity, historic records, suitable habitat and protected species are present.

GROUND 6 — WHITE-CLAWED CRAYFISH AND BIOSECURITY RISK REQUIRE STRONGER ASSESSMENT

9.0 Ground 6 — White-Clawed Crayfish and Biosecurity Risk

Appendix 4 records white-clawed crayfish eDNA at site A2 on the Ballynahown River, with 12 positive qPCR replicates out of 12. It also records white-clawed crayfish at site A1. The finding of crayfish in a hydrologically connected receiving system requires more than general biosecurity wording. The NIS and EIAR should clearly demonstrate how machinery, pumps, drainage works and temporary works will avoid spread of crayfish plague; how works will avoid sedimentation of crayfish habitat; whether any NPWS licence or consultation is required; how works will be sequenced to avoid contamination between sub-catchments; and what emergency response applies if crayfish plague or invasive species concerns arise during works.

A negative crayfish plague eDNA result in September 2024 does not remove future biosecurity risk during construction. NPWS records that Ireland has historically remained free of introduced crayfish species and proven crayfish plague — making this a matter of international conservation responsibility.

GROUND 7 — FISHERIES HABITAT, LAMPREY AND SEDIMENTATION ARE NOT ADEQUATELY ADDRESSED

10.0 Ground 7 — Fisheries Habitat, Lamprey and Sedimentation

Appendix 4 records that siltation, primarily from peat, and historical drainage have reduced the quality of salmonid and lamprey spawning habitat throughout the survey sites. It also records that lamprey densities were lower in 2024 than previously recorded at site B3 in 2021, and that increased sedimentation and poorer spawning may have contributed to those lower densities.

Appendix 4 describes the River Brosna as a major Shannon tributary containing one of the largest areas of peat bog and peat harvesting in the country, resulting in a major influx of peat silt and sediment into the river. This is directly relevant to the proposed wind farm because the construction works would occur in a peatland environment involving peat excavation, spoil management, access tracks, hardstands, borrow pits, dewatering and drainage. The Applicant's own aquatic baseline identifies peat silt and sediment as an existing pressure. The

assessment must show, with site-specific evidence, that the proposed works will not worsen that already recognised pressure.

A specific fisheries and lamprey protection assessment should address spawning habitat, nursery habitat, sediment release, peat silt mobilisation, timing of works, watercourse crossing risk, outfall discharge quality, emergency response to turbidity exceedances, IFI consultation, and monitoring before, during and after works. It is not sufficient to rely on generic silt fences, settlement ponds, best practice and post-consent monitoring where the baseline already records peat siltation pressures.

GROUND 8 — CUMULATIVE EFFECTS ARE UNDERSTATED

11.0 Ground 8 — Cumulative Effects Are Understated

Chapter 9 acknowledges that the construction phase may overlap with peatland rehabilitation works, resulting in increased activity, greater peat disturbance, potential elevated suspended solids in runoff, and heightened risk of hydrocarbon spills. Despite this, Chapter 9 concludes that standard best practice and IPC licence requirements will ensure no negative cumulative effect. That conclusion is not sufficiently demonstrated.

A lawful cumulative assessment should assess the real combined effect of historic industrial peat extraction, ongoing site drainage, proposed wind farm construction, peatland rehabilitation works, borrow pit excavation, road and hardstand construction, pump operation and outfall management, storm events, climate-related rainfall intensity, downstream WFD pressures, and protected aquatic species and habitats. The Commission is requested to require a revised cumulative assessment integrating Appendix 4, Chapter 9, the NIS, the WFD Compliance Assessment, the CEMP, the Peat and Spoil Management Plan, and any rehabilitation or substitute consent-related works. See ATTACHMENT F for the requested further information schedule.

GROUND 9 — THE APPLICANT'S OWN METHODOLOGY STRENGTHENS THE NEED FOR PRECAUTION

12.0 Ground 9 — The Applicant's Own Methodology Strengthens the Need for Precaution

The additional Appendix 4 extracts reviewed should be incorporated because they strengthen the objection in a fair and evidence-based way. They show that the Applicant selected the aquatic survey network on the basis that the watercourses could be affected directly or indirectly by the Proposed Project, and that the survey included instream and riparian habitat, fisheries assessment, electro-fishing, white-clawed crayfish survey, macrophyte and aquatic bryophyte survey and biological water-quality sampling.

This means that the recorded findings cannot be dismissed as accidental or incidental. The records of poor/tentative Q-ratings, protected aquatic species, red-listed duck mussel, Annex I habitat, pond receptors and county-importance river corridors are central baseline constraints. The macrophyte and aquatic bryophyte methodology is also relevant — Appendix 4 states that the assessment was designed to identify rare macrophyte species listed under the Flora (Protection) Order 2022, Irish Red List vascular plants, aquatic bryophytes and habitats corresponding to Annex I habitat types 3260 floating river vegetation/aquatic mosses. The Annex I habitat findings and aquatic vegetation records must be presented transparently and explained in relation to each relevant outfall and construction activity.

GROUND 10 — SIGNED COLLECTIVE STATEMENT CONFIRMS ACTUAL DOWNSTREAM AGRICULTURAL WATER USERS AND LIVESTOCK WATER SUPPLY

13.0 Ground 10 — Signed Collective Statement: Actual Downstream Agricultural Water Users

A fully signed Collective Statement of Lemanaghan Farmers and Landowners is attached to this submission as a supporting document. It confirms that a natural brook/stream flows from the Lemanaghan Bog area through private lands towards the River Brosna at Dernagun and that this watercourse is used locally as a freshwater source for livestock, including cattle, sheep and horses.

This strengthens the aquatic objection in a practical and legally relevant way. The watercourse is not simply an environmental feature shown on a map. It is part of the ordinary working use of farms and private lands

downstream of the proposed project. Any deterioration in water quality could affect water, land, material assets, agriculture, farm livelihoods, animal welfare and agricultural production.

The EIAR and NIS do not appear to contain a clear assessment of the consequences of sediment, hydrocarbon, cement-based contamination or other pollutants entering a watercourse used for livestock drinking water before farmers become aware of the incident. The assessment should address how farmers would be notified, who would test the water, what emergency alternative livestock water supply would be provided, who would be responsible for veterinary costs, losses, remediation and land impacts, and what stop-work procedures would apply.

Key Significance

The Applicant accepts that the bog is drained by a network of drains and outfalls and that water-quality impacts can arise if construction risks are not properly controlled. The signed statement gives the Commission direct evidence that there are actual downstream agricultural water users who may be affected if those controls fail. In EIA terms, these are real receptors under water, land, material assets, population and human health, and the interaction between those factors.

14.0 Legal Audit — Key Deficiencies Identified

Issue	Applicant's Material	Legal / Planning Concern
Hydrological connectivity	Appendix 4 confirms connectivity to River Shannon Callows SAC and Middle Shannon Callows SPA	Distance alone does not remove Appropriate Assessment risk where pathways exist.
Protected species	White-clawed crayfish, lamprey, eel, smooth newt, frog and duck mussel recorded or detected	Requires species-specific mitigation, monitoring and legal compliance.
Biological water quality	Multiple Q3 Poor Status results and tentative Q-ratings	Cannot safely rely on "no significant effects" without WFD no-deterioration proof.
Sedimentation	Appendix 4 records peat siltation and reduced spawning habitat	Wind farm works may worsen the very pressure already identified.
Cumulative effects	Chapter 9 admits overlap with rehabilitation may increase peat disturbance and hydrocarbon risk	Conclusion of no cumulative effect appears insufficiently supported.
Mitigation reliance	Chapter 9 repeatedly relies on mitigation to reduce effects	Mitigation must be certain, enforceable, site-specific and assessed before consent.
Survey limitations	Dry site, tentative Q-ratings, limited eDNA locations	Uncertainty must be resolved before consent, not deferred.
Applicant's own survey methodology	Appendix 4 states all freshwater watercourses which could be affected were considered; surveys included instream/riparian, fisheries, crayfish, macrophytes, bryophytes and Q-sampling.	Findings in that selected network must be treated as material constraints.
River Brosna fisheries and peat-silt context	Appendix 4 describes the Brosna as a major Shannon tributary with extensive peat bog/peat harvesting and peat silt/sediment pressure, while supporting salmonid/eel/lamprey fisheries.	Wind farm peatland works may worsen the very sediment pressure already identified.
Signed farmers / landowners statement	Downstream private lands, livestock water use and a brook/stream flowing from Lemanaghan Bog towards the River Brosna at Dernagun confirmed.	Assessment must address actual downstream agricultural water users, animal welfare, emergency notification, alternative supply, monitoring and responsibility for losses/remediation.

14.1 Information Outstanding and Potentially Misleading Presentation

The concern is not that Appendix 4 contains no useful baseline information. The concern is that the Applicant's conclusions are not sufficiently supported by a clear, integrated and receptor-specific assessment. The assessment is potentially misleading by omission: it identifies the relevant risk components, but does not

sufficiently demonstrate how those risks are excluded to the legal standard required for EIA, Appropriate Assessment and Water Framework Directive compliance.

Where the Applicant identifies all potentially affected freshwater watercourses, claims a survey approach capable of detecting high-conservation habitats and species, and describes the River Brosna catchment as already subject to peat silt and sediment pressures, it is not sufficient for the conclusions to rely on general mitigation language without a transparent receptor-by-receptor and outfall-by-outfall demonstration of how those specific pressures and receptors will be protected.

15.0 Requested Further Information / Relief Sought

The Commission is respectfully requested to refuse permission on the basis that the Applicant has not demonstrated, to the required legal standard, that the proposed development would avoid adverse effects on European site integrity, avoid deterioration under the Water Framework Directive, and avoid significant effects on aquatic ecology and fisheries.

In the alternative, the Applicant should at minimum be required to provide a revised and fully integrated aquatic ecology, fisheries, WFD and Natura 2000 assessment addressing the following:

1. Outfall-by-outfall receptor matrix linking SW22D, SW22C, SW22B, SW22A, SW22, SW19, SW19A and SW19B to downstream aquatic receptors, WFD status, Q-values, protected species and mitigation.
2. Revised WFD no-deterioration assessment using Appendix 4 biological Q-results, Chapter 9 hydrochemistry, EPA Q-data, WFD risk status and protected aquatic species.
3. Protected species assessment for white-clawed crayfish, lamprey, European eel, brown trout, smooth newt, common frog, duck mussel and otter.
4. Fisheries protection plan prepared in consultation with Inland Fisheries Ireland, with construction timing restrictions, turbidity limits, sediment controls, emergency procedures and stop-work triggers.
5. Crayfish and biosecurity plan addressing crayfish plague, equipment disinfection, contractor movement between sub-catchments, emergency response, NPWS licensing and audit procedures.
6. Revised cumulative effects assessment integrating proposed wind farm works, peatland rehabilitation, IPC-licensed activities, historic peat extraction, drainage, road construction, borrow pits and climate-related rainfall.
7. Revised sediment and peat-silt risk assessment for all excavation, road, hardstand, borrow pit, dewatering and drainage works.
8. Independent monitoring commitments, including upstream and downstream monitoring of turbidity, suspended solids, pH, conductivity, hydrocarbons and ammonia, with clear action limits and public reporting.
9. Clear confirmation that no missing information is being deferred to post-consent in breach of the legal requirements for EIA and Appropriate Assessment.
10. Macrophyte, aquatic bryophyte and Annex I aquatic habitat clarification, including findings for Flora (Protection) Order 2022 species, Irish Red List vascular plants, aquatic bryophytes, Annex I hydrophilous tall herb habitat 6430 and Annex I floating river vegetation/aquatic mosses habitat 3260.
11. Revised River Brosna/Ballynahown/Boor fisheries and sediment assessment, expressly addressing Appendix 4's description of peat silt, sediment, arterial drainage, salmonid/lamprey/eel fisheries context, and the risk of additional peat-derived sediment or hydromorphological pressure from the proposed works.
12. Downstream agricultural receptor and livestock-water-use assessment, identifying all private lands, farmers, landowners, occupiers and livestock water users downstream of the Lemanaghan Bog drainage network.
13. Baseline, construction and post-construction water-quality monitoring on private lands downstream of the proposed works, including agreed sampling points, trigger levels and farmer reporting arrangements.
14. Livestock water emergency response, notification and responsibility mechanism, including immediate farmer notification, emergency alternative livestock water supply, veterinary costs, livestock losses, land impacts, remediation and enforceable stop-work procedures.

16.0 Publications, Guidance and Legal Authorities Relied Upon

The publications, guidance documents and legal authorities relied upon in this section are identified in ATTACHMENT G — Legal Authorities, Technical Guidance and Supporting Publications. These materials are relied

upon to support the submission that Appendix 4 should not be treated as a neutral baseline document, but as evidence of a hydrologically connected, ecologically sensitive and already pressured aquatic receiving environment.

17.0 Conclusion

Appendix 4 should not be interpreted as demonstrating absence of aquatic risk. On the contrary, Appendix 4 and Chapter 9 expressly confirm downstream hydrological connectivity between the Proposed Project, its associated infrastructure, the Ballynahown/Boor system, the Brosna system, and the River Shannon Callows SAC and Middle Shannon Callows SPA. Properly read, Appendix 4 confirms that the proposed Lemanaghan Wind Farm drains into a sensitive and already pressured aquatic network containing protected species, red-listed species, fisheries habitat, degraded biological water quality, and hydrological connectivity to European sites.

In these circumstances, the Commission cannot safely conclude, on the basis of the material submitted, that there will be no adverse effect on European site integrity, no deterioration under the Water Framework Directive, and no significant effects on aquatic ecology and fisheries. A revised, integrated, receptor-specific assessment is required before any lawful consent could be considered.

This conclusion is reinforced by the Applicant's own survey methodology. Where the Applicant states that all watercourses capable of being directly or indirectly affected were considered, and that the survey approach was designed to detect high-conservation habitats and species, the protected and red-listed receptors actually recorded must be given full legal weight. The signed Collective Statement of Lemanaghan Farmers and Landowners further reinforces this conclusion by identifying actual downstream farms, private lands and livestock water supplies connected to the watercourse flowing from the Lemanaghan Bog area towards the River Brosna.

Core Submission

Accordingly, the Commission is respectfully requested to refuse permission, or alternatively to require substantial further information and a revised NIS/EIAR assessment before any decision is made.

SECTION 19 ATTACHMENT Schedule — Aquatic Ecology, Fisheries and Hydrologically Connected Natura 2000 Sites

The following appendices are relied upon in support of this objection section. They are prepared from Appendix 4 of the NIS – Aquatic Baseline Report and Chapter 9 – Water of the EIAR, together with relevant legal, policy and technical guidance materials. ATTACHMENT I is a separate supporting document containing the signed Collective Statement of Lemanaghan Farmers and Landowners.

ATTACHMENT A — Aquatic Receptor Summary Table

Source material: Appendix 4, Tables 2.1, 4.1, 4.2, 4.3 and discussion sections 4–5.

Site / watercourse / location	2024 Q-rating / status	Protected or notable receptor recorded/detected	Pathway context and planning relevance
A1 Ballynahown River 26B17 – Togher	Q3 Poor	White-clawed crayfish: 2 adults recorded; local importance (higher value).	Ballynahown/Boor route to River Shannon Callows SAC and Middle Shannon Callows SPA. Confirms protected crayfish receptor in hydrologically connected system.
A2 Ballynahown River 26B17 – N62 road crossing	Q3 Poor	White-clawed crayfish eDNA positive (12/12); Lampetra sp. lamprey; brown trout recorded.	Ballynahown/Boor route to SAC/SPA. Poor biological status plus protected species requires receptor-specific AA/EIA assessment.
B1 Fortified House Castlearmstrong Stream 25F69 – Killaghintober	Q3 Poor	No higher-conservation receptor recorded in Table 4.3.	Brosna route to SAC/SPA. Poor baseline water quality in discharge receiving network.
B2 Fortified House Castlearmstrong Stream 25F69 – Castlearmstrong	Q3 Poor	Lampetra sp. lamprey; local importance (higher value).	Brosna route to SAC/SPA. Lamprey and poor status require specific sediment/spawning/nursery assessment.
B3 Fortified House Castlearmstrong Stream 25F69 – Leabeg	Q3-4 Moderate	Annex I hydrophilous tall herb habitat (6430); duck mussel vulnerable in Ireland; brown trout recorded; county importance.	Brosna route to SAC/SPA. Annex I habitat and red-listed mollusc indicate ecological sensitivity.
B4 Lemanaghan Stream 25L04 – Straduff	*Q3 Poor	No higher-conservation receptor recorded.	Lemanaghan Stream to Brosna route. Tentative poor rating; receiving system already pressured.
B5 Lemanaghan Stream 25L04 – Lemanaghan	*Q3 Poor	Duck mussel vulnerable in Ireland; common frog; local importance (higher value).	Lemanaghan Stream to Brosna route. Red-listed/protected receptors and poor water quality.
B6 Lemanaghan Stream 25L72 – Lemanaghan	n/a – dry / no biological sample	No higher-conservation receptor recorded.	Lemanaghan Stream to Brosna route. Dry/no sample is a survey limitation

			and should not be treated as absence of risk.
B7 Lemanaghan Stream 25L04 – L3002 road crossing	*Q4 Good (tentative)	Brown trout recorded; local importance; eDNA negative for crayfish/FWPM.	Lemanaghan Stream to Brosna route. Good rating is tentative; fisheries receptor still present.
B8 River Brosna 25B09 – Pollagh	*Q3 Poor (tentative)	River Brosna identified as county-importance ecological corridor.	Brosna route to Shannon. Poor/tentative Q-rating in county-importance river corridor.
B9 Kilcolgan Beg Stream 25Q21 – L3002 road crossing	*Q3 Poor (tentative)	No higher-conservation receptor recorded.	Kilcolgan Beg to Brosna route. Poor/tentative Q-rating in discharge receiving network.
B10 River Brosna 25B09 – Kilcolgan Bridge	*Q4 Good (tentative)	River Brosna county-importance ecological corridor; suitable European eel habitat noted.	Brosna route to Shannon. Good rating is tentative; downstream river corridor remains important.
B11 Ferbane Stream 25F31 – Ferbane	*Q4 Good (tentative)	No higher-conservation receptor recorded.	Brosna/Shannon connected wider network. Good rating is tentative; wider catchment receptor.
P1 Pond – Cornafurrish & Corrabeg	n/a	Brown trout eDNA positive (12/12); European eel eDNA positive (4/12); local importance (higher value).	On-site pond/bog drainage context. European eel is critically endangered; requires species-specific consideration.
P2 Pond – Cornafurrish & Corrabeg	n/a	Brown trout eDNA positive (11/12); local importance (higher value).	On-site pond/bog drainage context. Fish eDNA in pond habitat requires integration with drainage/construction assessment.
P3 Pond – Cornafurrish & Corrabeg	n/a	Brown trout eDNA positive (12/12); smooth newt eDNA positive (1/12); local importance (higher value).	On-site pond/bog drainage context. Smooth newt protected under Wildlife Acts; requires species-specific consideration.

** Asterisk indicates Appendix 4 described the Q-rating as tentative due to lack of suitable riffle areas and/or poor flows.*

ATTACHMENT B — Site Drainage / Outfall Pathway Summary

Source material: Chapter 9, section 9.3.5 and Table 9-9. Chapter 9 states that the site discharges through eight gravity surface-water outfalls and that all surface-water discharge from the Proposed Project site ends up in the River Shannon.

Outfall	Receiving watercourse	Sub-basin and downstream route	European site link
SW22D	Ballynahown Stream; approx. 200 m from mapped watercourse.	Boor_020 / Shannon Lower_SC_010. Ballynahown Stream → Boor River → River Shannon.	River Shannon Callows SAC/pNHA and Middle Shannon Callows SPA; shortest flowpath approx. 10.5 km.
SW22C	Fortified House Castlearmstrong Stream; approx. 100 m.	Brosna_100 / Brosna_SC_060. Fortified House Castlearmstrong Stream → Brosna River → River Shannon.	River Shannon Callows SAC/pNHA and Middle Shannon Callows SPA; Brosna flowpath approx. 22.1 km.
SW22B	Fortified House Castlearmstrong Stream; approx. 50 m.	Brosna_100 / Brosna_SC_060. Fortified House Castlearmstrong Stream → Brosna River → River Shannon.	Same European-site pathway as above.
SW22A	Fortified House Castlearmstrong Stream; approx. 200 m.	Brosna_100 / Brosna_SC_060. Fortified House Castlearmstrong Stream → Brosna River → River Shannon.	Same European-site pathway as above.
SW22	Fortified House Castlearmstrong Stream; direct discharge.	Brosna_100 / Brosna_SC_060. Fortified House Castlearmstrong Stream → Brosna River → River Shannon.	Same European-site pathway as above.
SW19	Lemanaghan Stream; approx. 40 m. Pumped central bog outfall flows through silt ponds before SW19.	Lemanaghan Stream_010 / Brosna_SC_060. Lemanaghan Stream → Brosna River → River Shannon.	Same European-site pathway as above.
SW19A	Lemanaghan Stream; direct discharge.	Lemanaghan Stream_010 / Brosna_SC_060. Lemanaghan Stream → Brosna River → River Shannon.	Same European-site pathway as above.
SW19B	Kilcolgan Beg Stream; direct discharge.	Brosna_110 / Brosna_SC_060. Kilcolgan Beg Stream → Brosna River → River Shannon.	Same European-site pathway as above.

ATTACHMENT C — WFD Status and Biological Water Quality Table

Part 1: Appendix 4 Biological Water Quality Q-Ratings

Site	Watercourse	2024 Q-rating / WFD biological status	Tentative?	Planning relevance
A1	Ballynahown River	Q3 / Poor	No	Poor status in Ballynahown/Boor pathway.
A2	Ballynahown River	Q3 / Poor	No	Poor status plus crayfish/lamprey records.
B1	Fortified House Castlearmstrong Stream	Q3 / Poor	No	Poor status in receiving stream.
B2	Fortified House Castlearmstrong Stream	Q3 / Poor	No	Poor status plus lamprey.
B3	Fortified House Castlearmstrong Stream	Q3-4 / Moderate	No	Moderate status plus Annex I habitat/duck mussel.
B4	Lemanaghan Stream	*Q3 / Poor	Yes	Tentative poor rating.
B5	Lemanaghan Stream	*Q3 / Poor	Yes	Tentative poor rating plus duck mussel/common frog.
B6	Lemanaghan Stream	n/a	n/a	Dry/no biological sample.
B7	Lemanaghan Stream	*Q4 / Good	Yes	Tentative good rating; should not be over-relied upon.
B8	River Brosna	*Q3 / Poor	Yes	Tentative poor rating in Brosna corridor.
B9	Kilcolgan Beg Stream	*Q3 / Poor	Yes	Tentative poor rating.
B10	River Brosna	*Q4 / Good	Yes	Tentative good rating.
B11	Ferbane Stream	*Q4 / Good	Yes	Tentative good rating.

Part 2: Chapter 9 WFD Surface-Water Body Status and Risk

WFD waterbody	Status (2013–18 / 2016–21 / 2019–24)	3rd Cycle Risk	WFD pressures	Relevance
Boor_020	Moderate / Good / Moderate	Not at risk	None	Receives SW22D via Ballynahown/Boor route.
Brosna_100	Moderate / Moderate / Moderate	At risk	Agriculture	Receives SW22, SW22A, SW22B, SW22C via Fortified House Castlearmstrong Stream.
Lemanaghan Stream_010	Good / Moderate / Moderate	Under Review	None listed	Receives SW19 and SW19A.
Brosna_110	Good / Moderate / Good	At Risk	Agriculture & hydromorphology	Receives SW19B via Kilcolgan Beg Stream and downstream Brosna route.
Brosna_120	Good / Moderate / Good	At risk	Agriculture	Downstream Brosna pathway.
Brosna_130	Moderate / Moderate / Moderate	At risk	Anthropogenic	Further downstream Brosna pathway.
Brosna_140	Moderate / Moderate / Moderate	At risk	Hydromorphology	Further downstream Brosna pathway.
Shannon(Lower)_010	Unassigned / Moderate / Moderate	Under Review	None listed	Downstream Shannon receptor.
Shannon(Lower)_020	Moderate / Moderate / Moderate	At risk	Anthropogenic	Downstream Shannon receptor.
Shannon(Lower)_030	Moderate / Moderate / Moderate	Under Review	None listed	Downstream Shannon receptor.
Lough Derg	Moderate / Moderate / Moderate	At risk	Agriculture, hydromorphology & invasive species	Further downstream waterbody.

ATTACHMENT D — Protected Species / Habitat Legal and Conservation Status Table

Source material: Appendix 4 Tables 4.1 and 4.3, sections 4.3 and 4.4.

Species / receptor	Applicant record / location	Legal or conservation status	Planning relevance
White-clawed crayfish	A1: 2 adult crayfish recorded; A2: eDNA positive 12/12.	Annex II and Annex V Habitats Directive; protected under Wildlife Acts; Endangered on IUCN Red List.	Biosecurity, crayfish plague, sediment and habitat protection must be site-specific and enforceable.
Lampetra sp. lamprey	Recorded at A2, B2 and B3.	Annex II lamprey; lamprey habitat/spawning/nursery requires protection.	Peat silt and sediment may affect spawning/nursery habitat; requires specific fisheries/lamprey plan.
European eel	P1 eDNA positive 4/12; Appendix 4 states European eel is critically endangered internationally and in Ireland.	Critically Endangered; EU eel recovery context; high conservation concern.	Pond/drainage habitat and connectivity require assessment before works.
Brown trout	eDNA positive in P1, P2, P3; recorded by electrofishing at A2, B3 and B7.	Fisheries receptor; salmonid habitat relevant to IFI construction guidance.	Sediment, dewatering, hydrocarbons and cement risks require IFI-compliant controls.
Smooth newt	P3 eDNA positive 1/12.	Protected under Wildlife Acts.	Pond habitat and construction drainage impacts require species-specific assessment.
Common frog	Recorded at B5.	Annex V Habitats Directive and Wildlife Acts protection.	Riparian/wetland habitat impacts require assessment.
Duck mussel	Recorded at B3 and B5.	Vulnerable in Ireland (Byrne et al. 2009).	Red-listed macro-invertebrate indicates sensitive aquatic baseline.
Otter	No signs within 150 m of survey sites; historic records in wider area.	Annex II / Annex IV Habitats Directive species requiring strict protection.	Absence of signs at survey sites should not be treated as absence of wider receptor risk.
Hydrophilous tall herb habitat 6430	Representative example at B3.	Annex I habitat.	County-importance ecological feature requiring receptor-specific consideration.
River Brosna ecological corridor	B8 and B10 considered county importance.	County-importance ecological corridor.	Hydrological impacts to the Brosna route require careful AA/EIA integration.

ATTACHMENT E — Applicant Extracts: Hydrological Connectivity and Pathways

This ATTACHMENT contains the key Applicant statements relied upon to establish the source-pathway-receptor connection between the Proposed Project and downstream European sites.

Extract	Source location	Applicant text / summary	Why relied upon
E1	Appendix 4, Section 1.1 Background	"Whilst not located within a European site, the Proposed Project site (via several watercourses) shared downstream hydrological connectivity with the River Shannon Callows SAC (000216) and Middle Shannon Callows SPA (004096)."	Confirms downstream European-site link.
E2	Appendix 4, Section 2.1 Selection of watercourses	"The Proposed Project and all associated infrastructure are not located within a European Site, although downstream hydrological connectivity exists with the River Shannon Callows SAC (000216) and the Middle Shannon Callows SPA (004096) via the Ballynahown and Brosna Rivers."	Confirms link from project and associated infrastructure via named rivers.
E3	Chapter 9, Section 9.3.5 / Table 9-9	Drainage from the Proposed Project site discharges through 8 gravity surface-water outfalls: SW19, SW19A, SW19B, SW22, SW22A, SW22B, SW22C and SW22D.	Shows site drainage is operational and outfall-based, not theoretical.
E4	Chapter 9, Section 9.3.5	"7 of the 8 no. outfalls discharge into tributaries of the Brosna River whilst SW22D in the north discharges into the Ballynahown Stream, a tributary of the Boor River."	Shows two main hydrological routes: Brosna and Ballynahown/Boor.
E5	Chapter 9, Section 9.3.5	"All surface water discharge from the Proposed Project site ends up in the River Shannon."	Confirms ultimate downstream receptor.
E6	Chapter 9, Section 9.3.14	The Proposed Project site is not within a designated site, but there are downstream hydrological connections to River Shannon Callows SAC/pNHA and Middle Shannon Callows SPA.	Confirms designated-site connection in Chapter 9.
E7	Chapter 9, Section 9.3.14	Ballynahown Stream / Boor River pathway: River Shannon Callows SAC/pNHA and Middle Shannon Callows SPA approx. 8.5 km northwest; hydrological flowpath approx. 10.5 km.	Confirms route and distance for SW22D pathway.
E8	Chapter 9, Section 9.3.14	Brosna pathway: hydrological connection via tributaries of the Brosna receiving SW22, SW22A, SW22B, SW22C, SW19, SW19A and SW19B; flowpath approx. 22.1 km.	Confirms route and distance for main Brosna outfalls.

E9	Chapter 9, Section 9.5.2.8	Chapter 9 states surface-water connections from the site to the Boor and Brosna rivers could transfer poor-quality surface water that may affect conservation objectives of the designated sites.	Important admission for Appropriate Assessment risk.
E10	Appendix 4, Section 2.1	All freshwater watercourses which could be affected directly or indirectly by the Proposed Project were considered; 13 riverine and 3 pond sites were selected for detailed aquatic assessment.	Confirms the selected survey network is the Applicant's own affected-watercourse network.
E11	Appendix 4, Section 2.2	Surveys included fisheries assessment, white-clawed crayfish, macrophyte and aquatic bryophyte surveys and biological water-quality sampling where suitable.	Shows the baseline was intended to capture the key aquatic receptors now relied upon.
E12	Appendix 4, Section 2.2	The survey approach was stated to ensure that habitats and species of high conservation value would be detected to inform mitigation for the Proposed Project.	Makes the recorded protected/red-listed species and habitats material to the decision.
E13	Appendix 4, Macrophytes / bryophytes methodology	The aquatic vegetation assessment considered rare macrophytes under the Flora (Protection) Order 2022, Irish Red List vascular plants, aquatic bryophytes and Annex I habitat type 3260.	Requires clear integration of aquatic vegetation and Annex I habitat findings into AA/EIA.
E14	Appendix 4, Fisheries discussion	The River Brosna is described as a major Shannon tributary, with extensive peat bog/peat harvesting and peat silt/sediment pressure, while supporting salmonid/eel/lamprey fisheries.	Strengthens the sediment, peat-silt, WFD and fisheries protection grounds.

ATTACHMENT F — Requested Further Information Schedule

No.	Further information required	Why required from Applicant material	Planning/legal purpose
1	Outfall-by-outfall receptor matrix	Chapter 9 identifies eight outfalls and Appendix 4 identifies protected/relevant aquatic receptors, but no clear receptor-by-receptor matrix is presented.	Needed to link each outfall to receiving watercourse, WFD status, Q-rating, protected species, mitigation, monitoring and stop-work trigger.
2	Revised WFD no-deterioration assessment	Appendix 4 records Q3 Poor and tentative Q-ratings; Chapter 9 Table 9-19 records Moderate/Poor/At Risk/Under Review WFD positions.	Required to show no deterioration and no jeopardising of good status.

3	Protected species assessment	White-clawed crayfish, Lampetra sp., European eel, brown trout, smooth newt, common frog and duck mussel are recorded/detected.	Species-specific assessment needed; generic mitigation is insufficient.
4	Fisheries protection plan in consultation with IFI	Brown trout, lamprey and fisheries habitat are present; Appendix 4 records siltation/peat and poorer spawning/nursery conditions.	Needs timing restrictions, turbidity limits, emergency response and enforceable stop-work measures.
5	Crayfish and biosecurity plan	White-clawed crayfish recorded/detected in the Ballynahown system and construction may involve machinery/drainage movement.	Needed to address crayfish plague, contractor movement, decontamination and NPWS/IFI engagement.
6	Revised cumulative effects assessment	Chapter 9 accepts overlap between construction phase and peatland rehabilitation, with increased activity, peat disturbance and hydrocarbon risk.	Cumulative effects must be assessed scientifically, not assumed away through IPC/licence or best-practice reliance.
7	Revised sediment and peat-silt risk assessment	Appendix 4 records siltation and historical drainage; Chapter 9 identifies peat/spoil movement, borrow pits, hardstands, roads and dewatering.	Needed for all excavation, road, hardstand, borrow pit, dewatering and drainage works.
8	Independent monitoring commitments	Water-quality risk is central to the project and European-site pathway is accepted.	Monitoring should include turbidity, suspended solids, pH, conductivity, hydrocarbons and ammonia, with trigger values and public reporting.
9	Confirmation that missing assessment is not deferred post-consent	Applicant relies heavily on mitigation and later implementation/control measures.	EIA/AA information necessary to exclude significant/adverse effects must be before the decision-maker pre-consent.
10	Macrophyte, aquatic bryophyte and Annex I aquatic habitat clarification	Appendix 4 methodology expressly screens for Flora Protection Order species, Irish Red List vascular plants, aquatic bryophytes and Annex I habitat 3260.	Needed to show whether rare/aquatic vegetation and Annex I habitat pathways have been fully assessed and protected.
11	Revised Brosna/Ballynahown/ Boor fisheries and peat-sediment assessment	Appendix 4 identifies peat silt/sediment and arterial drainage in the Brosna context, with salmonid/lamprey/eel fisheries receptors.	Needed to prove no worsening of sediment, hydromorphology, fisheries habitat or WFD status from peatland construction works.
12	Downstream agricultural receptor and livestock-water-use assessment	The signed Collective Statement identifies downstream farmers, landowners, private lands and livestock water use connected to the brook/stream from Lemanaghan Bog.	Needed to integrate actual downstream agricultural receptors into the EIA, water, material-assets and cumulative-effects assessment.

13	Baseline, construction and post-construction water-quality monitoring on private lands	The watercourse is used locally for livestock drinking water and may be affected before farmers are aware of a pollution incident.	Monitoring should include upstream/downstream private-land points, with agreed trigger levels, farmer reporting and action limits.
14	Livestock water emergency response, notification and responsibility mechanism	The signed statement raises unresolved questions regarding farmer notification, alternative water supply, veterinary costs, livestock losses, land impacts and remediation.	Required so that mitigation is not merely aspirational; there must be enforceable stop-work, containment, notification, alternative supply and liability procedures.

ATTACHMENT G — Legal Authorities, Technical Guidance and Supporting Publications

Authority / publication	Topic	Where relied upon
EIA Directive 2011/92/EU as amended by 2014/52/EU	EIA / likely significant effects / reasoned conclusion	Supports requirement for complete assessment of water, biodiversity and interactions.
Planning and Development Act 2000, as amended, section 171A	Irish EIA process	Reasoned conclusion must be integrated into decision; aquatic baseline cannot remain isolated.
Habitats Directive 92/43/EEC	Appropriate Assessment / SAC / Annex species and habitats	Relevant to SAC, white-clawed crayfish, lamprey, common frog and Annex I habitat.
Birds Directive 2009/147/EC	SPA protection	Relevant to Middle Shannon Callows SPA and supporting wetland/ecological conditions.
European Communities (Birds and Natural Habitats) Regulations 2011	Irish Habitats/Birds implementation	Regulation 42 / appropriate assessment and species protection context.
Planning and Development Act 2000, sections 177U and 177V	AA screening and AA decision-making	Consent only after determination of no adverse effect on European site integrity.
Water Framework Directive 2000/60/EC	No deterioration / good status	Relevant to WFD waterbody status and risk positions in Chapter 9 and Appendix 4 Q-ratings.
Surface Waters Regulations 2009; Groundwater Regulations 2010; Salmonid Waters Regulations 1988	Irish water-quality implementation	Relevant to water quality, fisheries habitat and protected aquatic receptors.
Wildlife Acts 1976–2023	Species protection	Relevant to white-clawed crayfish, smooth newt, common frog and other protected species.

Waddenzee, Case C-127/02	AA legal test	No reasonable scientific doubt as to absence of adverse effects.
Sweetman, Case C-258/11	Site integrity	Strict Article 6(3) protection.
Holohan, Case C-461/17	Complete, precise and definitive AA findings	Supports objection to lacunae and lack of receptor/outfall matrix.
People Over Wind, Case C-323/17	Mitigation at screening	Mitigation cannot be used to screen out likely significant effects at screening stage.
Weser, Case C-461/13	WFD no-deterioration	Authorisation must not cause deterioration or jeopardise good status.
Eco Advocacy, Case C-721/21	Reasoned environmental assessment	Supports need for clear reasoning and traceable conclusions.
Inland Fisheries Ireland 2016 Guidelines	Construction near waters / fisheries protection	Relevant to sediment, timing, concrete, runoff and fish habitat protection.
EPA 2022 EIAR Guidelines	EIAR content and assessment standards	Relevant to integration of Appendix 4 into EIAR conclusions.
NPWS / Irish Red Lists / White-clawed Crayfish guidance	Species conservation status	Relevant to crayfish, duck mussel, eel and other aquatic receptors.
CIRIA C532 / C648	Construction water-pollution control	Relevant to drains, access tracks, compounds, linear works and sediment control.
Wells, Case C-201/02	Effective EIA before development consent	Supports the objection that material EIA gaps should not be deferred to post-consent or construction-stage processes.
Commission v Ireland, Case C-215/06	EIA compliance and regularisation concerns	Supports the need for strict EIA compliance where environmental effects have not been lawfully or fully assessed.

ATTACHMENT H — Key Applicant Admissions / Local Evidence / Extracted Issues Table

This ATTACHMENT summarises the Applicant material and local supporting evidence relied upon in the objection.

Issue	Applicant source	Extracted point	Objection relevance
Hydrological link to European sites	Appendix 4, s.1.1 and s.2.1	Downstream hydrological connectivity to River Shannon Callows SAC and Middle Shannon Callows SPA via watercourses/Ballynahown/Brosna.	Establishes source-pathway-receptor link.
All site discharge reaches River Shannon	Chapter 9, s.9.3.5	All surface water discharge from the Proposed Project site ends up in the River Shannon.	Distance alone cannot remove risk where pathway is accepted.
Eight outfalls	Chapter 9, Table 9-9	SW22D, SW22C, SW22B, SW22A, SW22, SW19, SW19A, SW19B discharge to Ballynahown/Fortified House/Lemanaghan/Kilcolgan Beg systems.	Requires outfall-by-outfall assessment.
Poor/tentative biological water quality	Appendix 4, Table 4.2	Several Q3 Poor sites; several ratings tentative due to poor flows/lack of riffle habitat.	Baseline is pressured and uncertain.
Protected/notable receptors	Appendix 4, Tables 4.1 and 4.3	White-clawed crayfish, Lampetra sp., European eel, brown trout, smooth newt, common frog, duck mussel, Annex I habitat.	Requires species-specific mitigation and AA/EIA integration.
WFD risk and pressures	Chapter 9, Table 9-19	Brosna_100 at risk; Lemanaghan Stream_010 under review; Brosna_110 at risk; downstream waterbodies moderate/at risk/under review.	Requires WFD no-deterioration proof.
Peat/siltation/fisheries issue	Appendix 4 Discussion, s.5.1	Siltation primarily from peat and historical drainage reduced salmonid/lamprey spawning habitat.	Wind farm works may worsen known pressure.
Cumulative overlap with rehabilitation	Chapter 9, s.9.5.7.6	Construction will overlap with rehabilitation, increasing activity, peat disturbance, potential suspended solids and hydrocarbon risk.	Cumulative effects require stronger assessment.
Affected-watercourse selection	Appendix 4, s.2.1	All freshwater watercourses which could be affected directly or indirectly were considered; 13 riverine and 3 pond sites selected.	Applicant's own selection makes the receptors/pathways relevant, not remote.

High-conservation detection claim	Appendix 4, s.2.2	Survey approach stated to ensure high-conservation habitats and species would be detected to inform mitigation.	Recorded protected and red-listed species must be treated as central constraints.
Aquatic vegetation / Annex I screening	Appendix 4, macrophyte/bryophyte methodology	Assessment screened for Flora Protection Order species, Red List vascular plants, aquatic bryophytes and Annex I 3260 floating river vegetation/aquatic mosses.	Requires clear habitat-by-habitat integration.
Brosna fisheries and peat silt	Appendix 4, fisheries discussion	Brosna described as a major Shannon tributary with extensive peat bog/peat harvesting and peat silt/sediment pressure, while supporting salmonid/eel/lamprey fisheries.	Wind farm peatland works may worsen a known existing pressure.
Downstream livestock water use and private agricultural receptors	Signed Collective Statement of Lemanaghan Farmers and Landowners	A natural brook/stream flows from the Lemanaghan Bog area through downstream lands towards the River Brosna at Dernagun and is used locally as a freshwater source for livestock.	Establishes actual downstream agricultural receptors and strengthens the need for baseline testing, monitoring, notification, alternative livestock water supply and stop-work procedures.

ATTACHMENT I — Signed Collective Statement of Lemanaghan Farmers and Landowners (Separate Supporting Document)

A fully signed copy of the Collective Statement of Lemanaghan Farmers and Landowners is attached separately to this submission. It confirms that downstream farmers, landowners and occupiers identify the brook/stream flowing from the Lemanaghan Bog area towards the River Brosna as affecting private lands and/or livestock water supply.

It is relied upon as direct local evidence that the aquatic and water-quality assessment must address actual downstream agricultural receptors, emergency notification, alternative livestock water supply, monitoring on private lands, responsibility for losses and remediation, and stop-work procedures in the event of contamination or suspected contamination.

Collective Statement of Lemanaghan Farmers and Landowners

Impact on Livestock Water Supply, Private Lands, Agriculture and Downstream Water Quality

We, the undersigned farmers, landowners and occupiers of lands downstream of Lemanaghan Bog, object to the proposed Lemanaghan Wind Farm on the grounds of potential impacts on our private lands, livestock water supply, agricultural use and downstream water quality.

A natural brook/stream flows from the Lemanaghan Bog area through our lands towards the River Brosna at Dernagun. This watercourse is used locally as a freshwater source for livestock, including cattle, sheep and horses. It is therefore not merely an environmental feature on a map. It is part of the ordinary working use of our farms and lands.

This watercourse is hydrologically connected downstream to the River Brosna, which flows onwards to the River Shannon. The wider downstream system includes the River Shannon Callows SAC and the Middle Shannon Callows SPA. We do not suggest that an impact on those protected sites is inevitable, but the acknowledged downstream connection reinforces the need for a complete, precautionary and site-specific assessment of water-quality effects.

The applicant's own EIAR identifies potential water-related risks, including suspended solids entering watercourses, hydrocarbon spillages and cement-based contamination. The application also acknowledges that the bog is drained by a network of drains and surface water outfalls. In our view, this confirms that credible pollution pathways to surface water exist and require full assessment.

Despite this, the application does not appear to properly assess the effect of any deterioration or contamination of this watercourse on:

- livestock drinking water;
- animal health and welfare;
- private agricultural land;
- farm livelihoods;
- agricultural production;
- potential implications for agricultural produce and the food chain;
- emergency water supply if contamination occurs;

- responsibility for testing, notification, remediation, veterinary costs or losses.

This is a serious omission.

If the watercourse is affected by sediment, hydrocarbons, cementitious material or any other pollutant, livestock may consume that water before farmers are aware of the issue. The consequences would not be confined to the development site. They could directly affect animals, farms, land use, agricultural production and downstream water quality.

We are also concerned that once contaminated water has entered a flowing brook/stream, the impact may already have passed through private lands before farmers are notified. For this reason, any assessment must include clear preventative controls, downstream monitoring points, immediate notification procedures, emergency alternative livestock water supply, and a clear responsibility mechanism if livestock, land, agricultural production or farm livelihoods are affected.

The Water Framework Directive requires protection of water bodies against deterioration in status. The EIA process must also identify, describe and assess likely significant effects on relevant environmental factors, including water, land, material assets, population and human health, and the interaction between those factors.

In our view, the application fails to adequately assess the real downstream agricultural use of this watercourse and the consequences for farmers and livestock if mitigation fails. General construction-stage mitigation is not an adequate substitute for a full assessment of the actual downstream receptors and users of the water.

We therefore respectfully request that An Coimisiún Pleanála refuse permission, or at minimum require full further information and assessment addressing:

1. baseline testing of the brook/stream before works commence;
2. regular downstream water-quality monitoring on private lands;
3. identification of all livestock water users downstream;
4. emergency notification procedures for affected farmers;
5. provision of alternative livestock drinking water if required;
6. responsibility for veterinary costs, livestock losses, land impacts and remediation;
7. assessment of potential agricultural, food-chain and

downstream water-quality consequences;

8. clear stop-work, containment and farmer-notification procedures in the event of any pollution incident, exceedance or suspected contamination.

Until these matters are fully assessed, the competent authority cannot safely conclude that the proposed development will not cause unacceptable effects on downstream water quality, livestock, private lands and agricultural use.

Signed by Downstream Farmers / Landowners / Occupiers:

We confirm that we are farmers, landowners and/or occupiers of lands downstream of Lemanaghan Bog and that the brook/stream flowing from the Lemanaghan Bog area towards the River Brosna passes through or affects our lands and/or livestock water supply.

Farmer /Landowner
Name: SEAN HALLIGAN
Address / Townland: LEAMANAGHAN

Interest in land: Owner / Occupier / Farmer / Other: OWNER
Agricultural / livestock use:

Signature: Sean Halligan

Date: 13/5/26

Farmer /Landowner
Name: SEAN CORCORAN
Address / Townland: LEMONAGHAN

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use:

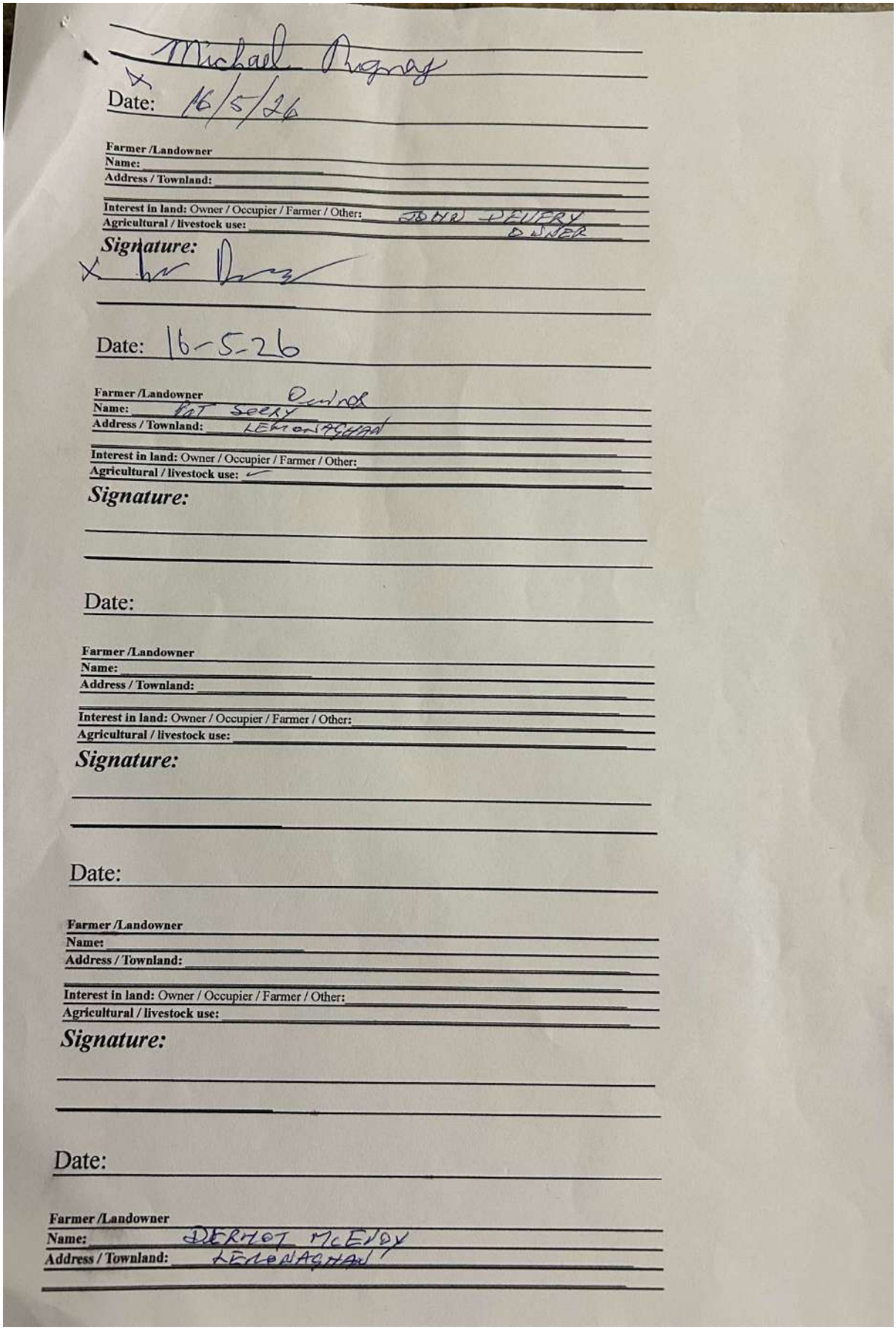
Signature: Sean Corcoran

Date: 13/5/26

Farmer /Landowner
Name: PADDY JOE BERMINGHAM
Address / Townland: LEAMONAGHAN

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use:

Signature: Paddy Joe Bermingham



Michael Ryan

Date: 16/5/26

Farmer /Landowner
Name:
Address / Townland:

Interest in land: Owner / Occupier / Farmer / Other: JOINT DELIVERY DRIVER
Agricultural / livestock use:

Signature:

Date: 16-5-26

Farmer /Landowner
Name: PAT SEERY
Address / Townland: LEMONSTOWN

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use:

Signature:

Date:

Farmer /Landowner
Name:
Address / Townland:

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use:

Signature:

Date:

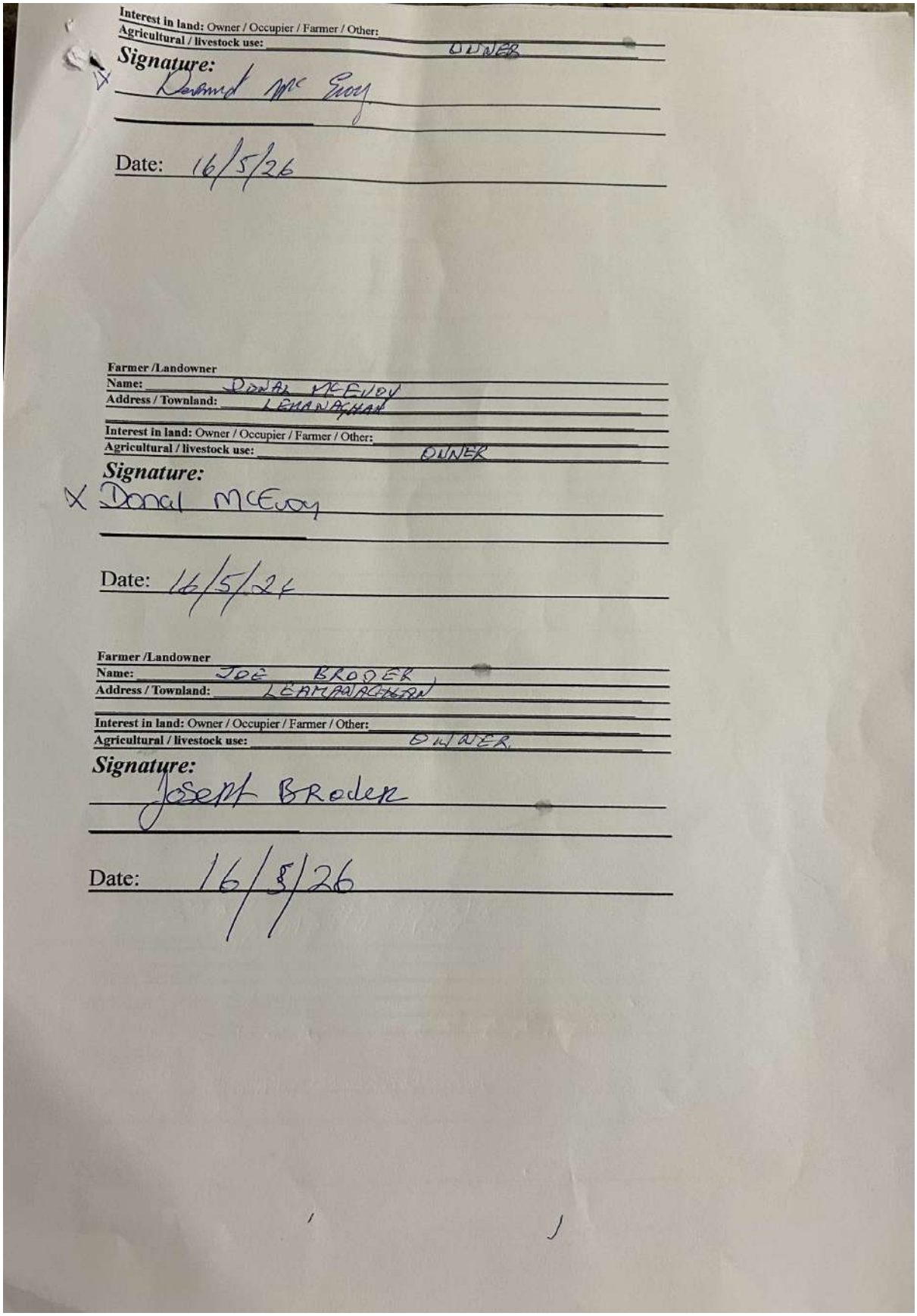
Farmer /Landowner
Name:
Address / Townland:

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use:

Signature:

Date:

Farmer /Landowner
Name: DERMOT McENDY
Address / Townland: KILENAGHAN



Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use: OWNER

Signature:
Desmond Mc Elroy

Date: 16/5/26

Farmer /Landowner
Name: DONAL MCELROY
Address / Townland: LEHANAGHAN

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use: OWNER

Signature:
Donal McElroy

Date: 16/5/24

Farmer /Landowner
Name: JOE BRODER
Address / Townland: LEAMAGHAN

Interest in land: Owner / Occupier / Farmer / Other:
Agricultural / livestock use: OWNER

Signature:
Joseph Broder

Date: 16/5/26

Section 20: Final remarks & Key Concerns

PROPOSED LEMANAGHAN WIND FARM DEVELOPMENT, COUNTY OFFALY

FORMAL PLANNING OBJECTION AND INTEGRATED APPROPRIATE ASSESSMENT REVIEW

Prepared by: Peter Scanlon BSc
Date: 11 May 2026

1. INTRODUCTION

I, Peter Scanlon BSc, hereby submit this formal objection to the proposed Lemanaghan Wind Farm Development in County Offaly.

This submission is based on a detailed review of the Appropriate Assessment Screening Report ("AASR"), Natura Impact Statement ("NIS"), Collision Risk Modelling ("CRM"), Peat and Spoil Management Plan ("PSMP"), Aquatic Ecology reports, and associated technical appendices.

The objection is grounded on the basis that the application documentation has not demonstrated, beyond reasonable scientific doubt, that the proposed development would avoid adverse impacts on protected habitats, protected species, peatland hydrology, aquatic ecology, downstream European sites, and overall ecological integrity.

The submitted material appears materially dependent on mitigation measures, future-stage assumptions, monitoring proposals and generic modelling assumptions rather than definitive scientific evidence as required under Article 6(3) of the Habitats Directive.

2. STATEMENT OF AUTHORITY

I hold a Bachelor of Science degree from University College Cork, specialising in Environmental Science – Applied Ecology. I also hold a Diploma in Forest Management from Galway Mayo Institute of Technology. I have extensive professional experience in environmental governance, technical assessment, infrastructure review, environmental risk management and regulatory compliance. Between 2006 and 2017, I advised on environmental and sustainability requirements for large infrastructure projects in the United Kingdom. I continue to work on large capital infrastructure projects, advising on commercial and contractual matters with a focus on sustainability and carbon-reduction initiatives as part of my professional remit.

I previously held Chartered Environmentalist accreditation during earlier stages of my environmental and governance career and continue to maintain a strong professional interest in environmental assessment, sustainability, ecological protection and regulatory compliance.

My review of this application has been undertaken with particular regard to:

- environmental risk;
- ecological protection;
- scientific robustness;
- mitigation certainty;
- hydrological risk;
- and compliance with European environmental law and the precautionary principle.

3. EXECUTIVE SUMMARY

Following review of the application documentation, the proposed development appears vulnerable on several interrelated grounds:

3.1 Mitigation Dependence

Significant elements of the no-likely-significant-effect ("LSE") and no-adverse-effect-on-integrity conclusions appear dependent on mitigation, management controls, monitoring and future implementation measures.

3.2 Assumption Dependence

Important conclusions appear dependent upon assumptions that are not fully demonstrated by site-specific evidence, including assumptions relating to:

- bird avoidance behaviour;
- flight-height allocation;
- nocturnal activity;
- turbine operation assumptions;
- peat stability;
- hydrological control effectiveness;
- and cumulative insignificance.

3.3 Residual Scientific Uncertainty

The documentation reviewed does not remove all reasonable scientific doubt regarding:

- ornithological impacts;
- collision risk;
- peat stability;
- hydrology;
- aquatic ecology;
- and cumulative impacts.

Accordingly, the application appears inconsistent with the legal requirements of Article 6(3) of the Habitats Directive.

4. LEGAL AND POLICY FRAMEWORK

4.1 Core Legal Test

Article 6(3) of the Habitats Directive requires that consent may only be granted where the competent authority has ascertained that the project will not adversely affect the integrity of a European site.

4.2 Relevant Legal Principles

The following principles are particularly relevant:

- mitigation cannot be relied upon at screening stage;
- the assessment must contain complete, precise and definitive findings;
- reasonable scientific doubt must be excluded;
- generic assurances and future controls are insufficient substitutes for evidence.

4.3 Relevant Case Law

The following Court of Justice of the European Union (CJEU) judgments are particularly applicable to the assessment of this application and provide important context for the competent authority when considering the legal adequacy of the AA/NIS documentation.

- Waddenzee established that consent may only be granted where there is no reasonable scientific doubt as to the absence of adverse effects on the integrity of a European site.
- Sweetman reinforced the precautionary principle and clarified that even permanent or irreversible effects on protected habitats may trigger refusal where integrity cannot be fully protected.
- People Over Wind confirmed that mitigation measures cannot be relied upon at screening stage to exclude likely significant effects.
- Holohan confirmed that Appropriate Assessment must examine all aspects of the project capable of affecting the conservation objectives of a European site and must contain complete, precise and definitive findings.

These judgments are directly relevant to the current application because the submitted documentation appears materially dependent on mitigation, future-stage controls, monitoring and assumption-led conclusions in order to exclude significant effects and adverse impacts on integrity.

In particular, the planning authority must be satisfied that:

- all hydrological pathways have been fully quantified;
- all ornithological assumptions are scientifically robust and site-specific;
- cumulative effects have been comprehensively assessed;
- mitigation measures are fully secured and demonstrably effective;
- and that no residual scientific uncertainty remains regarding downstream ecological impacts.

Where uncertainty remains, the precautionary principle requires that consent should not be granted.

5. ORNITHOLOGY AND COLLISION RISK MODELLING

5.1 Sensitive Bird Species

The wider study area records activity or presence of several sensitive species including:

- hen harrier;
- merlin;
- peregrine falcon;
- whooper swan;
- crane;
- osprey;
- and lapwing.

These species require a precautionary assessment approach.

5.2 Flight Height Categorisation

The CRM uses broad flight-height bands including:

- 0–15m;
- 15–25m;
- 25–200m;
- 200m+.

The turbine rotor swept zone is understood to extend approximately from 70m to 220m.

The broad flight-height bands therefore do not align precisely with the actual rotor-swept collision-risk envelope and may materially affect exposure calculations.

5.3 Avoidance Rate Assumptions

The assessment appears heavily dependent on generic avoidance-rate assumptions derived from external guidance and studies rather than direct site-specific behavioural evidence.

Bird avoidance behaviour is not fixed and may vary according to:

- species;
- weather;
- season;
- migration pressure;
- habitat context;
- and local topography.

5.4 Nocturnal Activity

The CRM appears to rely on generic nocturnal activity factors rather than comprehensive local nocturnal monitoring.

5.5 Cumulative Effects

The cumulative ornithological assessment does not appear sufficiently quantified regarding:

- additive collision mortality;
- cumulative displacement;
- barrier effects;
- and habitat fragmentation.

5.6 Conclusion on Ornithology

The ornithology case appears weakened by:

- coarse flight-height interpretation;
- transferred avoidance assumptions;
- generic nocturnal activity factors;
- and incomplete cumulative analysis.

6. PEATLAND, HYDROLOGY AND WATER QUALITY

6.1 Hydrological Connectivity

The application documentation confirms downstream hydrological connectivity to:

- River Shannon Callows SAC;
- Middle Shannon Callows SPA.

This establishes a live pathway requiring robust and quantified assessment.

6.2 Scale of Peatland Intervention

The proposed development involves substantial intervention including:

- excavated roads;
- floated roads;
- turbine excavations;
- spoil deposition;
- borrow pits;
- cable trenches;
- drainage intervention;
- and heavy construction activity.

6.3 Deferred Design and Future Controls

The PSMP repeatedly relies upon:

- future geotechnical confirmation;
- future engineering design;
- future construction-stage supervision;
- and future implementation of controls.

This level of deferred certainty is problematic where the AA conclusion depends upon those future measures to prevent ecological harm.

6.4 Borrow Pit Uncertainty

The documentation acknowledges uncertainty regarding borrow pit geology and recommends additional investigation.

This demonstrates that key aspects of the construction strategy remain assumption-based.

6.5 Monitoring and Contingency

The application relies heavily on:

- monitoring;
- contingency plans;
- stop-work procedures;
- and reactive management.

Monitoring is not equivalent to proof that the relevant impact pathway cannot occur.

6.6 Conclusion on Hydrology and Peat

The peatland and hydrology case appears dependent upon:

- future implementation;
- assumed mitigation effectiveness;
- reactive monitoring;
- and unresolved geotechnical assumptions.

That does not satisfy the precautionary standard required under Article 6(3).

7. AQUATIC ECOLOGY

7.1 Sensitive Receptors

The aquatic ecology baseline identifies sensitive receptors including:

- white-clawed crayfish;
- lamprey;
- European eel;
- duck mussel;
- and Annex I habitat interests.

7.2 Existing Environmental Stress

The receiving environment is already described as stressed in places, including:

- peat staining;
- siltation;
- modified channels;
- and constrained ecological conditions.

A stressed aquatic environment should not be assumed to possess high resilience to additional disturbance.

7.3 Lack of Receptor-Specific Thresholds

The application does not clearly establish receptor-specific thresholds that would allow the competent authority to conclude that:

- sediment release;
- drainage alteration;
- hydrological change;
- or peat instability

cannot materially affect protected aquatic receptors.

7.4 Conclusion on Aquatic Ecology

The aquatic ecology baseline strengthens the need for a fully quantified and receptor-linked hydrological assessment.

Generic reassurance is insufficient.

8. MITIGATION RELIANCE

A recurring concern throughout the application is reliance on mitigation-led conclusions.

The documentation repeatedly relies upon statements such as:

- "subject to mitigation";
- "through implementation of the PSMP/CEMP";
- "best practice construction methods";
- "monitoring and contingency";
- and "embedded mitigation measures".

If such measures are relied upon at screening stage to exclude likely significant effects, this would be inconsistent with People Over Wind.

If relied upon at Appropriate Assessment stage, the measures must be:

- specific;
- certain;
- evidence-based;
- effective;
- and secured by consent.

The current documentation does not appear to fully satisfy this standard.

9. SCIENTIFIC UNCERTAINTY

The application depends upon a number of assumptions that are plausible but not conclusively demonstrated with site-specific certainty.

These include assumptions relating to:

- bird avoidance behaviour;
- rotor-height allocation;
- nocturnal bird use;
- turbine operational assumptions;
- generic blade geometry;
- peat stability;

- drainage control effectiveness;
- borrow pit feasibility;
- aquatic detectability;
- and cumulative insignificance.

Plausibility alone is insufficient under Article 6(3).

Where uncertainty remains, the precautionary principle requires refusal unless reasonable scientific doubt has been removed.

10. CLIMATE, CARBON AND PEATLAND SUSTAINABILITY

10.1 Carbon Balance Concerns

The application does not appear to fully demonstrate that the long-term climate benefits of the proposed development outweigh the carbon losses associated with peatland disturbance, excavation, drainage alteration and peat oxidation.

Peatlands are significant long-term carbon stores. Disturbance of peat through excavation, drainage and construction activity may release substantial stored carbon and reduce the long-term carbon sequestration function of the bog environment.

The application should therefore demonstrate:

- full peat carbon balance calculations;
- embedded construction carbon;
- long-term peat oxidation impacts;
- hydrological degradation impacts;
- and the timeframe within which any claimed net climate benefit would actually arise.

Without this information, the sustainability justification for the project remains incomplete.

10.2 Conflict With Peatland Restoration Objectives

Ireland's national environmental policy increasingly supports peatland restoration, biodiversity recovery and long-term carbon sequestration.

The proposed development appears inconsistent with broader national objectives relating to:

- peatland restoration;
- biodiversity protection;
- climate resilience;
- and ecosystem recovery.

Renewable energy infrastructure is important; however, such development should not result in disproportionate ecological degradation of sensitive peatland systems.

10.3 Decommissioning and Restoration Uncertainty

The application does not adequately demonstrate that the site can be restored to its pre-development hydrological and ecological condition following decommissioning.

Significant uncertainty remains regarding:

- long-term drainage alteration;
- permanent concrete turbine foundations;
- restoration feasibility;
- future maintenance liabilities;

- and long-term ecological recovery.

The long operational lifespan of the development means these uncertainties are environmentally significant.

11. FIRE RISK, PUBLIC SAFETY AND EMERGENCY RESPONSE

11.1 Peatland Fire Risk

The proposed development site comprises peatland terrain which may become increasingly vulnerable to fire during prolonged dry weather conditions associated with climate change.

Peat fires can spread underground, remain undetected for extended periods and create significant ecological and air-quality impacts.

11.2 Turbine and Electrical Fire Risk

The application does not appear to fully assess:

- turbine fire risk;
- transformer fire risk;
- cascading wildfire propagation;
- emergency access feasibility;
- or downstream ecological impacts associated with fire suppression runoff.

11.3 Emergency Response Capacity

The application should demonstrate:

- realistic emergency access capability;
- water availability for firefighting;
- emergency response times;
- and detailed wildfire contingency planning.

Given the peatland environment and the scale of the turbines proposed, these matters are material planning considerations.

12. LANDSCAPE, RESIDENTIAL AMENITY AND CUMULATIVE INDUSTRIALISATION

12.1 Scale of Turbines

The proposed turbines are understood to extend to approximately 220 metres in tip height, representing extremely large-scale structures within the receiving landscape.

The scale of the proposed turbines raises additional concerns regarding:

- visual dominance;
- cumulative landscape impact;
- shadow flicker;
- residential amenity;
- and the applicability of historical collision-risk assumptions to modern turbine dimensions.

12.2 Cumulative Landscape Effects

The development contributes to the cumulative industrialisation of the wider peatland landscape through:

- habitat fragmentation;
- infrastructure expansion;

- visual encroachment;
- and incremental degradation of rural landscape character.

These cumulative impacts should be assessed comprehensively rather than in isolation.

13. COMPARATIVE PRECEDENTS

The history of peatland wind farm development demonstrates that ecological and hydrological assumptions can fail with significant environmental consequences.

The Derrybrien Wind Farm peat slide in County Galway remains a major Irish example of peatland engineering failure and downstream ecological harm.

International experience, including monitoring outcomes from Smøla Wind Farm in Norway, demonstrates that post-construction bird mortality can in some circumstances materially exceed pre-construction predictions and that local species behaviour is critically important.

14. PRINCIPAL GROUNDS OF OBJECTION

The application should be refused for the following principal reasons:

1. Failure to remove reasonable scientific doubt under Article 6(3);
2. Excessive reliance on mitigation and future controls;
3. Inadequate ornithological and collision-risk assessment;
4. Incomplete cumulative assessment;
5. Unresolved peatland and hydrological risks;
6. Insufficient certainty regarding aquatic ecology protection;
7. Reliance on assumption-led modelling and generic guidance;
8. Excessive dependence on monitoring and contingency;
9. Deferred design and unresolved geotechnical uncertainty;
10. Inadequate application of the precautionary principle.

15. FORMAL REQUEST

I respectfully request that the competent authority:

1. Refuse planning permission for the proposed development;
2. Require a revised and fully quantified Appropriate Assessment;
3. Require independent review of the Collision Risk Modelling;
4. Require additional peat stability and hydrological investigations;
5. Require expanded cumulative impact assessment;
6. Require additional bird survey work including nocturnal assessment;
7. and fully apply the precautionary principle before any determination is made.

16. CONCLUSION

The reviewed documentation indicates that the proposed Lemanaghan Wind Farm development remains materially dependent on:

- mitigation;
- future implementation;
- monitoring;
- transferred ornithological assumptions;
- unresolved hydrological assumptions;
- and incomplete cumulative analysis.

The application does not appear to contain the complete, precise and definitive findings necessary to remove reasonable scientific doubt.

Accordingly, the proposed development should be refused.

Signed

Peter Scanlon BSc
Objector
Offaly, Ireland