

Michael L. Dooley and Niamh Dooley
Carrigeen
Bruff
Co. Limerick
V35 W672
michaeldooleyire@gmail.com

The Secretary
An Coimisiún Pleanála
64 Marlborough St.
Rotunda
Dublin 1
D01 V902

05 November 2025

re: An Coimisiún Pleanála - Case reference: PAX91.323780

10 year planning permission for Ballinlee Wind Farm consisting of 17 no. wind turbines, a permanent 110kV substation and ancillary development

Located in Ballinacurra, Ballingayrou, Ballinlee North & South, Ballinrea, Ballyresode, Camas North & South, Carrigeen, Knockuregare, Ballybane and other townlands in County Limerick. (www.ballinleegreenenergyplanning.ie) Limerick City and County Council

Dear Sir/Madam,

We are writing to lodge an observation on the above application, and to ask that the commission refuse planning permission.

It is our view that the applicant's proposal poses an immeasurable threat to our family's quality of life and to the peaceful enjoyment of our home - a home we have worked tirelessly for, a home in which we are raising our two children, a home situated directly adjacent to the main site entrance of the proposed development. Owing to the proximity of a proposed borrow pit, the risk to our property is, using the EIAR's own admission, 'deemed to be significant.'

Whilst we have had only a matter of weeks with which to examine this application, we have identified what we believe to be significant and profound flaws in its accompanying documentation.

It is our belief that the applicant's Environmental Assessment Impact Report is evidently and fundamentally flawed, and fails to present an accurate assessment of the development's significant impacts on our family, our community, our ecological habitats, and our heritage.

We are of the opinion that its mechanisms and employed methodologies fail to stand up to the most basic scrutiny, let alone the strict regulatory and legislative standards necessary in this instance.

Given the scale of this proposed development, it is our firm belief that an oral hearing is merited in this instance as a vehicle for the full and robust interrogation of this application's limitations, contradictions, and evident flaws.

We are confident that, upon consideration of these flaws, the commission will determine that the application should be refused.

We are grateful for your attention to this matter.

Faithfully,

Michael L. Dooley

Niamh Dooley

Table of Contents

| | |
|---|-----------|
| Table of Contents | 3 |
| Observations on EIAR Chapter 13: Noise and Vibration | 4 |
| Introduction | 4 |
| Review of Literature Cited and Methodologies Employed in EIAR: Chapter 13 (Noise and Vibration) and Appendices 13B, 13D, and 13F | 5 |
| Construction Phase | 7 |
| Operation Phase | 9 |
| Observations on EIAR Appendix 2C: Turbine Delivery Route Report | 10 |
| Observations with regard to our home on EIAR Chapters 4 (Civil Engineering), 5 (Population and Human Health) 13 (Noise and Vibration) Appendix 2A (CEMP), and Appendix 16A (Traffic Management Plan) | 12 |
| Observations on EIAR Chapter 6: Biodiversity | 15 |
| Introduction | 15 |
| Review of Literature cited and Efficacy of Methodologies Employed in EIAR Chapter 6 Biodiversity | 18 |
| Badgers | 20 |
| Otters | 21 |
| Bats | 22 |
| Appendix 6E - Bat technical results report | 24 |
| Hedgerow | 26 |
| Observations on EIAR Chapter 7 Ornithology | 29 |
| Introduction | 29 |
| Review of Literature cited in EIAR Chapter 7 Ornithology | 32 |
| Appendix 7B - Baseline Ornithology Report | 34 |
| Appendix 7D - Whooper Swan Management Plan | 36 |
| Curlew | 39 |
| Appendix 7C - Collision Risk Modelling Report | 42 |
| Observations on EIAR Chapter 14 Archaeology and Cultural Heritage | 44 |
| Introduction | 44 |
| Review of Literature cited in EIAR Chapter 14 - Archaeology | 47 |
| Precautionary Principle | 49 |
| Observations on Appendix 1C - Community Engagement Report | 51 |
| Efficacy of Methodologies Employed | 51 |
| Observations on Wind Energy Zoning in the Limerick Development Plan 2022-2028 | 54 |
| Observation pertaining to Property Price Devaluation | 55 |
| Summary of Observation | 56 |

Observations on EIAR Chapter 13: Noise and Vibration

Introduction

We believe that this proposed development is a significant industrial intervention into our rural landscape, and fundamentally alters the character of our home, adjacent to the proposed main site entrance.

One of our most pressing concerns is the issue of noise and vibration. The relevant chapter 13 of the EIAR underestimates these significant adverse effects, utilises outdated science, and contains material contradictions, and is in our opinion not sufficiently compliant with domestic and EU legislation and regulatory frameworks.

We are particularly concerned by the applicant's own admission regarding noise during the construction phase: the EIAR concedes that noise levels will reach 75 dB, a 'very significant' exceedance of the 65 dB limit, with proposed mitigation we will argue to be entirely insufficient. This will be compounded by hundreds of daily heavy vehicle movements, creating an intolerable environment for our family as our home is but metres from the main site entrance.

We note also a critical contradiction in documents supplied in the application, stating that blasting both will and will not occur at a borrow pit near our home, and how this prevents a proper evaluation of vibration risks.

For the operational phase, the health impact assessment is obsolete, relying on selective and dated literature while ignoring a major 2024 peer-reviewed study that directly links wind turbine noise to increased risk of stroke and heart attack. This failure to consider contemporary evidence of serious harm flies in the face of the precautionary principle, a cornerstone of EU environmental policy.

Collectively, these flaws demonstrate that the EIAR does not provide a full account of the project's likely impacts. It fails in its fundamental purpose to ensure the commission and the public can make an informed decision. On this flawed basis, and in protection of our right to the peaceful enjoyment of our home and health, we ask that the application be refused.

Review of Literature Cited and Methodologies Employed in EIAR: Chapter 13 (Noise and Vibration) and Appendices 13B, 13D, and 13F

We believe that the purported scientific rigour of the applicant's EIAR and associated appendices is illusory, and is built upon methodological flaws, unverified data, and a selective application of standards which systematically underestimates a true impression of impact. This is particularly evident in its treatment of human health, where it relies on what we believe to be a curated and outdated selection of literature to support a pre-determined conclusion of 'no harm'.

The assessment uses a 2014 Health Canada study, noting it 'found no evidence to support a link between exposure to wind turbine noise and any of the self-reported illnesses' (Chapter 13, Section 13.3.4). However, it marginalises the study's critical limitations. The turbines examined in that instance were 84-128 metres tall, falling considerably short of the 160 metre structures proposed for this development, and can not act as a comparable or reliable frame of reference. Additionally, the study was conducted over a single season in only two Canadian provinces, and Health Canada itself cautioned that the 'results should not be considered on their own' and 'might not be generalisable'. Further to this, the EIAR's invocation of a 2015 Australian National Health and Medical Research Council statement of 'no consistent evidence' is equally misleading, as this position reflected the evidence available nearly a decade ago and has been substantially qualified by subsequent research.

Crucially, the EIAR's health assessment is rendered obsolete by its failure to engage with a significant body of peer-reviewed science published in the last decade. Peer-reviewed studies including the WITNES project (Smith 2020) using laboratory polysomnography, community-based field studies (Nissenbaum 2012), and subsequent systematic reviews and meta-analyses (Liebich/Godono 2020 to 2023) have reported objective sleep effects and argued that criteria for causation are met for some outcomes. By ignoring this contemporary evidence, the EIAR's health assessment is incomplete, and does not constitute a 'full' assessment as required by the EIA Directive, in contradiction of the precautionary principle which mandates decision-making based on the best available evidence.

We argue that this utilisation of an unreliable methodology extends to noise modelling also. The EIAR admits its model is predicated on an impossible worst-case scenario where 'all receptors are downwind of all turbines simultaneously' (chapter 13, Section 13.5.3.3). However, Appendix 13F proves the model's inaccuracy, showing that noise levels are highly variable and frequently lower than the flawed model claimed. Furthermore, the model's parameters are configured to minimise predicted noise levels artificially, admitting that 'miscellaneous other effects' such as propagation through 'foliage' and 'housing' have not been included (Appendix 13D, pg 4). We contend that this selective application of standards demonstrates a methodology designed to engineer compliance rather than to predict true impact, and that the commission must be cognisant of this failure.

Furthermore, the efficacy of the entire baseline dataset is thrown into question by Appendix 13B. As it appears to us, the baseline survey was conducted by a junior consultant with minimal post-graduation experience, and the critical sound calibrator was used nearly a year after its certification, introducing unquantified uncertainty.

To us, this is not a reliable prediction of impact at all, rather a product of a flawed model, selectively applied standards, unverified baseline data, and an obsolete literature review. It fails the fundamental tests of scientific reliability and precaution, providing no credible assurance that the operational phase will not cause significant adverse effects for those living close to the proposed development.

Construction Phase

Regarding noise and vibration during the construction phase, the assessment fails to provide a robust or precautionary evaluation of the impacts, instead revealing a pattern of underestimating significant effects and proposing inadequate and unenforceable mitigation.

The report admits that construction will generate a 'very significant' effect, with a 'construction noise level of 75 dB L_{Aeq} at the nearest NSL' which 'exceeds the limit of 65dB L_{Aeq,1hr}' (Chapter 13, Section 13.5.2.10, PDF p. 49).

For our home, which we believe to be NSL447, (although correct identification proves frustrating owing to the mercurial aversion to the use of Eircodes in the application), this represents an intolerable intrusion which will fundamentally undermine its amenity and our established modes of work - from home. Our work-from-home arrangements require a high degree of acoustic integrity for clear communication. The proposed mitigation (a site hoarding that may achieve 'a noise reduction of 3 dB to 10dB depending on the circumstances') (Chapter 13, Section 13.7.1.1, pg 70) is explicitly described as inconsistent and is plainly insufficient to remediate a 10-decibel exceedance. The persistent and uncontrolled background noise from this development would create an unprofessional and disruptive environment, making it impossible to conduct our roles to the required standard.

This failure of guaranteed protection is compounded by the report's non-binding language regarding construction hours. It states that operations 'shall be restricted to between 07:00hrs and 19:00hrs Monday to Saturday or as otherwise conditioned on the part of the consent', adding that 'any such out of hours working will be agreed in advance with the Local Authority' (Chapter 13, Section 13.7.1). This phrasing provides no firm guarantee, leaving room for intensified, unsociable working hours that would further erode residential amenity. This is unacceptable when combined with the forecast of '142 heavy vehicles per day' (194 at peak times) (Chapter 5, Population and Human Health Page 37), passing within metres of our property at a rate of, according to the EIAR's figures, one truck every 2.5 to 1.8 minutes.

We believe that the report's claim that there is 'no statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase' (Chapter 13, Section 13.2.1.1, PDF p. 9) does not absolve the applicant. Instead, it places a greater onus on the planning authority to apply the precautionary principle, a cornerstone of EU environmental law under Article 191 of the Treaty on the Functioning of the European Union, to protect our right to the peaceful enjoyment of our home, a right protected under the European Convention on Human Rights (Article 8). The collective failure to provide effective, guaranteed, mitigation for such significant and poorly controlled impacts is a critical flaw in the application. Accordingly, we implore the commission to reject the application on these grounds.

Vibration Risks

The developer's assessment of vibration risks is fundamentally inadequate, and fails to evaluate with any degree of propriety the clear and evident threat to the structural integrity of our home.

This failure is rooted in a critical and direct internal contradiction within the Environmental Impact Assessment Report. We note that the Construction Methods chapter (Chapter 2, Section 2.5.2) explicitly defines borrow pit construction techniques as including 'excavation, and/or blasting'. This is directly contradicted by the Noise and Vibration chapter which states categorically that 'no blasting works will take place at the borrow pits' (Chapter 13, Section 13.5.2.10). This uncertainty and inconsistency does nothing to assuage our anxiety regarding the incalculable impact the development will have on the peaceful enjoyment of our home.

With a borrow pit situated approximately 130 metres from our property (200m from our home), V35 W672, we believe that this discrepancy is not an administrative error, but a failure to define a fundamental project parameter. The risk this contradiction obscures is severe. The same Noise and Vibration chapter explicitly warns that 'at distances of less than 200m there is potential for vibration criteria... to be exceeded... and the effect to be significant' (Chapter 13, Section 13.5.2.10). The proximity of the borrow pit to our property does not negate the risk but highlights the absolute necessity for a site-specific assessment, which has not been conducted. This is yet another crucial flaw evident in the applicant's documentation.

This takes on a grave site-specific significance for our family given the local soil conditions. The Site Characterisation Report for our property, prepared for the construction of our home (LCCC Planning Application 18194), conclusively identifies that the subsurface is dominated by 'clay dominant soil' with a 'massive structure and having a high water retention capacity'. The trial hole logs in this report show over 1.5 metres of this clay rich, soft, saturated material. Such soils are known to transmit vibrational energy from blasting and heavy machinery more efficiently and over greater distances than stable bedrock, significantly amplifying the potential for cosmetic and structural damage to dwellings, in this instance our family home.

By providing conflicting statements on the use of high impact blasting so close to our home, the developer avoids its obligation to conduct a proper, soil-specific vibration impact assessment. A credible assessment would model the propagation of shockwaves through the identified clay substrate and evaluate the resonance risk for typical residential foundations. This failure to characterise a fundamental environmental receptor (the ground upon which our home is built) and the forces acting upon it, prevents a proper evaluation of risk. It represents a significant flaw in the application and undermines the ability of the planning authority and the public to conduct a full and fair assessment as required by the EIA

Directive, leaving our property exposed to an unquantified but very significant risk of structural damage. Accordingly, we ask the commission to reject this application.

Operation Phase

We believe that EIAR's treatment of operational impacts on human health is based on selective and outdated scientific literature, rendering its conclusions unreliable. The EIAR's dismissal of adverse health effects selectively utilises older studies,. One such instance is a 2015 Australian National Health and Medical Research Council statement of 'no consistent evidence' (Chapter 13, Section 13.3.3, pg22), a position that has been substantially challenged by subsequent research. Furthermore, its employment of the 2014 Health Canada study is misleading. While the report notes the study "found no evidence to support a link between exposure to wind turbine noise and any of the self-reported illnesses" (Chapter 13, Section 13.3.4, PDF p. 22), it marginalises the study's own critical limitations. We further question this relevance as it considered turbines of 84-128 metres, which are considerably smaller than the 160m structures proposed.in this development.

We urge the commission to note a major new longitudinal study published in *Environmental Health Perspectives* in May of 2024. This Danish nationwide cohort study "Long-Term Exposure to Wind Turbine Noise and Risk of Myocardial Infarction and Stroke" provides, we argue, the evidence earlier reports claimed did not exist. It found that for every 10 decibel increase in outdoor wind turbine noise, there was a 9% increased risk of stroke, with a stronger association (16% increased risk) for indoor low-frequency noise. The study also identified an increased risk of 'myocardial infarction', particularly from newer, larger turbines. This peer reviewed research directly links long-term noise exposure to serious cardiovascular outcomes and fundamentally undermines the report's assertion that no such effects exist. The findings of this study make markedly clear to us the threat the proposed development carries to the health of our family and our community. In light of this research, we urge the commission to reject the application.

We believe that by failing to engage with pertinent and timely emerging evidence, the EIAR's health assessment is incomplete, and does not constitute a full assessment as required by the EIA Directive. We argue that the developer's reliance on outdated science (while ignoring recent, high-quality evidence of harm) represents a failure to meet this fundamental obligation. The operational phase, therefore, poses a risk of significant adverse health effects that has not been properly assessed or mitigated.

Observations on EIAR Appendix 2C: Turbine Delivery Route Report

Material evident in the EIAR's Appendix 2C is, for our family, a cause of significant concern. The proposed development seeks planning permission for works that would fundamentally and detrimentally alter the character and amenity of our private residential property. The Turbine Delivery Route Report designates the private driveway serving our home as Pinch Point No. 18, outlining plans for 'access track widening for turbine component delivery' and the removal of vegetation (drawing 22635-MWP-HR-00-DR-C-0025). The application clearly extends its desired planning permission over the driveway entrance to our home. This amounts to the applicant seeking authorised use of and permanent physical alteration to a private domestic access for an industrial purpose, an overreach that fails to respect the integrity of the existing residential context, and which we raise as a significant issue in the process.

We fear also a detrimental impact arising from the proposed removal of the hedgerow established alongside our property, V35W672. This mature hedgerow is not merely a boundary feature; it is an integral component of our home's setting, providing vital visual screening and acoustic buffering from the busy public road. Its removal, as necessitated by the 'access track widening', would permanently and negatively transform the character of our home. The loss of this natural screen would directly expose the residence to the full visibility of oncoming road traffic, a manifest depreciation of privacy, fundamentally eroding a sense of seclusion that currently defines the property.

We argue that the removal of this barrier would subject our home to a significant and persistent nuisance from vehicle headlights. Moreover, the elevated nature of the proposed widened track would ensure that light from all delivery and construction vehicles would shine directly into the property, creating a glaring intrusion during both day and night. This constitutes a severe and unacceptable loss of residential amenity, resulting from a direct physical change facilitated by the planning permission. The Environmental Impact Assessment process, governed by the EIA Directive (2011/92/EU), requires an assessment of such direct effects on the human environment. The failure of the EIA to properly identify and evaluate this specific impact (the loss of privacy and increase in light nuisance from the removal of a key landscape feature) represents a critical flaw in assessing impact on the human environment.

In seeking to appropriate and physically alter our private driveway for heavy industrial access, the application demonstrates not just an abject negation of good professional conduct and consultation, but a failure to consider the fundamental rights of existing residents to the quiet enjoyment of their homes. This brazen attempt to extend permission across our driveway, and the resulting exposure of our home to public gaze, lights from road traffic, and traffic nuisance, is a direct and unavoidable consequence of the proposed works.

Accordingly, we believe the permission sought for the works at Pinch Point 18 is unacceptable and we ask that the commission refuse.

Observations with regard to our home on EIAR Chapters 4 (Civil Engineering), 5 (Population and Human Health) 13 (Noise and Vibration) Appendix 2A (CEMP), and Appendix 16A (Traffic Management Plan)

Several chapters in the Environmental Impact Assessment Report inadvertently highlight the severe and unmitigated risk to our home (Eircode V35 W672). We argue that the applicant's assessment too heavily relies on generic assumptions that fundamentally misrepresent impact at this proximity, whilst also failing to characterise site-specific geological risks that undermine the assessment's validity and methodological efficacy.

The EIAR chapter on Population and Human Health (5) acknowledges and downplays concerns around dust, stating 'there is, however, the possibility of dust occurring in the vicinity of the site entrance and along the local public roads which could affect road user health and visibility' (Ch. 5.5.1, pg 39), but does not address the impact on our property, the closest property to the main entrance. If concern materialises for passing road users, likely to be present at this site for a matter of seconds, then why does this concern not extend as far as our young family? If this could affect 'road user health', surely it will affect ours as we live metres from this main entrance?

As aforementioned, we are particularly concerned about the issue of vibration. The Site Characterisation Report for our property (Limerick City and Co Council Planning Application 18194) conclusively identifies subsurface conditions dominated by 'clay dominant soil' with a "massive structure and having a high water retention capacity", showing over 1.5 metres of this clay-rich, soft, saturated material. Such soils are known to efficiently transmit vibrational energy from heavy machinery, significantly amplifying the potential for structural damage to dwellings. The predicted '142 heavy vehicles per day' (192 at peak times) (Ch. 5, p. 37) passing within metres of our home will generate continuous dust and vibration plumes, yet the report proposes no specific monitoring or mitigation for these unavoidable impacts. Coupled with noted restricted access, this severely undermines our sense of safety and wellbeing in our own home.

Furthermore, the proposed reliance on a wheel wash facility (Appendix 2A, 4.2.4.12, page 27), as a primary mitigation measure in Chapter 4 of the Construction Environmental Management Plan, appears fundamentally unsuitable given the well understood propensity for flooding and waterlogging across this specific site. The entire land area has a long established history of saturation, a condition starkly evident in the 'clay dominant soil' with 'high water retention capacity' identified in our own Site Characterisation Report. This is not a theoretical risk; we have firsthand experience of the system's vulnerability when, in February 2020, a single piece of construction debris blocked a culvert entrance to the drainage trench passing our property, causing rapid overland flow during a period of heavy sustained rainfall that came within metres of our home and required urgent intervention by the local authority to avert significant damage. The applicant's own surface water design for

the permanent infrastructure, detailed in Section 4.17 of the Civil Engineering chapter, is predicated on managing these very risks, acknowledging the "increase in runoff rate" from new impermeable surfaces (Section 4.17.3). Introducing a facility that will concentrate and generate vast quantities of sediment-laden water into this already fragile drainage system is a profound miscalculation. It not only risks repeating such blockage events with its own runoff but would actively intensify the volume and velocity of water passing our house during storm events. This approach fails the precautionary principle, proposing a solution that itself becomes a source of risk, thereby placing our family's home and local environment in a position of unacceptable and clearly avoidable danger.

We believe that this failure to address fundamental environmental receptors extends to vibration assessment. By providing conflicting statements on high-impact activities near our property, the developer avoids its obligation to conduct a thorough, soil-specific vibration impact assessment. A credible assessment would model shockwave propagation through the identified clay substrate and evaluate resonance risk for residential foundations. We argue that this failure prevents proper evaluation of risk and represents another serious flaw in the application, undermining the ability of the planning authority and public to conduct a full and fair assessment as required by the EIA Directive.

We are left deeply worried by non-binding language regarding construction hours, stating operations 'shall be restricted to between 07:00 and 19:00 Monday to Saturday or as otherwise conditioned on the part of the consent', and that "any such out of hours working will be agreed in advance with the Local Authority' (Ch. 13, 13.7.1). This phrasing provides no firm guarantee, while reliance on future agreements with an authority lacking continuous supervision resources creates a significant enforcement gap, effectively granting the developer broad discretion to intensify operations.

The report's admission that there is 'no statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase' (Ch. 13, 13.2.1.1) reveals a critical regulatory failure. This places greater onus on the planning authority to apply the precautionary principle under Article 191 of the Treaty on the Functioning of the European Union to protect our right to peaceful enjoyment of our home. The proposed noise assessment (addressed on page 5 of this document) relying on generalised modelling rather than site-specific predictions considering the clay substrate's acoustic properties, cannot form a reliable methodology on which an evidence-based decision can be made.

The proposed delivery of 170 abnormal load vehicles at night, as outlined in Section 2.2.6 of the Traffic Management Plan, constitutes a severe and unjustified interference with our right to respect for our private and family life and the peaceful enjoyment of our home, as protected by Article 8 of the European Convention on Human Rights. It has to be understood that our residence is directly adjoining the proposed convoy route and the main site

entrance, and that we have two small children at home, one of whom is an incredibly light sleeper and has suffered considerably from night terrors. We are deeply concerned that the movement of these heavy, Garda-escorted, vehicles at night will cause substantial sleep disruption, stress, and safety concerns for our family.

We note also that the TMP itself acknowledges in Section 2.3.4 that these works may cause “temporary obstruction to traffic flow,” and that in the event of a night-time emergency, this could pose an unacceptable risk by potentially delaying critical access for emergency services. As far as we are concerned, the applicant’s mitigation strategy of using night time hours does not negate this profound violation but merely serves to localise its most severe impacts onto our household, failing the proportionality test required to justify such an infringement on our family’s fundamental rights to safety, rest, and privacy.

It is clear to us that the collective failure to properly quantify these impacts, combined with the absence of robust independent oversight and the fundamental flaw in characterising vibration risk through clay soils, represents another not insignificant flaw in the application. As proposed, the development, with its unenforceable mitigation and failure to address severe impacts on the closest residential property, demonstrates clear potential for significant adverse effects on human health and structural integrity of adjacent dwellings. In the absence of credible, empirically sound and academically-grounded assessment and enforceable controls, we urge the commission to refuse permission for the development.

Observations on EIAR Chapter 6: Biodiversity

Introduction

Chapter 6 asserts that "mitigation through design has been integral to the planning and layout of the Development" (Section 6.1.2). We believe that avoidance, the primary step of the mitigation hierarchy required by the EIA and Habitats Directives, was not, in this instance, fully and appropriately exhausted. For instance, the identification of badgers "outlier sett (sett 2)... directly adjacent to the proposed access track (i.e. 3 m)" (Section 6.3.3.3.1.1, pages 6-101) and the placement of turbines within 190m of confirmed bat roosts (Table 6-30, pages 6-87) indicate that ecological constraints were clearly not prominent in the design. Rather, a reliance on post-consent mitigation to manage risks is noteworthy; we believe this could have, and should have, been designed out, rather than resulting in a clear contravention of the preventative ethos evident in both Irish and European legislation.

Regarding the baseline data for bats, a significant methodological limitation is noted where the chapter states, "these locations are comparable and therefore can be used as a proxy for the analysis and assumed activity levels for the turbine locations where there is period missing data" (Section 6.2.10.2 page 6-52). This reliance on 'proxy data' introduces substantial uncertainty. The EU EIA directive necessitates a description of the forecasting methods used to assess environmental effects, and using data from a detector on a hedgerow to represent activity at a turbine in an open field is, at the very least, an instance of questionable accuracy for assessing localised risk of collision. This data gap is critical given the strict protection afforded to all bat species under Annex IV of the Habitats Directive and undermines the robustness of the collision risk assessment for specific turbine locations.

We argue that the chapter itself acknowledges a key uncertainty in its data, stating that "presenting mean activity levels can be highly misleading where the data are highly skewed, as is frequently the case with bat activity at wind turbines" (Section 6.2.7.4.1.6 pages 6-35).

However, the subsequent assessment does not appear to act on this acknowledgement and factor it in to a precautionary interpretation of residual risk. The precautionary principle, imperative to EU environmental law, necessitates a more conservative approach when data is known to be skewed or incomplete. We question the conclusion that with mitigation, effects on bats will be reduced to a low level. Not alone does it appear optimistic and relies on predictive models, rather than planning for the potential that activity levels and collision risk are higher than the modelled medians suggest, but it clearly acknowledges impact.

In its assessment of habitat loss, the EIAR provides a quantitative summary, noting that "in total there were 34 (9.1km) hedgerows recorded within the Planning Application Boundary which have each been assessed in line with the Hedgerow Appraisal System.

Of these, two were categorised as 'high significant hedgerows'... six rated as moderate, 21 as slight and five as low" (Section 6.3.3.1.1.1, pages 6-70). We feel this disparate, piece meal, approach risks underestimating the cumulative impact of fragmenting the wider ecological network. The National Biodiversity Action Plan and local policy emphasise the importance of a connected green infrastructure network. The loss of multiple sections of hedgerow, even those of 'slight' individual value, can collectively create barriers to movement for protected species like bats. These, the chapter notes, use "linear features ... for commuting" (Section 6.3.3.2.1.1 pages 6-83). The fragmentation of this network is a cumulative impact not fully captured by assessing each hedgerow in isolation.

EIAR Chapter 6 identifies a "weak hydrological connection" to the Lower River Shannon SAC, located "c. 24.2 rkm downstream" (Table 6-22, pages 6-57). It argues that "water quality effects arising from the construction phase... can travel a distance downstream from the site and affect hydrologically connected ecological features" (Section 6.2.2, page 6-13), but concludes the risk is low.

This approach is dubious, and, as a consequence, we are led to question its legal grounding. Dismissing a pathway based on distance alone contradicts the comprehensive and strict requirements of Article 6 (.3) of the Habitats Directive, which mandates an 'Appropriate assessment' for any plan or project likely to be a significant effect. A pollution event could easily travel this distance and impact the SAC's interests. The assessment relies entirely on the ambition of a flawless implementation of mitigation to break this pathway, rather than acknowledging the inherent risk posed by the hydrological connection itself.

Finally, the chapter's conclusion that residual effects are 'not significant' is contingent upon measures such as the "Habitat and Species Management Plan (HSMP)" (Section 6.1.1, pages 6-1), which is an appendix and thus not fully detailed within the main assessment. This creates a situation where the finding of "no significant effect" is conditional upon future actions. The European Communities (Birds and Natural Habitats) Regulations 2011 require a 'high degree' of certainty. Reliance on draft plans introduces a level of uncertainty that is difficult to reconcile with the requirement for robust, demonstrable mitigation. Moreover, the chapter states that "these embedded measures are not relied upon in isolation" (Section 6.1.2), yet the residual assessment appears to do just this, relying on future management plans to convert potentially significant effects into insignificant ones. This places a heavy burden on planning conditions and future enforcement to secure the project's environmental acceptability, a risk not fully accounted for in the chapter's conclusions.

Chapter 6's compliance with the precautionary and preventative principles of EU and Irish environmental law is lacking in several key areas. The reliance on mitigation over avoidance, the use of 'proxy data' for critical impact assessments, the inconsistent application of the precautionary principle, the potential under assessment of fragmentation impacts, the

downplaying of hydrological connectivity to designated sites, and the conditional nature of the 'no significant effect' conclusion all represent obvious grounds for concern.

Review of Literature cited and Efficacy of Methodologies Employed in EIAR Chapter 6 Biodiversity

It is our assertion that Chapter 6 of the EIAR relies too heavily on a specific set of guidelines and in-house methodologies to downplay ecological risks, while overlooking or misapplying peer-reviewed science that suggests more significant impacts. A critical examination of its cited literature reveals several key weaknesses and a negation of oversight.

Reliance on Non-Statutory Guidance and 'In-house' Methods

The chapter's bat impact assessment is primarily based on the NatureScot (2021) guidelines, from the Scottish statutory body. While this provides something of a framework, the report then applies an "in-house analysis" developed by the consultancy, Woodrow, to interpret the data. This analysis adapts activity level classifications from Mathews et al. (2016) and uses a risk matrix that has not been peer-reviewed. The report states that "Woodrow have developed an in-house analysis for static data collected" and that the 'overall risk assessment adheres to the following categories...' (Table 6-13, page 6-37). This reliance on a proprietary, non-transparent method to determine final collision risk is a significant weakness, it is bereft of oversight and detail, and exists outside of independent verification. We worry that without such transparency and oversight, it is possible for its conclusions to be too easily agreeable to the designs of a client.

Additionally, the employed methodology is contradicted by other peer-reviewed literature. A major study by Thaxter et al. (2017), in *Current Biology*, for instance, used GPS tracking to demonstrate that bird and bat activity and collision risk models based on ground-level surveys (like transects) significantly underestimate the true use of airspace by these species. The chapter's reliance on ground-based static detectors and transects, therefore, likely captures only a fraction of the bats' flight activity at rotor-swept heights, leading to a fundamental underestimation of risk.

Selective Interpretation of Bat Activity and Mitigation Efficacy

The chapter uses its data to suggest that bat activity is concentrated near linear features and is low in open areas where turbines are often placed. It concludes that for turbines in open fields, activity levels from detectors in similar fields are "representative" and that these show "the least amount of activity for the Study Area" (page 95, Table 32). This conclusion is used to justify a lower risk rating for these turbines.

However, this contradicts peer-reviewed research. Cryan et al. (2014), in *Proceedings of the National Academy of Sciences*, provided evidence that tree-roosting bats, including species like Leisler's bat, regularly migrate and forage at high altitudes, moving across open landscapes and specifically through areas where wind turbines are built. They note that "bats are consistently attracted to and active within the airspace proximal to turbines," not

just along hedgerows. This suggests that the chapter's methodology of downplaying risk in open areas is ecologically unsound and fails to account for the full range of bat behaviour.

Furthermore, the primary mitigation proposed is a curtailment strategy, shutting down turbines under specific wind and temperature conditions. While the chapter presents this as a sufficient solution, peer-reviewed literature questions its universal effectiveness. Writing in *Ecological Solutions and Evidence*, Adams et al. (2021) found that while curtailment reduces fatalities, its success is highly variable and species specific. It often fails to protect high-flying bats like *Nyctalus* species (which includes Leisler's bat) and does not account for all seasonal peaks in activity, meaning a significant residual mortality can persist.

Inadequate Assessment of Cumulative and Indirect Impacts on Aquatic Systems

The chapter's assessment of aquatic impacts focuses on localised, direct effects like siltation during construction, citing guidance from Inland Fisheries Ireland (IFI) and the Environmental Protection Agency (EPA). It dismisses wider impacts by stating that watercourses "undergo a process of natural recovery with increasing distance downstream" (page 43). This allows the report to conclude that impacts on the downstream Lower River Shannon SAC, a European site, will be insignificant.

But this analysis is weak; it ignores a substantial body of literature on the cumulative impacts of land use change on freshwater ecosystems.

A review by Ormerod *et al.* (2010) in *Freshwater Biology* collated evidence showing that catchment scale disturbances, including construction and altered drainage patterns, have effects that can prevent recovery and lead to long term degradation of river ecosystems. The chapter's assumption of natural recovery is overly optimistic and reductive, and fails to assess how the project's impacts will combine with existing agricultural pressures in the catchment, a strict requirement under the EU Water Framework Directive (2000/60/EC). The potential for increased sediment and nutrient loads to affect sensitive species in the SAC, such as the Freshwater Pearl Mussel (an Annex II species), is not rigorously evaluated using contemporary catchment science.

We believe that while Chapter 6 follows a standard consultancy format, its rigour is compromised by its selective use of literature.

It leans heavily on guidance documents and in-house methods, and applies it in a way that minimises the risks to biodiversity evident in the application. It overlooks, or fails to integrate, credible peer-reviewed literature that demonstrates higher altitude bat flight, the limitations of standard mitigation, and the complex, coalescent nature of impacts on freshwater systems. This creates a presentation of the development's impacts that appears significantly more certain and less severe than the broader scientific literature would suggest.

Badgers

The EIAR acknowledges the presence of badgers within (and adjacent to) the proposed development site, recording in Section 6.5.3 that “evidence of badger activity, including several setts and foraging signs, was recorded.”

Despite this, it concludes that “no significant impacts are predicted” provided that “pre-construction surveys” and “best-practice measures” are implemented. This sweeping conclusion is highly reductive and simplified, failing to recognise the ecological and behavioural sensitivity of badgers, mammals that are highly territorial and vulnerable to disturbance, particularly during the breeding season.

Utterly astonishing is the free admission of habitat destruction of a protected species, as outlined in Section 6.7.2: “where a sett is found to be directly affected by construction works, it will be closed under licence from the NPWS by a suitably qualified ecologist prior to commencement of works.”

This admission confirms that the development may involve the destruction of active setts, which directly contradicts the earlier claim of insignificant impact. The closure of a sett represents the permanent loss of a breeding or resting site and cannot reasonably be classed as “mitigation.”

It is clearly stated in the Wildlife Acts 1976 - 2018, that it is an offence to destroy, disturb or obstruct access to a badger sett. Furthermore, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) requires that any ‘derogation’ must ensure no adverse effect on the species’ conservation status. The EIAR provides no evidence that this test has been met, nor any commitment to ecological reinstatement, relocation of affected clans, or post construction monitoring.

The EIAR minimises the scale of likely disturbance and fails to ensure that badger populations will be effectively protected within the site and its surroundings. Arising from this wilful habitat destruction in contravention of Irish law and European regulation, we urge the commission to deny permission.

Otters

Similarly, we are concerned for the impact on the otters we regularly encounter when walking the river.

We feel that the EIAR's treatment of otters in relation to the Morningstar is legally and ecologically inadequate.

In Section 6.5.4 ("Otter"), the EIAR acknowledges that 'spraints and slides were recorded along the Morningstar River and associated tributaries'. It notes also that they "use the wider site area for foraging and commuting."

Despite this, the mitigation proposed in 6.7.2 is limited, once again, to 'pre-construction surveys by a suitably qualified ecologist and adherence to standard best-practice guidelines.'

Again, these proposed measures fall short of the Article 12 obligations of the EU Habitats Directive (92/43/EEC) and Regulations 50 and 51 of S.I. No. 477/2011, which expressly prohibit any disturbance or deterioration of resting or breeding sites for Annex II and IV species.

The EIAR claims that "no significant residual impacts on otter are anticipated provided mitigation is implemented."

This assertion lacks a basis in evidence informed practices. Basic adherence to the above statutory instruments would necessitate, at the very least, seasonal exclusion zones, riparian buffer commitments, or long-term post-construction monitoring be present. But no such efforts materialise.

The omission of a detailed Otter Protection and Habitat Management Plan contradicts the NPWS Otter Conservation Guidelines (2009), guidelines which require specific measures within 150 m of active holts or core foraging routes.

Given the Morningstar River's role as a key ecological corridor, the mitigation strategy described is neither enforceable nor compliant with the conservation objectives of the Habitats Directive. For these reasons, we urge the commission to refuse permission.

Bats

The assessment of impacts on bats within the proposal's EIAR demonstrates a level of confidence which, in our view, is not merited by its own data, and which, again, appears to contravene core tenets of environmental law at both Irish and EU level.

Again, the approach reveals flaws in the application of the precautionary principle, and fails to guarantee the strict protection afforded to bats under Article 12 of the EU Habitats Directive (92/43/EEC), as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011).

Regarding instruments employed, the legal requirement for a project subject to EIA is to provide a comprehensive description of the likely significant effects, based on reliable forecasting methods (EIA Directive, Annex IV). The chapter's admission in Section 6.2.10.2 that static bat detectors 'could not always be set-up at the exact proposed turbine locations', and that data from other locations were used as a 'proxy for the analysis and assumed activity levels for the turbine locations where there is period missing data' gives rise to a fundamental flaw in the baseline data.

This practice fails to meet the required standard of 'certainty'. The assessment for collision risk for a specific turbine, a direct cause of mortality prohibited under Article 12(1)(b) of the aforementioned Habitats Directive, cannot be reliably forecast using proxy data from different habitat types. This data gap should invalidate the confidence placed in the site specific risk assessments and trigger a more precautionary conclusion.

In Section 6.2.7.4.1.6, it is explicitly acknowledged that "presenting mean activity levels can be highly misleading where the data are highly skewed, as is frequently the case with bat activity at wind turbines". This statement undermines, directly and considerably, the robustness of its own central analysis. The precautionary principle, a cornerstone of EU environmental policy and embedded in Irish law, demands that where there is uncertainty or a lack of reliable data, a conservative approach must be employed.

By proceeding with a risk model based on medians while openly stating the data is "highly misleading," the assessment quite clearly disregards this principle. We believe it fails to account for the reality that short, infrequent periods of very high activity, masked by the use of medians, could lead to significant mortality, thereby violating the strict protection regime.

Finally, the reliance on "bat curtailment algorithms" to mitigate this risk is, we argue, legally uncertain. The finding of "no significant residual effect" is conditional upon a perfect, no faults, performance of this technology in perpetuity. Following the Habitats Directive, the above 2011 regulations require that protective measures must be proven and effective, not theoretical. Clearly, this is not the case in this instance.

The European Court of Justice has ruled, consistently, that derogations from strict protection require exact, definitive, data as well as guarantees of effectiveness. It's clear that the assessment employed in this instance provides neither; rather, it showcases an unproven technological solution as some form of remediation or panacea for its own unreliable data. So then, this creates a situation where the project's very legality is contingent on the future success of mitigation, an approach that does not comply with the requirement to ascertain, with as absolute as possible a scientific certainty, the absence of adverse effects on bat populations.

We argue that the measures put forward in this chapter are fundamentally and methodologically unsound, are in contravention of domestic and European legislation, and consequently that they pose a significant threat to a protected species.

It is built upon a foundation of proxy data and acknowledged uncertainty. Its confidence is not derived from robust, site-specific, evidence, but from an optimistic interpretation of flawed information and a reliance on unproven technological fixes.

This approach is incompatible with the strict legal duties imposed by the Habitats Directive and associated Irish regulations.

To assert with confidence that there will be no significant effect on these Annex IV species, the assessment must be based on complete, site-specific data and guaranteed, effective mitigation. It fails on both counts. Consequently, we ask the commission to refuse planning on these grounds.

Appendix 6E - Bat technical results report

Additionally, the bat survey report contains observable limitations which undermine the rigour of proposed mitigation measures.

Again, findings are built on incomplete data, as the report openly admits to multiple static detector failures throughout the survey period.

Note that detectors D.08, D.09, D.10, and D.14 all failed entirely during various seasonal deployments. The assertion that data from other "similar locations" can act as a reliable proxy is an assumption, a poor one we argue, given the localised nature of bat activity. This means that, crucially, the impact assessment for specific turbines is not based on direct evidence.

Furthermore, the report's conclusion that impacts will be 'minimal' seems to rely on a single, critical finding from the 2023 data: that "bat activity overwhelmingly occurred at wind speeds below 3 m/s". Reliance and confidence based on a sole finding is a practice well outside of the most basic academic rigour.

This correlation is used to justify a turbine cut-in speed of 3 m/s. However, the authors themselves concede that 'accepting that 2023 could have been a mild year for wind speeds' challenges the universality of this data.

Moreover, this assumption ignores the fact that turbine blades spin at speeds below the 'cut-in' speed, posing a collision risk even when not generating power. Worryingly, the suggestion (not enforceable commitment) of a "precautionary" curtailment threshold of 5.5 ms is presented as optional, even though this would be the only measure that would effectively mitigate risk for high-collision species like Leisler's bat.

We believe also that in this chapter and appendix that the ecological value of confirmed bat roosts is also downplayed. The five identified roosts are classified as "transitional", with Appendix 6E stating that they were not classified as 'maternity or hibernation sites'.

We feel this to be an undervaluing of the vital role of transitional roosts. The dynamic 'fission and fusion' behaviour of tree roosting bats, which the report references, means that the inability to confirm tree roosts does not equate to an absence of roosting. This is particularly pertinent given the planned felling of 14.4 hectares of forestry, which contains numerous trees with "Potential Roost Features".

Finally, the baseline is constrained by its reliance on a single survey year, providing a snapshot rather than an understanding of long-term population trends. Combined with the incomplete survey of the turbine delivery route, where "no surveys were conducted for bat roosts along the major roads", these limitations paint a picture of a dataset that is not sufficiently robust or precautionary. The conclusion that "no significant adverse effects on

the local bat population are anticipated" is therefore built upon a series of optimistic assumptions and data gaps, suggesting that the proposed mitigation is inadequate re compliance with the strict protective legislation for bats. As such, we ask the commission to refuse permission for this development.

Hedgerow

We also believe there to be fundamental flaws identified in the assessment regarding impacts on hedgerows. The admitted proposed destruction of 9.1KM of hedgerow within the planning application boundary is presented in a manner that systematically understates the severity of the impact and fails to comply with domestic and European law in this regard. The report's own data provides the evidence to challenge its conclusions, particularly in light of the escalating threat of fireblight disease.

The chapter states that "mitigation through design has been integral to the planning and layout of the Development" claiming this approach included environmental constraints to avoid or reduce potential adverse effects.

However, this claim is contradicted by the sheer scale of the proposed loss. An iterative design process that genuinely sought to avoid ecological harm, in-line with the precautionary principle embedded in EU environmental law, would not result in the destruction of over 9KM of established hedgerow. The claim of integral mitigation becomes implausible and unworkable when the outcome is such extensive habitat removal, suggesting that ecological constraints were ultimately of lesser importance to other design considerations. This approach, also, is inconsistent with the spirit and purpose of the EIA Directive 2011/92/EU which mandates that significant effects be identified and avoided where possible, not merely mitigated after the fact.

Furthermore, the assessment underplays the ecological value of the hedgerows to be lost, whilst also ignoring a critical threat to the remaining landscape. The Hedgerow Appraisal System results, detailed in Table 6, identify two hedgerows within the boundary rated as "high" significance. The destruction of such high value features is not justified. More gravely, the report completely fails to consider the national crisis presented by fireblight disease, a notifiable disease.

The Department of Agriculture, Food and the Marine has issued stringent advice and statutory notices emphasising that it is the movement of machinery, especially from infected to clean areas, that acts as a primary vector for the spread of this devastating plant disease. The proposed development, involving extensive construction and movement of heavy machinery across a vast area of hedgerow rich Co. Limerick, presents a significant and unassessed risk of spreading fireblight. The EIAR does not address this, and as such this constitutes, in our estimation, a critical failure to assess a likely significant effect on the environment (the health of the horticultural landscape and supported ornithology), thereby undermining the report's compliance with the EIA Directive.

This extensive loss of hedgerows also directly contravenes established Irish and EU policy. Domestically, the project conflicts with the Wildlife (Amendment) Act 2000, as this affords

protection to the wider countryside, and the National Biodiversity Action Plan 2023-2030, as this prioritises the protection of ecological corridors.

At a European level, the EU Biodiversity Strategy for 2030 and the newly enacted Nature Restoration Regulation (2024) establish binding targets to halt and reverse biodiversity loss, including the enhancement of landscape features on agricultural land. The proposed large scale removal of hedgerows is an affront to these legal and policy commitments.

Note also that the Limerick Development Plan 2022-2028 includes Objective EH 010, which is "to support the protection and management of existing networks of woodlands, trees and hedgerows." The proposed development does not support protection; it facilitates large scale destruction, rendering the local authority's own policies ineffective.

We argue that the singular ecological function of these hedgerows is downplayed in the EIAR. The report itself acknowledges that these hedgerows "form a continuum of habitat along which wildlife can safely move." This is particularly critical for protected species. The destruction will sever this continuum corridor, impacting, directly, species protected under the EU Habitats Directive, such as bats, which the report confirms use these features extensively for commuting.

The loss of such a significant amount of commuting corridor constitutes a violation of the strict protection regime afforded to Annex IV bat species under Article 12 of the Habitats Directive, which requires member states to maintain their breeding and resting sites. The proposed mitigation, such as bat exclusion buffers, does not compensate for the permanent loss of the habitat corridor itself; the report fails to demonstrate that this loss will not adversely affect the integrity of the local bat populations.

Finally, the approach outlined in the EIAR is over reliant on post-destruction compensation. As outlined by the Chartered Institute of Ecology and Environmental Management (CIEEM) and reflected in Irish planning practice, this is the least desirable step in the mitigation hierarchy.

The report places significant emphasis on the Habitat and Species Management Plan as a mitigating measure. This flaw prioritises 'offsetting' over prevention. The irreversible loss of complex hedgerow habitats, with their unique assemblages of flora and fauna, cannot be truly compensated for by creating new habitats elsewhere, especially when the proposed development exacerbates other environmental threats such as the potential spread of fireblight through machinery movement. The proposal to replace what is lost with something new, unnatural, and ecologically immature, fails to acknowledge the established value of the existing resource and the interconnected risks that the project introduces if permission were to be granted.

It is our understanding that, when examined in light of domestic and European legislation and established policy, the application's treatment of hedgerow impacts is fundamentally inadequate. It relies on assertions of integrated design that are belied by the scale of proposed destruction; it understates the value of the hedgerows to be lost; it is in conflict with protective Irish and EU legislation and policy; it ignores the consequences of fragmenting ecological corridors for protected species; it fails to assess the significant risk of spreading notifiable plant disease; and it relies on compensation to justify an unacceptable level of habitat loss.

For these reasons, the assessment of hedgerow impacts is not robust or credible, and we ask the commission to refuse permission.

Observations on EIA Chapter 7 Ornithology

Introduction

Amongst the most worrying concerns materialising from the applicant's EIA is the issue of ornithology.

The EIA (Chapter 7) presents an ostensibly detailed chapter in this regard, yet a critical examination reveals critical shortcomings that undermine its credibility and the robustness of its conclusions. The assessment appears to employ a methodology that selectively applies precaution, often minimising potential risks to protected species and designated sites through optimistic assumptions and a reliance on unproven mitigation strategies.

A primary concern lies in the treatment of the whooper swan, a species listed on Annex I of the EU Birds Directive (2009/147/EC) of Amber conservation concern in Ireland, and a cherished winter visitor to our wetland Corcas.

The report acknowledges a functional ecological connection between the development and the Lough Gur NHA, with swans regularly commuting to forage within the proposed site. Despite this, the proposed mitigation centres on a Whooper Swan Management Plan which aims to "enhance" 14.3 ha of land to compensate for potential displacement and disturbance. The report admits that "construction-phase disturbance is assessed as a moderate adverse effect at a County/Regional scale in the absence of mitigation" (Section 7.6.1.2.2, page 66). We ask the commission's note this, as the proposed mitigation relies heavily on the swans adapting their behaviour to use these newly created areas, an outcome that is far from certain. The plan's effectiveness is built upon swans abandoning historically used foraging grounds near turbines for these managed fields, a behavioural shift that the baseline surveys do not guarantee. Furthermore, the consultation response from the Development Applications Unit rightly highlighted the risk of creating an "ecological trap" by locating enhancement fields between turbines, thus actually increasing the potential collision risk by concentrating birds within the development's footprint (Section 7.2.5, Page 23).

We find most curious the collision risk modelling used to protect whooper swans as it is based on a concerning basis of assumptions. The initial model predicted 0.22 collisions per year, but this was later supplemented with a "more precautionary scenario" using "inferred flight data" which increased the estimate to 0.55 collisions per year (Section 7.3.3, Page 62).

The very need for such an alternative, behaviourally adjusted, model suggests that the standard methodology may underestimate true risk, particularly for nocturnal movements detected in this instance by bioacoustics, but not fully captured in vantage point surveys.

For the applicant's EIA to then dismiss this higher estimate as a "precautionary upper bound" rather than a core prediction, seems to diminish purported genuine concern for a species protected under the European Communities (Birds and Natural Habitats) Regulations 2011. The assertion that predicted mortality represents a negligible proportion of the national or flyway population is, while unfortunately common, a legally unsound argument. The Habitats Directive requires the protection of individual specimens and their breeding sites, not merely the maintenance of population totals.

The assessment of impacts on other protected species also raises concerns.

For the Red-listed curlew, a species in critical decline, the report concludes that displacement effects would be "minor adverse at the local scale" (Section 7.6.1.2.3.1, Page 69). This conclusion is reached despite acknowledging the sensitivity of the species, and applying disturbance buffers of up to 500 metres. The apparent justification rests on the low numbers recorded and the availability of "suitable alternative habitat," a claim that feels speculative without a detailed analysis of habitat quality and carrying capacity in the wider landscape.

Similarly, for breeding raptors like the buzzard, the potential displacement of "up to two breeding territories" is dismissed as a temporary and minor effect (Section 7.6.1.2.5, Page 72). This overlooks the principle of strict protection afforded to breeding sites under Irish and European legislation.

The report's handling of the River Shannon and River Fergus estuaries SPA, a site of international importance designated under the EU Birds Directive, is another point of concern. While it correctly identifies a hydrological pathway for potential pollution impacts via the Morningstar river, it quickly downplays the risk, stating that 'significant water quality impacts are unlikely' (Section 7.6.1.1.1, Pg 64). This assessment seems to rely on the implementation of a proposed 'Surface Water Management Plan' to control runoff and prevent accidental pollution, yet provides little detail on the guarantees and monitoring that would make such measures robust enough to protect the qualifying interests of the SPA from a development over 35KM upstream. Once again, this too appears to contravene the precautionary principle embedded in EU environmental law, which mandates that doubt should be resolved in favour of the environment.

Finally, the proposed mitigation for the operational phase, particularly the adaptive curtailment of turbines T1-T4 during the first winter, is presented, confidently, as a sufficient safeguard. We feel it is crucial to highlight that this is a temporary measure, that the long term strategy relies on swans habituating to the turbines. The report does admit that "micro-avoidance remains less well quantified," introducing "some uncertainty in close-range turbine interactions" (Section 7.6.2.2.2, Page 77). To proceed with a development based on the hope that a protected species will successfully adapt its

behaviour to avoid new threats represents little more than a gamble, one that seems inconsistent with the duties of strict protection and the preventative ethos of the EIA Directive (2011/92/EU). Our impression is of a document that leans towards interpretations and mitigations that facilitate the development's approval, often at the edges of what a truly precautionary application of Irish and European environmental law would permit. For these reasons, we believe it's crucial that the commission refuse the application.

Review of Literature cited in EIAR Chapter 7 Ornithology

We believe that there exists an obvious reliance on certain guidance and literature chosen strategically to justify the chapter's conclusions; this, we feel, is at the expense of more comprehensive and critical academic insight.

The report anchors its methodological framework and impact significance criteria on guidance documents from NatureScot, e.g. "Assessing Connectivity with Special Protection Areas" (2016) and "Collision Risk Modelling" guidance (Band, 2024). While these are established documents in UK wind energy assessments, their direct application to the Irish context is not without contention. The report uses these to define study areas (e.g. a 20KM buffer for designated site connectivity) and to set thresholds for significance (e.g. magnitude criteria in Table 7-2). We believe that research from an Irish context ought to have been drawn upon in this instance, particularly as relevant findings call into question the transference of such models. For example, work by Crowe et al. in "Bird Sensitivity Mapping for Wind Energy Developments and Associated Infrastructure in the Republic of Ireland" (2015) makes clear the unique distribution and sensitivity of Irish bird populations, and so a blanket application of British thresholds may not be sufficiently protective. The report cites this Irish sensitivity mapping, yet its conclusions often default to the more development-permissive NatureScot guidance, creating an obvious inconsistency.

Furthermore, the use of Collision Risk Modelling is a prime example of where the report's reliance on specific guidance masks significant scientific uncertainty. The model's output is highly sensitive to the 'avoidance rate', the proportion of birds assumed to steer clear of turbines. The report applies high avoidance rates (98-99.5%) based on NatureScot guidance (2024), which directly results in low predicted mortality. This can be challenged, easily, by exploring other relevant, yet omitted, peer-reviewed meta-analyses.

Writing in *Journal of Applied Ecology* (2014), Marques *et al.* found that, having reviewed at least 50 studies avoidance rates are highly variable and often overestimated in modelling, and that current models frequently fail to predict observed mortality. Similarly, research by Thaxter et al. ("*Journal of Applied Ecology*", 2017) on seabirds demonstrated that collision risk models can underestimate actual mortality by a factor of five or more. By not engaging with this critical body of literature that highlights the inherent uncertainties and potential inaccuracies of CRM, the report presents its low collision estimates as more certain and robust than the wider scientific consensus allows. This is significant cause for concern.

We feel that further employment of selectivity in referenced literature impacts the impact assessment on whooper swans and other waders. The EIAR draws on research such as Larsen & Madsen (2000) and Pearce-Higgins *et al.* (2012) to support the notion that birds can habituate to infrastructure. However, it does not equally weigh studies that document significant and long-term displacement. For example, a study by Bright et al. in "Biological

Conservation" (2008) found that pink-footed geese avoided wind farm areas at a landscape scale, leading to a net habitat loss. More specifically for swans, research by Clausager (2004) in Denmark documented displacement of whooper and Bewick's swans from a wetland area following wind farm construction. Challenging the report's optimistic habituation narrative with these peer-reviewed case studies would undermine its assertion that displacement will be "temporary" and "reversible".

Worryingly, mitigation in this instance, particularly the 'Whooper Swan Management Plan', is justified by referencing the report's own baseline surveys and the general guidance in CIEEM (2018).

The credibility of this approach is highly questionable when contrasted with peer-reviewed evidence on the effectiveness of habitat compensation. A comprehensive review by zu Ermgassen et al. in "Conservation Letters" (2019) on ecological compensation found that such measures often fail to achieve "no net loss" of biodiversity, with failures linked to inadequate implementation, long time lags for habitat establishment, and a poor understanding of species' behavioural responses.

The WSMP aim to 'create' 14.3 hectares of 'enhanced grassland' assumes that whooper swans will immediately and reliably adopt these new areas, an assumption that is not grounded in the critical scientific literature on compensation ecology. Citing such studies would expose the plan as a high-risk, unproven, experiment and certainly not a robust, evidence-based mitigation plan fully in-line with the EU Birds Directive.

Finally, the report's cumulative effects assessment is notably narrow, considering only other wind farms and a handful of local developments. This approach ignores the broader peer-reviewed understanding of cumulative impacts, which are often driven by a combination of climate change, agricultural intensification, and multiple infrastructure projects. Research by Foden *et al.* (*Science*, 2019) and others has shown that 'synergistic pressures' lead to non-linear, detrimental, effects on bird populations. Therefore, the report's conclusion of "no significant cumulative effects" is based on a limited scope that does not align with the contemporary ecological understanding of how multiple stressors interact, thereby presenting an incomplete and potentially misleading assessment.

We argue that referenced research and guidance in this instance creates little more than a veneer of scientific rigour. By contrasting its chosen references with a body of peer reviewed literature which emphasises uncertainty of the model, documented displacement effects, the frequent failure of compensation, and the complex nature of cumulative impacts, the core arguments and proposed mitigation measures can be effectively challenged as inadequately precautionary and not fully aligned with the prevailing scientific evidence. Accordingly, we ask that the commission refuse permission.

Appendix 7B - Baseline Ornithology Report

The Baseline report informing much of the mitigation suggested in the EIAR presents a foundation for impact assessment which is fundamentally compromised by methodological inconsistencies, significant data gaps, and a contradictory interpretation of its own findings. The report's authority is undermined further by a failure to adhere to best practice in several key areas, and this leads to an incomplete and potentially misleading representation of the ornithological risks.

It's patently lacking in robust enquiry. One concern is the admitted inadequacy of survey coverage. The report concedes on page 38 that 'a very small number of discrete locations (<0.1% of the core study area), where infrastructure such as access tracks and cable routes are proposed, were not directly surveyed in all seasons.' Relying on 'indirect observations from accessible areas' to deduce bird use in the very locations slated for ground disturbance is not a robust methodology. This creates an observable gap in the data precisely within the development's permanent footprint, failing to provide a complete baseline for the habitats that will be most affected by construction, thereby violating the precautionary principle.

The survey effort for Vantage Point watches, crucial for collision risk modelling, was also not fully achieved. The report confirms on page 38 that "across Years 1, 2 and 3, 36 hours of VP watches per season were achieved at each location, except during the Year 1 (breeding season 2022), when 30 hours were completed." While the authors argue that three years of data compensates for this shortfall, beginning the dataset with a season that did not meet the stipulated effort, as per the cited NatureScot guidance, weakens the statistical robustness of the entire time series, particularly for assessing seasonal flight activity of breeding birds.

Further eroding confidence in the data is the profound methodological inconsistency in the outlined bioacoustics survey. Detailed on page 35, the effort for detecting nocturnal whooper swan flights changed drastically between years; in 2022-23, recorders operated for "approximately six hours per day," while in 2023-24, they were 'active 24/7'. This resulted in a 369% increase in detections. The report's attempt to rationalise this by comparing a restricted dataset, acknowledging on page 78 that 'Year 2 may therefore underestimate nocturnal activity' does not negate the fact that the baseline understanding of a key risk, nocturnal collision, is built upon non-comparable datasets. This introduces significant uncertainty and suggests the reported activity levels may still be a substantial underestimate.

There is an observable, significant, and telling incongruity between the different methodologies employed when preparing the Baseline Ornithological Report. The report's conclusions show a stark contradiction between its desk-based sensitivity mapping and the empirical data collected.

The desk study classified the development area as having a "low sensitivity to wind farm development" (page 9). However, the survey results themselves document a very different reality, including regular use by an internationally important flock of Whooper Swans, a species listed on Annex I of the EU Birds Directive, and confirmed breeding of red-listed Kestrel and other raptors within the survey buffers. The presence of these species, which are recognised as highly vulnerable to wind energy impacts, fundamentally contradicts the initial 'low sensitivity' finding and suggests the report's foundational assessment is flawed.

Critically, the functional connectivity to a European designated site is explicitly demonstrated by the report's own data. The whooper swan is a Special Conservation Interest of the River Shannon and Fergus Estuaries SPA. The report confirms on page 72 that the "Lough Gur flock," which roosts within this SPA, regularly forages within the "northern section of the 500 m buffer." The dedicated flight speed surveys on pages 74 to 77 provide irrefutable evidence of 'regular and energy-efficient commuting behaviour' between the SPA roost and the development zone. This creates a direct and legally significant pathway for impact, which the report's overarching "low sensitivity" characterisation seems to have underestimated severely.

This under-reporting of risk further extends to protected raptors. The report confirms breeding territories for Buzzard and Sparrowhawk within the 500m buffer and a Barn Owl territory just 900m outside the 2KM buffer, (page 61). It also records Annex I species such as Hen Harrier and Peregrine Falcon within the study area. The regular presence and breeding of these protected species, which are highly sensitive to disturbance and collision, indicates a far higher ornithological value than initially assessed.

While the report contains a substantial volume of data, its efficacy is simply not tenable. It is a showcase of unsurveyed development areas, inconsistent nocturnal survey methods, unmet survey effort in a key season, and a fundamental contradiction in conclusions between the desk study and the empirical findings of high-value species in functionally linked habitats - all of these render the very baseline on which mitigation and permission are sought to be flawed.

Here, there is no evidence of the required: a sufficiently robust, comprehensive, or reliable foundation upon which to assess the true scale of likely significant effects on avian populations, including those of European importance. Consequently, we ask that the commission refuse permission for this application.

Appendix 7D - Whooper Swan Management Plan

It is clear to us that the WSMP fails to provide any robust, legally compliant, or competent framework for protecting our local population of Icelandic whooper swans.

As an Annex I species under the EU Birds Directive (2009/147/EC), the whooper swan is afforded the highest level of protection. The WSMP, however, is fundamentally flawed in its reliance, once again, on selective evidence, unproven and inadequately evidenced mitigation, and a failure to adhere to the precautionary principle. In short, it creates an unacceptable risk of significant harm to this legally protected, and culturally valued, visitor.

The WSMP's central claim is that the collision risk to whooper swans is 'generally thought to be extremely low,' with a 'theoretical avoidance rate... of 99.5%.' This confidence is critically undermined within the report's own Appendix B, which admits this rate "may still be conservative, and will be subject to review as more data becomes available." To predicate the survival of a protected species on a theoretical model that its own source acknowledges is uncertain and evolving is a profound failure of the precautionary principle.

This principle, a cornerstone of EU environmental law, mandates that where there are threats of serious or irreversible damage, a lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. The Planning and Development Act 2000, and associated departmental guidelines, require a precautionary approach to projects affecting European sites and protected species. But this WSMP does the opposite. It uses scientific uncertainty to justify risk rather than to avoid it.

Further, the plan's assessment of displacement risk is optimistic and misapplies established guidance.

It proposes a '300 metre buffer distance' for assessment, claiming this falls 'within the lower end of NatureScot's recommended 200 600m range for human related disturbance.' This is a misrepresentation.

The NatureScot range is a generalised, precautionary buffer for a variety of disturbances, not a prescribed safe distance for the specific, permanent, and novel threat posed by rotating turbine blades to a large, high wing loading bird like the whooper swan. The WSMP's own literature review contradicts its confidence, citing a meta analysis that found 78% of studies on swans indicated displacement effects, with reported avoidance distances ranging up to 560m.

Quite selectively, we believe, the WSMP highlights a single study where swans foraged close to turbines, while ignoring the broader body of evidence suggesting significant habitat loss is likely. This citation demonstrates a very clear instance of confirmation bias which seems to

prioritise development feasibility over robust ecological protection, a practice consistently criticised by the commission in refusals for projects impacting sensitive ecological receptors.

The competency of the evidence base for the proposed habitat manipulation, the core of the mitigation, is highly questionable. The plan's central strategy hinges on the claim that sowing tetraploid Italian rye can provide a "4 fold increase in foraging capacity," an assertion sourced from, as far as we can deduce, an unpublished technical note by the author (Mackie, 2022). The underlying research, drawn from the author's own recent and likely un-peer-reviewed doctoral thesis, is presented as definitive proof of concept. Relying on proprietary, non-peer-reviewed work as the primary evidence for a high-stakes mitigation measure for an Annex I species fails to meet the standard of independent, verifiable scientific scrutiny required for a robust Environmental Impact Assessment. It places the entire efficacy of the mitigation strategy on the authority of what we believe to be a single party's unpublished findings. The statement that the enhancement area is 'larger than required' is, we believe, an assumption, not a guarantee. Critically, the plan admits that "in the first instance, whether decoys, baiting and the use of audio lures are required to initiate field use" will need monitoring. This admission reveals the central mitigation measure is entirely experimental. To grant permission based on an unproven behavioural experiment with an Annex I species would be a clear breach of the duty to ensure the development is not detrimental to the species' population, as required by the Birds Directive.

The plan notes the local Lough Gur flock has declined by "approximately 30% from an average of 102 swans at the turn of the century," with a reduction in county and national share. While it states, correctly, the national population has increased, this does not nullify the conservation importance of local populations. The Habitats Directive (92/43/EEC) and the EIA Directive (2011/92/EU) require an assessment of impacts on the local population as a component of the wider ecological network. The loss or further degradation of a traditional wintering site for this already declining local flock could have disproportionate consequences, potentially even acting as a "sink" population. The mitigation plan, therefore, risks being an experiment conducted on a vulnerable sub-population, a scenario which planning authorities have previously found unacceptable.

Further, the proposal to undertake post-construction monitoring is a clear admission that the actual impacts are unknown and serves to sanction potentially irreversible harm. The commitment to 'five years' of monitoring acknowledges that "initial neophobic avoidance" and "habituation" are significant factors that could alter risk over time. However, this is a reactive, not a preventative, strategy. It allows for "carryover effects" and "localised population effects" to occur before any remedial action is taken, by which time it may be too late for this specific local flock. The commission (as An Bord Pleanála) has consistently held that monitoring is not a substitute for effective, pre-emptive mitigation. The plan states monitoring will help "reduce uncertainty;" but the legally appropriate course of action when

faced with such uncertainty regarding a protected Annex I species is clearly to avoid creating the risk altogether, and to refuse permission if uncertainty cannot be resolved.

The Whooper Swan Management Plan for the applicant fails to provide a robust, evidence based case that the development will not have a significant negative impact on whooper swans. Again, its arguments are built upon selectively applied data, an over-reliance on unproven theoretical models, and an experimental mitigation strategy founded on non-peer-reviewed material. The plan does not adequately adhere to the precautionary principle or the strict protective measures mandated by the EU Birds Directive.

There are obvious uncertainties here: the decline of the local flock, an entirely unproven and experimental mitigation strategy built on an unpublished technical note, the selective employment of guidance and literature, and the omission of more relevant and informing research. It is clear that the WSMP is, in this instance, and in our belief, little more than a gamble. And for its complete aversion to informed and rigorous scrutiny, we ask that the commission refuse permission.

Curlew

It is not just the whooper swan who is clearly endangered by this application. A close reading of the EIAR makes expressly clear the threat to the Eurasian Curlew (*Numenius arquata*) should the project proceed, a species in a state of catastrophic national decline.

EIAR Chapter 7: Ornithology completely underestimates the site's value for this critically endangered bird, and fails to meet the stringent legal requirements of both Irish and European Union nature conservation law. Regarding observation and monitoring, it states that "curlew were occasionally present at the site but no breeding behaviour (displaying, territorial calling or nesting) was observed", and that their use of the site was 'opportunistic or low intensity' (Section 7.3.2.2.9, pg 41). Table 7-10 (pg 85) concludes "no breeding recorded."

These assertions are fundamentally flawed and are directly contradicted by verified field evidence. Time and location stamped recordings of Curlew calling from within the development site on 24 May 2024 and 09 July 2024, archived with the Cornell Lab of Ornithology's Macaulay Library (assets 643277412 and 643279489), provide proof of breeding season activity. Territorial or persistent calling in summer months is recognised by the National Parks and Wildlife Service (NPWS) and BirdWatch Ireland as reliable evidence of breeding activity or attempted nesting. The EIAR's dismissal of breeding potential is therefore scientifically unsound and omits critical data, leading to a profound underestimation of the project's impacts, and calls into question the efficacy of methodologies employed during field research.

This failure has grave implications under the EU Birds Directive (2009/147/EC), incorporated into our statute book by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). The curlew is listed on Annex II of the Birds Directive, and Ireland holds a special responsibility for its conservation. Article 2 of the directive requires member states to 'take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level.'

Moreover, Article 3 mandates the preservation of a 'sufficient diversity and area of habitats' for all wild birds. The Curlew's status as a BoCCI red listed species, having suffered a population decline of over 97% in Ireland since the 1980s, means that the precautionary principle must be rigorously applied. This cornerstone of European environmental frameworks dictates that where there is uncertainty, or a lack of definitive data regarding potential significant effects, the competent authority must err on the side of caution. The presence of a territorial Curlew call during the breeding season, as definitively captured in the aforementioned recordings, constitutes credible ornithological evidence that should

have triggered further targeted surveys and a far more robust, site-specific mitigation strategy. By concluding 'no breeding recorded' without adequately investigating these signs, the EIA is clearly flawed and fails this fundamental test.

Worryingly, the EIA categorises the impact on curlew as a 'minor adverse effect at the local scale' during both construction and operational phases (Table 7-10, pg. 85). This conclusion is predicated on a flawed presumption that breeding does not occur, and that site use is only intermittent.

The construction phase assessment acknowledges that disturbance could displace flocks of up to 24 birds, but dismisses this as affecting only 0.06% of the national non-breeding population, stating that 'any displacement is expected to be short-term and reversible' (Section 7.6.1.2.3.1, pg 69). We believe this population level approach is inappropriate for a critically endangered breeding bird. Academic research consistently shows that disturbance to breeding waders, even from temporary construction activity, can lead to nest abandonment, reduced chick survival, and long-term territory desertion. For a species like the Curlew, where every breeding pair is absolutely critical given their catastrophic decline, the loss of even a single territory represents a significant conservation setback. The EIA's focus on wintering flocks overlooks the paramount importance of protecting potential breeding habitat, which is an obligation under the Birds Directive.

Similarly, assessment for the operational phase is flawed. It suggests that disturbance from moving turbines will be minor and that 'most potential foraging habitat lies outside the immediate turbine envelope' (Section 7.6.2.3.1.1, p. 77). Peer-reviewed studies, however, such as those by Pearce-Higgins et al. (2012), demonstrate that waders like curlew can exhibit avoidance behaviour at distances of up to 500 metres from turbines. The EIA itself cites guidance noting 'displacement effects can occur up to 250–500 m from active works' (Section 7.3.2.2.9, page 41). If the development footprint and its zone of influence effectively render a potential breeding territory unusable through disturbance and fragmentation, this constitutes a significant effect, regardless of whether the habitat is physically lost. The EIA's collision risk model scopes the curlew out entirely due to low observed flight activity (Section 7.3.3, p. 54), but this is a further reflection of the incomplete baseline data that failed to properly account for breeding season behaviour.

The proposed mitigation measures are generic and insufficient to address the potential presence of a breeding Curlew. The chapter's mitigation section is overwhelmingly focused on the Whooper Swan, with a detailed management plan, while the Curlew is afforded no specific, targeted protection. The general commitment to pre-clearance nest checks during vegetation removal (Section 7.7.2.1.1, p. 91) is a standard practice that is wholly inadequate for a ground-nesting bird of such extreme sensitivity. It fails to address the chronic disturbance from two years of construction or the long-term operational displacement over the 35-year lifespan of the wind farm. For a species on the brink of extinction as a breeding

bird in Ireland, a precautionary and effective mitigation strategy would require the full avoidance of known or potential breeding habitats, not just reactive checks. On these grounds listed, we ask the commission to refuse permission.

Appendix 7C - Collision Risk Modelling Report

Again, the questionable adherence to employing the NatureScot guidance is applied to collision risk modelling. Using this, it arrives at the conclusion that the predicted avian mortality for most species will be negligible or have an insignificant effect at the population level. Crucially, however, a close reading reveals methodological weaknesses and assumptions that undermine the legitimacy of its conclusions, particularly when assessed against the precautionary principle under domestic and EU legislation.

The model's conclusions are built on data with significant inherent uncertainty, which the report itself quantifies having a margin of error of $\pm 30\%$. This uncertainty arises from imprecise flight height estimations, the extrapolation of "relatively short survey period" data across an entire year, and the use of an admitted assumption on nocturnal activity levels where no actual nocturnal surveys were conducted (pg. 20). For species like the snipe, which is assigned the highest nocturnal activity score, this lack of empirical data is another critical flaw. The EU Birds Directive (Directive 2009/147/EC) requires member states to avoid pollution or deterioration of habitats for all wild birds, a duty interpreted through a precautionary lens. Basing assessments on unverified assumptions, rather than robust, species-specific nocturnal survey data, fails to meet this stringent standard and risks underestimating true collision mortality.

Moreover, there exists an application of generic avoidance rates which we believe is highly contentious. The model applies rates as high as 99.5%, dramatically reducing the final collision estimates (page 17, Table 12). The report notes these figures are sourced from Scottish Natural Heritage (Bob Furness, 2019), yet it provides no site-specific validation for these values. Academic literature suggests that avoidance behaviour can be highly variable and is not a fixed property of a species. An aforementioned study by Marques et al. (2014) in the *Journal of Applied Ecology* cautions that avoidance rates can be overestimated, and their use can mask actual cumulative impacts. For a development comprising 17 turbines, the blanket application of high, non-site-specific avoidance rates appears to us to be a tool for minimising predicted impact rather than a robust, evidence-based prediction. This approach is leagues removed from a responsible assumption of the precautionary principle, which demands that scientific uncertainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The report dismisses collision risk for certain species as 'negligible' because it is projected to be "less than one collision per decade" (page 18). This is also problematic.

This conclusion is reached only after applying the contentious high avoidance rates. For species of conservation concern, such as the peregrine falcon or whooper swan, even low levels of additional, human induced mortality can be significant at a population level, particularly when considered cumulatively with other threats. The Habitats Directive

(Council Directive 92/43/EEC), which is directly relevant for species like the peregrine falcon, requires an appropriate assessment for plans or projects likely to have a significant effect on protected sites. The model's output, while seemingly low, does not automatically absolve the proposed development from such rigorous scrutiny, especially given the admitted uncertainties.

Also, the model's structure contains simplifications that further underestimate risk. It uses average bird dimensions and flight speeds, ignoring natural variability and context-specific behaviours such as foraging or 'escape flights' that may alter collision probability (page 20). The assumption of a '50:50' ratio of upwind to downwind flights (page 8) is another standardised input that does not reflect local conditions, yet it directly influences the calculated single-transit collision probability. The legitimacy of risk modelling in this instance is compromised by dependence on unverified assumptions for nocturnal activity, the application of generic and potentially optimistic avoidance rates, and the dismissal of low-level risks for sensitive species. When viewed through the lens of Irish and EU environmental legislation, which prioritises a precautionary and protective approach, the model's conclusions appear inadequately conservative to ensure full compliance with the legal duties to protect avian populations.

Accordingly, for all of these reasons relevant to the ornithology chapter, we ask that the commission refuse permission for this proposed development.

Observations on EIAR Chapter 14 Archaeology and Cultural Heritage

Introduction

We are concerned by the development's treatment of the rich archaeological and cultural heritage affected by the proposal.

We question the efficacy, rigour, and ultimately the sufficiency of the archaeological and cultural heritage assessment outlined in EIAR 14. We feel the chapter has problematic methodological limitations, factual inaccuracies, a tendency to downplay established significance, and an obvious failure to align fully with the precautionary principles embedded in Irish and European Union heritage legislation.

Regarding methodological approaches, the chapter assessment relies heavily on desk-based study and surface inspection while deferring critical intrusive investigation. The report explicitly states that 'Licensed test excavations on the footprint of Ballinlee wind farm components were not included in this study. However, they will be undertaken in advance of construction as a Condition of planning if granted' (page 7). This approach is fundamentally reactive, seeking permission based on an incomplete data set. This contravenes the spirit of the Environmental Impact Assessment process, as outlined in the EU EIA Directive (2011/92/EU as amended), which is intended to inform the planning authority's decision with a full understanding of likely significant effects. To argue that potential "significant" physical impacts on unknown archaeology, as conceded in section 14.6.3.4, can be adequately mitigated by conditions after consent has been granted is to outsource the core of the impact assessment itself. This is not a robust, precautionary approach but rather a request for permission in principle despite acknowledged, unquantified risks to the cultural heritage resource.

The logical rigour of the assessment is further undermined by internal contradictions and a dismissive attitude towards certain archaeological features. For instance, the report questions the very existence of earthwork LI039-149, suggesting that 'it would appear that doubt must be cast on the veracity that this earthwork ever existed' because, unlike a nearby barrow, it was not afforded a no-planting zone during afforestation (page 52). This is speculative, and not based on the clear archaeological evidence present. The absence of surface expression, particularly after the destructive processes of forestry planting and root action, cannot be used as proof a feature never existed. This line of argument lacks academic credibility.

Similarly, the assessment of a newly identified standing stone near turbine T3 is heavily influenced by unverified local anecdote, noting 'according to the landowner the stone was pulled out from the nearby river and in that context the current location may not be the

original setting of the stone' (page 48). While local knowledge is valuable, a professional assessment should prioritise morphological and contextual analysis. Dismissing a feature that is 2.0m high and 1.5m wide, which exhibits the classic hallmarks of a standing stone, on the basis of hearsay, demonstrates a lack of objective rigour and a potential failure to adhere to the principles of the Valletta Convention (the European Convention on the Protection of the Archaeological Heritage), which this state ratified in 1997, and which emphasises the importance of maintaining scientific standards in archaeological work.

We argue that factual inaccuracies within the application process further erode confidence in assessment employed. The planning application explicitly answered "No" to the question "Are you aware of any previous uses of the site, eg. dumping or quarrying?". However, the Historic 25-inch Ordnance Survey map (1897-1913) clearly depicts a quarry at the location of the proposed Borrow Pit No. 1. This is a direct contradiction. The EIAR chapter itself later indirectly addresses the existence of this historical quarry, noting "the remains of the quarry site are still visible to the N of the earthwork" LI039-035 (p. 38). This inconsistency regarding a site's industrial historical land use is a serious matter, as it suggests a failure in basic due diligence and calls into question the completeness of the information provided to the commission.

It is also clear that the assessment repeatedly makes assertions that appear logically inconsistent with the presented evidence, particularly concerning direct physical impacts. The report identifies numerous recorded monuments whose statutory Zones of Notification (ZON) extend into the planning boundary, including a cluster of four prehistoric barrows in direct proximity to turbine T1. Yet, for many of these, it concludes there will be "no direct physical effect" during construction. This conclusion is illogical without comprehensive subsurface testing to confirm the absence of associated, and potentially extensive, archaeological features such as pits, post-holes, or external activity areas that commonly surround monument cores. Placing a turbine foundation, a temporary compound, or a deposition area within or immediately adjacent to these ZONs, as is the case with several components, constitutes a high-risk strategy. The proposed mitigation of post-consent geophysical survey and targeted testing is an inadequate safeguard for a decision that could permit the destruction of irreplaceable archaeological remains. This approach does not align with the precautionary principle nor with the duty to protect archaeological heritage as a non-renewable resource, a concept central to both the Valletta Convention and the National Monuments Acts.

Finally, the procedural framework for mitigation appears insufficiently robust. While consultation with the Limerick City & County Council Archaeologist is proposed, the primary statutory body for the protection of archaeological monuments in Ireland is the National Monuments Service. Given the proximity of the development to the Lough Gur complex, a National Monument, and the high density of recorded archaeology throughout the site, the mitigation strategy should have been developed and agreed upon in direct and formal

consultation with the National Monuments Service. Relying primarily on local authority consultation, while standard for many developments, may not be adequate for a project of this scale and sensitivity. The grid connection route, which passes within 10m of archaeology at the Lough Gur complex, further underscores the necessity for the highest level of oversight from the national authority.

The archaeological and cultural heritage chapter of the EIAR is compromised by a methodology that defers essential investigation, logical inconsistencies in the evaluation of features, factual inaccuracies in the application, and a mitigation strategy that does not sufficiently pre-empt or mitigate the high potential for significant and irreversible damage to a landscape demonstrably rich in archaeological heritage.

For the assessment to be considered rigorous and efficacious, it must be founded on a comprehensive, pre-consent understanding of the subsurface environment, a transparent and accurate account of site history, and a mitigation strategy developed in concert with the most authoritative national bodies, as mandated by the gravity of the potential impacts involved.

Review of Literature cited in EIAR Chapter 14 - Archaeology

We feel that the methodological approach in this chapter echoes our previous concerns of selective appropriation of literature and reference material, particularly on the issue of outdated material made obsolete by more timely and relevant academic literature.

The report's understanding of the Irish Bronze Age, a period central to the assessment given the high number of recorded barrows and enclosures, is largely informed by texts such as Waddell's 'The Prehistoric Archaeology of Ireland' (2022) and Eogan & Shee Twohig's 'Cois tSuiire' (2012). While these are valuable syntheses, the report fails to incorporate significant subsequent peer-reviewed research that fundamentally challenges traditional interpretations of monument landscapes.

For instance, the work of scholars such as Carlin (2017) in 'Transforming our understanding of Neolithic and Chalcolithic society (4000-2200 BC) in Ireland' has demonstrated that the landscape surrounding major ceremonial complexes was often a carefully managed and structured entity, with monuments forming relational networks. The report's treatment of the cluster of barrows near Turbine T1 as isolated features, rather than potentially integral components of a structured prehistoric landscape, reflects an outdated, site-specific approach that ignores this prevailing scholarly consensus. This oversight is critical when assessing the cumulative impact of breaking-up such a potentially significant archaeological landscape with large-scale industrial infrastructure.

The assessment of ringforts, the most numerous monument type within the study area, relies heavily on Matthew Stout's 1997 work, 'The Irish Ringfort'. While certainly a foundational text, nearly three decades of intensive development-led archaeology and associated research have dramatically refined our understanding of these sites. The report makes no reference to more recent, critical analyses such as those by O'Sullivan and Nicholl (2011) in *Early Medieval Settlement in Ireland: Changing Patterns*, which emphasise the complexity, longevity, and varied economic functions of these settlements, often extending beyond their enclosing elements. The assertion that ringforts largely represent a short, three century period, of occupation is a, we believe, an oversimplification that does not reflect current academic understanding. This outdated perspective risks underestimating the extent, complexity, and potential survival of subsurface archaeological deposits associated with these sites, leading to an inadequate assessment of impact.

The methodological approach to identifying archaeological potential is also not supported by current best practice in the field. The report's heavy reliance on aerial photography and cartographic analysis, while standard, is presented as sufficient without a full acknowledgement of its limitations, particularly in wooded or improved pastureland. Peer-reviewed geophysical survey literature, such as that by Gaffney & Gater (2003) in *Revealing the Buried Past: Geophysics for Archaeologists*, consistently demonstrates that

subsurface features can be entirely invisible from surface inspection or aerial survey. The report's confidence in stating "no surface remains visible" as an indicator of low impact potential is academically unsound. This is particularly relevant for the proposed geophysical survey areas; the report does not cite any methodological precedents or standards to which this survey will adhere, leaving the rigour of this key mitigation measure undefined and unsubstantiated.

The assessment of visual impacts on cultural heritage receptors, a cornerstone of the operational impact assessment, lacks a robust theoretical or methodological foundation in the literature referenced. The references provided (such as Lock and Ralston's 'Atlas of Hillforts' (2022)), are primarily descriptive catalogues, and do not provide a theoretical framework for assessing the visual intrusion of modern industrial structures on the setting and significance of historical monuments. This chapter fails to engage with established academic discourse on the heritage value of 'setting' as defined by institutions like ICOMOS and operationalised in guidance from bodies such as Historic England.

There is no reference to peer-reviewed studies on the perceptual impacts of wind turbines on historic landscapes, which often highlight the profound alteration of a landscape's character and the erosion of a heritage asset's cultural value due to the introduction of large-scale, moving, modern structures. This constitutes a significant scholarly gap, rendering the subjective classifications of 'slight' or 'moderate' visual impact as little more than opinion rather than conclusions derived from an academically rigorous methodology.

Finally, the report's handling of the standing stone discovered near Turbine T3 demonstrates a failure to apply basic principles of archaeological science, for which no amount of cited literature can compensate. The dismissal of its potential significance based on unverified local anecdote, rather than morphological analysis or comparative study, is a practice wholly at odds with the scientific principles mandated by the Valletta Convention. Authoritative texts on monument identification, such as Burrow's *The Tomb Builders* (2006) or any standard archaeological field manual, would stress the primacy of empirical observation and recording over unsubstantiated oral history in a primary assessment.

In summary, the literature review underpinning this chapter is demonstrably incomplete and does not represent current academic thought in Irish archaeology. The reliance on outdated syntheses, the omission of key methodological and theoretical research, and the failure to ground its methodologies in established peer-reviewed science collectively serve to undermine the academic authority of its assertions. The assessment presents a perspective that is not aligned with the current standards of archaeological practice and scholarship, thereby bringing its conclusions into serious question.

Precautionary Principle

It's apparent to us that the most critical flaw in the Archaeological and Cultural Heritage chapter of the EIAR is its failure to comply with the precautionary principle, a cornerstone of European Union environmental law enshrined in Article 191 of the Treaty on the Functioning of the European Union (TFEU).

The assessment explicitly defers the core investigative work required to understand the development's impacts, thereby rendering the current application fundamentally incomplete and the consent decision uninformed, contrary to the objectives of the Environmental Impact Assessment (EIA) Directive (2011/92/EU as amended by Directive 2014/52/EU).

The report itself actually concedes what it refers to as "significant" potential for physical impacts on unknown sub-surface features, a conclusion it rightly bases on the "very large number of known recorded monuments" which it describes as a "paradigm indicator of the archaeological subsurface potential" (Section 14.6.3.4).

However, it then adopts a methodology that deliberately leaves this potential unquantified, stating that "Licensed test excavations... were not included in this study" and will be deferred to a post-consent condition (Section 14.2). This is a clear contradiction. It acknowledges a paradigm of high archaeological potential while simultaneously refusing to test that paradigm prior to seeking permission, failing to provide the "comprehensive and precise information" on likely significant effects required by the EIA Directive.

We note that this approach seeks to transfer the primary burden of environmental impact assessment from the applicant to the planning authority and its conditions.

The EIAR process is intended to provide a fully formed understanding of likely significant effects *before* a decision is made, as per Article 5(1) of the EIA Directive. By identifying a 'significant' impact potential and then proposing to investigate it only after consent, the chapter fails in its basic purpose. It asks the authority to grant permission for a project whose most severe archaeological impacts are, by the applicant's own admission, unknown and unassessed in scale and significance.

We can infer that the application itself clearly admits the inadequacy of the chapter's proposal - it does this by including a programme of post-consent geophysical survey and targeted testing. The siting of key infrastructure, such as Turbine T1 within a cluster of prehistoric barrows and temporary deposition areas within the Zones of Notification of recorded monuments, is predicated on this incomplete knowledge.

For the full extent of archaeological material only to be revealed after permission is granted is a clear flaw and obvious risk. At which point, the options for preservation *in situ* may be severely compromised.

Ultimately, the chapter presents a framework for managing archaeological risk, not a robust assessment of it. A grant of permission based on this deferred methodology would be contrary to the precautionary principle and would fail to meet the core objectives of the EIA Directive, as the decision would be made without the requisite full picture of likely significant effects on a non-renewable cultural heritage resource. The application, in its current form, is premature and non-compliant, and accordingly, we ask that the commission refuses permission.

Observations on Appendix 1C - Community Engagement Report

The Community Engagement Report for the Ballinlee Green Energy project outlines a process intended to constitute 'meaningful community consultation' in line with national guidelines (p. 5). A systematic examination of its methodologies and data, however, reveals significant shortcomings. It is our contention that the engagement strategy, through its design and execution, failed to secure adequate community participation, relied on methodologically unsound research instruments, and strategically constrained the scope and influence of public dialogue, thereby undermining its own credibility.

Efficacy of Methodologies Employed

We note a strategic departure from traditional forms of public consultation. The report explicitly states that 'Our Community Clinics replace the traditional "town hall" or open exhibition forum,' justifying this by claiming it 'avoids situations where a small cohort of anti-wind voices dominate' (p. 26).

This framing is problematic, as it characterises collective opposition not as legitimate civic participation but as a disruption to be managed.

This approach appears contrary to the spirit of the Aarhus Convention, which upholds the public's right to participate in environmental decision-making in a free and fair manner. By moving to appointment-only, small-group sessions, the process effectively atomises dissent, preventing the formation of a collective community voice. This controlled environment is further institutionalised by a 'Code of Respectful Engagement' (p. 23), which, while intended to ensure civil dialogue, also provides the developer with a formal mechanism to suspend 'further consultation with specific residents' deemed 'persistently aggressive or threatening' (p. 24). This creates a tangible risk that the most concerned citizens can be excluded, thereby narrowing the scope of consultation. Further, it serves as an unquantifiable and unverifiable instrument to exclude, corral, and engineer the veneer of participation whilst simultaneously casting a damaging and unsubstantiated aspersion on the collective character of the very community with which it seeks to engage.

The ostensible presentation of empirical data presented in the report further illustrates the failure of this strategy to achieve meaningful engagement. The door-to-door campaign, a cited best practice, achieved a notably low participation rate. Of the 179 dwellings visited, only 61 households, or 34%, engaged with the applicant's representatives (p. 24). This indicates that a significant majority of the most directly affected residents were either unavailable or, more critically, disengaged from the process. The sentiment analysis derived from this limited sample is revealing, too: of those who responded, '23% expressed a positive view of the project, 22% indicated a negative response, and 55% remained neutral' (p. 28). The report frames this neutrality as an 'opportunity for ongoing dialogue' (p. 28). However, within the context of a major infrastructure project, a majority neutral stance

more likely signifies a lack of sufficient information, profound uncertainty, or disengagement, rather than a blank slate for the developer. The report provides no qualitative data or methodological detail on how these sentiments were elicited, which undermines entirely, from the most basic ethnographic principles of qualitative research, the reliability of this analysis.

But the most glaring methodological failure apparent in this instance, we feel, is the 'Ballinlee Green Energy Project Survey'. The report acknowledges the survey received only 'nine responses throughout the engagement process' (p. 15). To garner a clear picture or appraisal of the efficacy and reliability of this engagement, it is helpful to consider demographics.

This sample size is wholly inadequate from a statistical perspective. A conservative estimate, based on 179 households and the 2022 Census average for Co. Limerick, suggests an affected population of approximately 483 individuals within the 1km radius. A sample size of nine yields a margin of error exceeding 30% at a 95% confidence level, rendering the resulting data statistically meaningless and unfit for purpose in a planning context.

Furthermore, the survey's design exhibits a clear, and in our opinion, brazen instance of framing bias. As illustrated in the report's figures, the survey contains three questions, two of these presented to respondents focus thematically on the 'Community Benefit Fund' and project updates (pp. 16-17), potentially leading participants to prioritise financial compensation over fundamental environmental and amenity concerns. The survey's lack of independent oversight, demographic controls, or structured questions on project impacts confirms its lack of even the most basic scientific rigour.

Finally, the process exhibits a pattern of strategic information control that clearly limits the potential for influential public input. A key request identified during door-to-door engagement was for a 'detailed project layout map'. The report notes this was only shared 'once the project design had progressed sufficiently' (p. 24), which in practice meant it was presented to the community as a largely finalised element. This contradicts the principle of early and influential engagement advocated in both the 2006 and Draft 2019 Wind Energy Development Guidelines (p. 5), which state that consultation should occur 'ideally prior to submitting a planning application'. Providing critical information only after key design decisions are made reduces community input to a reaction, rather than allowing it to shape the project meaningfully.

In short, the Ballinlee Green Energy Community Engagement Report describes a process that we feel to be performative rather than substantively participatory, and was, when not admitting its own limitations, carefully marshalled to skew findings even upon the thinnest of engagement.

The avoidance of open forums, the demonstrably low rates of participation, the reliance on a statistically invalid survey, and the controlled release of key information collectively indicate a methodology engineered to meet minimum regulatory thresholds.

This approach appears inconsistent with the principles of early, transparent, and effective public participation as envisaged in Irish planning policy and European environmental law. The data within the report itself contradicts its narrative of successful consultation and calls into question the legitimacy of the community feedback it claims to represent.

We ask that the commission refuse permission as a result of this deeply flawed adherence to the application processes.

Observations on Wind Energy Zoning in the Limerick Development Plan 2022-2028

We believe that the proposed development is built upon what appears to be a fundamental misreading of the Limerick Development Plan 2022-2028; consequently, its approval would undermine the plan's core strategic objectives. The developer's reliance on the Wind Energy Suitability Map to justify the location is critically flawed, as it ignores a direct conflict within the plan itself and the clear precedence of its written policies. Yet, the development plan itself provides the resolution to this internal contradiction.

Page 9 of the Written Statement explicitly states that "in the event that any conflict or ambiguity arises between the Written Statement and the supporting maps, the Written Statement shall take precedence." The written statement contains powerful, unambiguous policies that are directly relevant to this application. Policy RE P3 establishes a "presumption against wind energy development within, or likely to impact upon, Natural Heritage Areas." Furthermore, the plan's strategic objectives, such as SO 8.8, commit to protecting and enhancing "areas of natural heritage... for the benefits of... biodiversity, protected species and habitats."

The proposed development, situated within an area designated as an NHA on the map, clearly contravenes these written commitments. It is our opinion that the zoning map itself appears to be a flawed document, compiled from agricultural lowlands without, it seems, the rigorous scientific and ecological assessment that underpins the Written Statement. It cannot, therefore, legitimately form the basis for justifying a project that the plan's own written text presumes against.

This conflict is further sharpened when considering the specific context of the Bruff Area Plan, which is integrated within the wider County Development Plan. The proposed industrial-scale development directly contravenes objectives such as BR 03, which seeks "Tourism Development," and BR 06, which aims to "Safeguard the lands along the Morningstar River." The visual and ecological impact of seventeen 160-metre turbines would irrevocably harm the rural landscape character essential to tourism and would fundamentally fail to safeguard the river corridor. The developer's use of the zoning map to claim the site is 'preferred' is therefore another selective and incorrect interpretation which seeks to legitimise the proposed project. As detailed heretofore, this is but one of many, many, instances of a practice we believe to be wilfully selective. It is, however, perhaps the most consequential. For this reason, we ask that the commission refuse the application.

Observation pertaining to Property Price Devaluation

We believe it is important in this regard to raise the recent decision of Clare County Council to refuse permission for the proposed development at Moanmore. It is our view that this serves to establish a cogent and compelling precedent for our concerns: as acknowledged by a local authority of the state, industrial scale turbines can and do depreciate the value of nearby homes.

In their decision, the second reason cited by CCC's Planning Authority explicitly stated that the proposed turbines for the Moanmore wind farm would be 'visually overbearing on existing properties and thus depreciate the value of property in the vicinity' (Planning ID P25-60257, Schedule reason 2). This is a direct link between visual impact and financial loss, and in our opinion, moves the issue of property devaluation from a matter of public concern into the realm of formal, material, planning consideration.

We note also that this refusal by CCC is not anomalous, but seems to be consistent with a broader pattern of planning rationale. Other councils, such as those in Cork (PL20.107229) and Tipperary (21/577), have refused permissions on the grounds that turbines are 'visually obtrusive and overbearing' and would 'seriously injure residential amenities.'

We note also that this decision is supported by empirical economic research focused on the Irish context. A working paper from the respected University of Galway's Centre for Economic Research on Inclusivity and Sustainability (CERIS) provides quantitative validation. Gillespie and McHale (2023) employing a hedonic pricing model, conclude that 'proximity to wind turbines has a significant negative impact on house prices' in an Irish setting. For our home, less than 1km to turbines, this is a devaluation of almost 15% using a conservative application of Gillespie and McHale's modelling.

As such, it seems to be the case that evidence exists in both academic and formal planning contexts to support the claim that proximity to wind turbine developments has a quantifiable detrimental impact on property prices. In our case, our home is the sole asset of worth we can leave to support our children's futures. We have already gone to great detail to highlight the vulnerability of our home regarding vibration risk (clay soil). If this development were to proceed, we fear that the sole asset we hope to leave to our children would experience such depreciation as to leave it worthless. Being cognisant of these academic and planning developments, we ask that the commission refuse permission.

Summary of Observation

We are writing not just as observers, but as a family whose home and future feel profoundly threatened by this proposal.

Our home is situated metres from the planned main site entrance. The applicant's own documents classify the risk to our property as 'significant' (Observations on EIAR Chapter 13: Noise and Vibration), a stark admission that resonates deeply when one's children play in the shadow of the proposed access route.

Our primary concern is the practical and persistent reality of the proposed construction. The forecast of 142 heavy vehicle movements daily, passing immediately adjacent to our boundary (Observations with regard to our home on EIAR Chapters 4, 5, 13 and Appendices 2A and 16A), suggests a sustained period of disruption which we fear will become the backdrop to our lives. The Environmental Impact Assessment Report concedes that construction noise will produce a 'very significant' exceedance of recognised limits. In our view, the proposed mitigation appears a frail defence against an impact of this scale, and it is difficult to feel confident in a prediction that seems to downplay the true effect on our home's amenity.

Our review of the ecological assessments has also raised considerable and troubling doubts. The methodology employed for protected species seems to rely on a number of optimistic assumptions. The use of 'proxy' data from other locations to model bat activity at specific turbine sites (Observations on EIAR Chapter 6: Biodiversity) introduces a level of uncertainty that feels at odds with the strict protection afforded to these species. Similarly, the entire strategy for the whooper swan population, a cherished feature of our local landscape, is contingent upon an unproven management plan (Observations on EIAR Chapter 7 Ornithology, Appendix 7D). It strikes us as a precarious gamble with a protected Annex I species, trading the certainty of disturbance for the hope that the swans will adapt.

The approach to archaeological heritage also appears to lack a genuinely precautionary ethos. The chapter acknowledges a high potential for unknown subsurface features, yet defers all intrusive investigation until after a potential grant of permission (Observations on EIAR Chapter 14 Archaeology and Cultural Heritage). This seems anathema to the proper order of assessment, leaving the full extent of any impact on cultural heritage unknown until it is too late for the findings to inform the core decision.

Furthermore, the community engagement process itself seems to have yielded little substantive data. A community survey that garnered only nine responses cannot, in our view, provide a reliable or representative measure of local opinion (Observations on Appendix 1C - Community Engagement Report), and it leaves us feeling that genuine consultation has been bypassed.

In conclusion, it is our firm belief that the application contains material deficiencies that cannot be overlooked by the authority. The combined effect of these flaws is an application that does not, in our opinion, provide a robust or complete account of the likely significant effects. The potential for harm to the human and natural environment feels both substantial and inadequately mitigated. For the sake of our family's right to the peaceful enjoyment of our home, and for the protection of the local ecology and heritage, we respectfully request that the Commission refuse planning permission.