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The Secretary  
An Coimisiún Pleanála  
64 Marlborough Street  
Dublin 1  
D01 V902

**Re: Objection to the Proposed Tirawley Wind Farm Strategic Infrastructure Development**  
**Objection Submission to An Coimisiún Pleanála**

Re: Planning permission for the construction of Tirawley Windfarm consisting of 16 no. wind turbines, a permanent 110kV substation, 110kV underground cable and grid connection, and ancillary development in the townlands of Ballymurphy, Ballynaleck, Barnhill Lower & Upper, Barroe, Billoos, Carn, Carrickanass, Carrowmore, Castlelacken Demesne, and other townlands in County Mayo.

**Case Number: PAX16.324258**

Dear Sir/Madam,

I am a resident of Lacken living in close proximity to the proposed Tirawley Wind Farm development (identified as **H52** in the applicants document). I believe this proposal is fundamentally unsuitable for this location due to its likely adverse impacts on landscape character, tourism assets, biodiversity, residential amenity, infrastructure and cumulative development pressures already affecting North Mayo. For the reasons set out below, I respectfully request that An Coimisiún Pleanála refuse permission for the proposed development.

## **1. Hen Harrier & Biodiversity Impacts**

The EIAR does not adequately demonstrate that the project can avoid significant impacts on protected habitats, birds, bats and ecological networks, particularly when cumulative and long-term effects are considered

### ***Sensitive Ecological Location***

The proposed development is located within an area containing:

- Blanket bog habitats.
- Commercial forestry.
- Wetland ecosystems.

- Bat foraging and commuting habitats.
- Bird breeding, feeding and flight corridors.
- Hydrological connections to protected European sites.

The ecological sensitivity of the site requires a particularly precautionary approach to development.

### *Risk to Protected Bird Species*

A major concern relates to collision mortality, displacement and habitat disturbance affecting protected bird species. The EIAR relies heavily on Collision Risk Modelling (CRM) to predict impacts, but these models contain significant uncertainties.

Key concerns include:

- Collision risk from turbine blades.
- Displacement from feeding and breeding areas.
- Loss of habitat connectivity.
- Disturbance during construction and operation.
- Underestimation of cumulative effects with other wind farms.

Research consistently shows wind farms can result in bird displacement distances of hundreds of metres to several kilometres depending on species.

I am particularly concerned about the impact of the proposed development on **the Hen Harrier**, an Annex I protected species under the EU Birds Directive and one whose Irish population has declined significantly in recent years. The EIAR acknowledges that hen harriers are present within the study area and that the site provides suitable autumn and winter foraging habitat. The site contains a combination of blanket bog, scrub, wet grassland, semi-improved grassland and hedgerow networks, all of which are important habitats for foraging and roosting hen harriers.

Of particular concern is that a winter hen harrier roost was recorded within the study area, yet no comprehensive winter roost survey appears to have been undertaken across the wind farm site itself. The applicant's roost surveys focused primarily on areas outside the development footprint, despite evidence that hen harriers utilise habitats within the proposed development area. In the absence of a robust assessment of winter roosting activity, it is difficult to conclude that the impacts on this protected species have been fully assessed.

The development will result in the permanent loss and fragmentation of habitats used by hen harriers, including substantial hedgerow removal, loss of blanket bog habitat, forestry felling and the construction of extensive site roads and infrastructure. While mitigation is proposed, there remains uncertainty as to whether replacement habitats can adequately replicate the ecological value of the habitats being lost, particularly in the short to medium term.

I am also concerned about the cumulative effects of habitat loss, construction disturbance and operational displacement. Research has shown that hen harriers may avoid otherwise suitable habitat in the vicinity of operational turbines, resulting in a reduction in available foraging area. The application does not appear to adequately assess or mitigate this displacement effect.

Given the conservation status of the species, the acknowledged presence of suitable habitat and recorded winter roosting activity within the study area, I do not believe sufficient scientific certainty has been provided to demonstrate that the proposed development will not adversely affect the hen harrier population using this landscape. The precautionary principle should therefore apply.

In light of the acknowledged uncertainty regarding winter roosting activity and habitat utilisation, the applicant has not demonstrated beyond reasonable scientific doubt that significant adverse effects on the species can be avoided

### *Deficiencies in Ornithological Assessment*

The review identified several weaknesses and information gaps, including:

- Reliance on limited baseline survey data.
- Uncertainty regarding migratory species.
- Need for updated mortality and avoidance rates.
- Insufficient assessment of cumulative impacts.
- Inadequate consideration of transboundary effects.
- Limited justification for screening certain species out of detailed assessment.

Where scientific uncertainty remains, the precautionary principle should apply.

### *Bat Impacts*

The proposed development raises particular concerns for bats because turbines are known to cause both direct mortality and habitat displacement.

The submission highlights:

- Collision risk.
- Barotrauma (fatal pressure changes near blades).
- Loss of commuting routes.
- Effects of forestry removal.
- Disturbance of feeding areas.
- Potential impacts on protected species.

Evidence suggests that wind farms can cause significant bat mortality and that some species may be displaced up to 1km from turbines.

### *Habitat Loss and Fragmentation*

The project would require:

- Approximately 31.86 hectares of forestry felling.
- New access roads.
- Turbine foundations.
- Hardstands.
- Drainage infrastructure.
- Spoil deposition areas.

These works have the potential to:

- Fragment habitats.
- Alter ecological connectivity.
- Disturb wildlife during construction.
- Cause long-term changes to ecological functioning.

Of particular concern regarding blanket bog habitats because of their biodiversity and carbon storage value.

### *Wider Biodiversity Effects*

The ecological impacts of the development extend beyond individual species and may affect broader ecosystem functioning, including impacts on:

- Birds.
- Bats.
- Mammals.
- Insects.
- Amphibians.
- Soil ecosystems.

While the EIAR focuses primarily on species-level impacts while giving insufficient consideration to broader ecosystem effects and long-term biodiversity decline.

### *Cumulative Ecological Impacts*

The ecological effects of the proposed development should not be considered in isolation. Potential cumulative impacts may arise from interaction with

- Existing wind farms.
- Permitted renewable energy projects.
- Grid infrastructure.
- Habitat fragmentation across the wider region.

Even relatively low annual mortality or displacement rates may become significant when considered cumulatively over the operational lifetime of multiple developments.

### *Precautionary Principle*

Scientific uncertainty remains regarding:

- Bird collision rates.
- Bat fatalities.
- Population-level impacts.
- Effectiveness of mitigation measures.
- Long-term ecological consequences.

Permission should not be granted unless it can be demonstrated beyond reasonable scientific doubt that protected habitats and species will not be adversely affected.

### Conclusion

The Tirawley Wind Farm is proposed within a sensitive ecological landscape containing blanket bog, forestry and habitats used by protected bird and bat species. Significant uncertainty remains regarding collision mortality, habitat loss, species displacement and cumulative ecological effects. The EIAR contains acknowledged data gaps and relies on modelling assumptions that may underestimate impacts. In the absence of sufficient scientific certainty, the proposal conflicts with biodiversity protection objectives of Irish and European environmental law and fails to demonstrate that significant adverse effects on protected species and habitats can be avoided

## 2. Landscape & Scenic Impact

The area includes sensitive landscapes, visible from the Wild Atlantic Way and other designated scenic routes, which would be adversely affected by this wind farm. The visual intrusion on the unique coastal and rural landscape is unacceptable and contrary to the policies outlined in the Mayo County Development Plan regarding landscape protection and visual amenities.

(Reference: Mayo County Council submission, EIAR Chapter 17 - Traffic and Transport, Pages 9-10; Planning Statement, Pages 69-71)

### *Environmental and Ecological Concerns*

The Lacken area includes sensitive habitats such as blanket bogs and areas with ecological significance under the Habitats Directive. The large volumes of peat to be extracted and the disturbance to these habitats could have long-term detrimental effects on biodiversity and peatland restoration efforts.

(Reference: Appendix 1.6 Community Engagement Report, Pages 13-14; Planning Statement, Pages 69-71)

### *Industrial-Scale Development in a Sensitive Coastal Landscape*

The proposal consists of **16 turbines with a tip height of 135m**, making them prominent structures visible over a wide area. The development is situated between Ballycastle and Killala in a landscape that forms part of the wider setting of:

- The Wild Atlantic Way
- Céide Fields
- Downpatrick Head
- Lackan Strand
- The Western Way walking route
- Numerous scenic roads and viewpoints in Mayo and Sligo

These landscapes derive their value from their expansive views, undeveloped character, coastal scenery and strong sense of place. The introduction of large wind turbines would substantially alter these landscape characteristics.

### *Conflict with Scenic Landscape Objectives*

The sensitivity of the receiving environment is evidenced by the scope of assessment specifically required by An Coimisiún Pleanála, including consideration of:

- Sensitive and vulnerable coastal landscapes.
- Scenic routes in Mayo and Sligo.
- Designated viewpoints.
- The setting of the protected Lacken Gazebo Folly.
- Visual impacts on tourism and heritage assets

The requirement for detailed assessment reflects the recognised importance and vulnerability of these landscapes.

In my view, the proposed development would conflict with the objectives of the Mayo County Development Plan that seek to protect scenic landscapes, visual amenities and the environmental qualities upon which tourism and local identity depend

### *Impact on Tourism Landscape*

The visual impacts of the proposed development extend beyond landscape appearance and have implications for tourism and recreation in North Mayo.

The application acknowledges the importance of key tourism assets including:

- Downpatrick Head.
- Céide Fields.
- The Wild Atlantic Way.
- The developing "Céide Coast Experience".
- Regional walking and cycling routes.

Visitors are attracted to the area because of its

- Unspoilt scenery.
- Wild coastal landscapes.
- Natural heritage.
- Cultural landscape
- Sense of tranquillity and remoteness

The introduction of a large-scale wind energy development into this landscape has the potential to diminish the experience associated with these attractions and may undermine the area's tourism appeal.

### *Cumulative Visual Impact*

The landscape effects of the proposed development should not be assessed in isolation.

Consideration should also be given to the cumulative effects arising from:

- Existing wind farms.
- Permitted wind farms.
- Associated electricity infrastructure.
- The gradual industrialisation of the wider landscape.

While the impacts of a single development may be considered acceptable in isolation, the combined effect of multiple developments can result in a gradual erosion of landscape character and visual quality over time.

There is a risk that continued large-scale energy infrastructure development could contribute to the incremental industrialisation of the North Mayo landscape, contrary to the area's scenic and tourism value.

### *Landscape as More Than a Visual Resource*

Landscape is more than a visual resource. It contributes significantly to:

- Community identity.
- Local heritage.
- Cultural value.
- Recreation.
- Tourism.
- Health and well-being.

Changes to landscape character therefore have social and cultural consequences in addition to visual effects. The potential loss of distinctive landscape qualities should be afforded substantial weight in the planning assessment.

### *Deficiencies in the Landscape Assessment*

The EIAR appears to contain a number of shortcomings, including:

- Underestimation of impacts on important tourism assets.
- Excessive reliance on photomontages and theoretical visibility analysis.
- Insufficient consideration of cumulative landscape change.
- Limited assessment of the experiential impact on visitors and recreational users.
- Inadequate weighting of the value of undeveloped coastal scenery and landscape character

## **Conclusion**

The proposed Tirawley Wind Farm would introduce sixteen 135m industrial turbines into a sensitive coastal landscape that forms part of the setting of nationally important tourism, recreational and heritage assets including the Wild Atlantic Way, Downpatrick Head and Céide Fields. The scale, height and visibility of the development would result in significant change to landscape character, diminish the visual quality of the area and contribute to the cumulative industrialisation of the North Mayo landscape. Accordingly, the proposal is contrary to the landscape protection and tourism objectives of the Mayo County Development Plan and cannot be regarded as consistent with the proper planning and sustainable development of the area

## **3. Tourism impact**

I am concerned about the cumulative impact the Tirawley wind farm will have on tourism in not only the Lacken Area but also in Ballycastle. Recently Glenora wind farm has been approved by An Coimisiún Pleanála for 22 turbines. The coast road from Lacken to Ballycastle is an extremely important part of the Wild Atlantic Way and is a extremely important economic asset to the area. The cumulative effect of Tirawley, Glenora, Keerglen and potentially Clydagh will have on tourism in the area cannot be ignored. The communities involved have worked extremely hard over the years to promote the areas and recently launched Failte Ireland and Mayo County Council tourism plan for the area is a significant boost for the area. This cumulative wind energy development that is planned for the northwest coast of Mayo is eroding the future that our communities can have. The Lacken

Ballycastle coastline is impressively historic with the Céide fields complex and down Patrick head, the future that residents could have will become negligible if **An Coimisiún Pleanála** do not consider fully the cumulative impact of all projects in the area. I do not believe that the applicant has fully considered all the cumulative effect.

### *Strategic Tourism Importance of the Area*

The proposed wind farm is located close to several nationally and internationally important tourism assets, including:

- The Wild Atlantic Way.
- Downpatrick Head.
- Céide Fields and Visitor Centre.
- Lacken Strand.
- Killala Heritage Town.
- The Western Way walking trail.
- The "Céide Coast Experience" tourism initiative.
- EuroVelo Atlantic Coast Cycle Route.

These attractions collectively form a significant component of the tourism economy of North Mayo.

The Mayo County Development Plan recognises tourism as a key economic sector and seeks to protect the landscape, environmental and heritage resources upon which it depends.

### *Impact on the Tourism Product*

Visitors are attracted to North Mayo because of:

- Wild Atlantic coastline.
- Open and undeveloped landscapes.
- Archaeological heritage.
- Natural beauty.
- Outdoor recreation opportunities.
- Sense of remoteness, tranquillity and place.

The proposed sixteen turbines, each with a tip height of 135 metres, would become prominent features within the landscape and would be visible from a range of tourism and recreational locations.

As tourism in North Mayo is strongly landscape-dependent, significant changes to landscape character have the potential to affect the visitor experience and the attractiveness of the area as a tourism destination.

### *Conflict with the Céide Coast Tourism Strategy*

The recently developed **Céide Coast Experience**, which aims to increase visitor numbers and promote North Mayo as a premier coastal tourism destination.

The attraction of this tourism initiative is based upon an undeveloped coastal landscape, dramatic views and cultural heritage assets.

The introduction of large wind turbines risks undermining the very qualities being marketed by Fáilte Ireland and Mayo tourism bodies.

### *Visitor Attitudes and landscape sensitivity*

The EIAR relies upon studies suggesting that tourism is not generally adversely affected by wind farm development. While such studies provide useful context, their findings are not universally applicable.

Evidence indicates that:

- Visitor attitudes vary depending on landscape type.
- Coastal and heritage landscapes are among the most sensitive locations.
- Visitors place significant value on scenic quality and unspoilt views.
- Tourism impacts can be more pronounced where multiple developments are visible within the same landscape.

For this reason, it is important that tourism impacts are assessed in the specific context of North Mayo rather than relying solely on broad national or international studies.

### *Wild Atlantic Way and Cumulative Impacts*

Although the turbines are not located directly on the Wild Atlantic Way route, they would form part of the wider visual setting experienced by visitors travelling through North Mayo.

Key concerns include:

- Deterioration of scenic views.
- Industrialisation of the coastal landscape.
- Reduced sense of wilderness and remoteness.
- Cumulative visual effects when considered alongside existing and permitted wind farm developments.

The cumulative effect of Tirawley, Glenora, Keerglen and other proposed developments should be assessed comprehensively, rather than considering each project in isolation.

### *Economic Implications*

Tourism is identified as an important contributor to the local economy through:

- Hotels, guesthouses and B&Bs.
- Restaurants, cafes and pubs.

- Visitor attractions.
- Outdoor recreation providers.
- Heritage and cultural tourism services.

While the proposed development may create temporary construction employment and limited long-term operational jobs, any reduction in the area's tourism appeal could have broader and more enduring economic consequences.

## **Conclusion**

The proposed Tirawley Wind Farm would be located within the setting of some of County Mayo's most significant tourism assets, including the Wild Atlantic Way, Downpatrick Head, Céide Fields and the emerging Céide Coast Experience.

When considered alongside existing, permitted and proposed wind energy developments in North Mayo, the proposal would contribute to a substantial cumulative change in landscape character. This risks diminishing the scenic quality, sense of place and visitor experience that underpin the area's tourism economy.

In my view, the applicant has not adequately demonstrated that the cumulative tourism and landscape impacts of the proposed development have been fully assessed. Accordingly, the proposal conflicts with the tourism and landscape protection objectives of the Mayo County Development Plan and is not consistent with the proper planning and sustainable development of the area.

## **4. Cumulative Impacts with Glenora, Keerglen and Other Wind Energy Developments**

### ***Cumulative Landscape, Tourism and Environmental Impacts***

A significant concern arising from the proposed Tirawley Wind Farm is its cumulative impact when considered alongside existing, permitted and proposed wind energy developments in North Mayo, including the recently approved Glenora Wind Farm, the proposed Keerglen Wind Farm, and other associated energy infrastructure. The environmental effects of Tirawley cannot be assessed in isolation. Rather, they must be considered within the context of the increasing concentration of large-scale wind energy developments across the wider North Mayo landscape.

The scale and height of modern turbines, as noted by Mayo County Council, raise questions about the suitability of this site compared to previous assessments.

(Reference: Mayo County Council submission, EIAR Chapter 17, Pages 9-10)

The combined effect of multiple wind farms has the potential to fundamentally alter the character of the landscape between Killala, Lacken, Ballycastle and Downpatrick Head. Individually, each development may be presented as acceptable; however, the cumulative presence of numerous wind farms, substations, grid connections, access roads and associated infrastructure can result in a gradual industrialisation of a landscape that is currently valued for its rural, coastal and largely undeveloped character.

Particular concern arises regarding the cumulative visual impact on nationally important tourism assets, including:

- The Wild Atlantic Way.
- Downpatrick Head.
- Céide Fields and Visitor Centre.
- The proposed Céide Coast Experience.
- The Western Way walking route.
- EuroVelo Atlantic Coast Cycle Route.

Scenic routes and viewpoints throughout North Mayo.

Visitors are attracted to North Mayo because of its open landscapes, dramatic coastal scenery, archaeological heritage, tranquillity and sense of remoteness. While a single wind farm may not significantly alter these qualities, the progressive addition of multiple large-scale wind energy developments has the potential to erode the landscape character upon which the tourism economy depends. The cumulative impact on visitor perception, scenic amenity and the area's tourism brand has not been adequately addressed.

The cumulative effects on biodiversity are also a matter of concern. Protected bird and bat species do not recognise individual development boundaries. Habitat loss, disturbance, collision risk and displacement associated with one project may be compounded by the effects of neighbouring developments. In particular, the cumulative impact on Hen Harrier foraging habitat, flight corridors and wintering activity requires careful consideration. Even relatively small impacts from individual projects may become significant when experienced across a wider landscape used by protected species.

Furthermore, cumulative ecological effects may arise from the combined impact of forestry clearance, habitat fragmentation, road construction, peatland disturbance and associated grid infrastructure. The assessment of these impacts is inherently complex and subject to significant uncertainty. In circumstances where scientific uncertainty remains regarding cumulative effects on protected habitats and species, the precautionary principle should apply.

There is also concern regarding the cumulative impact on local communities. Residents of North Mayo are being asked to accommodate not one but multiple large-scale renewable energy developments across the same geographical area. The combined impacts on landscape character, residential amenity, road infrastructure, tourism potential and quality of life may be substantially greater than the impacts identified for any individual project considered in isolation.

## **Conclusion**

The cumulative effects assessment does not adequately address the combined impacts of the proposed Tirawley Wind Farm together with Glenora, Keerglen and other existing, permitted and proposed energy developments in North Mayo. When considered collectively, these projects would contribute to the progressive industrialisation of a sensitive coastal landscape, place additional pressure on biodiversity and ecological networks, and undermine the tourism and amenity value of the area. Accordingly, it has not been demonstrated that the cumulative environmental, landscape and socio-economic effects of the proposal are acceptable or consistent with the proper planning and sustainable development of the area

## 5. Noise & Residential Amenity

My home is identified as **receptor H52** in the EIAR.

My home is located approximately:

- **808 metres from turbine AT15 stated in Table 15.1**
- **1015 metres from turbine AT16**
- **1818 metres from turbine AT14**

I am concerned that the EIAR assessment does not adequately address the real-world residential impact of having three large-scale turbines located within approximately one kilometre of my home.

### *Noise Impact Concerns*

The proposed turbine AT15 is located only approximately **808 metres from my dwelling (H52)**. I consider this separation distance insufficient to protect residential amenity, particularly given the scale of modern turbines and the quiet rural environment in which my home is located.

The assessment relies heavily on predicted modelling. I request that An Coimisiún Pleanála carefully examine whether the modelling fully represents the actual conditions experienced at H52, including:

- night-time noise impacts when background noise levels are naturally low;
- periods with specific wind direction where turbines AT15, AT16 and AT14 may all contribute simultaneously;
- amplitude modulation (“blade swish” or changing character of turbine noise);
- low-frequency noise impacts;
- the cumulative noise contribution from multiple turbines.

A predicted compliance with a numerical noise limit does not necessarily mean that there will be no significant loss of residential amenity. A change from the existing quiet rural soundscape to continuous operational turbine noise has the potential to materially affect my enjoyment of my home, garden and surrounding property.

I request that a more precautionary assessment be applied to H52 given its proximity to AT15 and the combined influence of three turbines.

|     |        |        |      |      |      |      |      |      |
|-----|--------|--------|------|------|------|------|------|------|
| H49 | 517632 | 838261 | 28.2 | 32.3 | 36.1 | 38.4 | 38.7 | 38.7 |
| H50 | 517638 | 837109 | 28.3 | 32.4 | 36.2 | 38.5 | 38.8 | 38.8 |
| H51 | 517742 | 837283 | 28   | 32.1 | 35.9 | 38.2 | 38.5 | 38.5 |
| H52 | 517457 | 838516 | 27.8 | 31.9 | 35.7 | 38   | 38.3 | 38.3 |
| H53 | 516738 | 836261 | 30.4 | 34.5 | 38.3 | 40.6 | 40.9 | 40.9 |
| H54 | 517836 | 837697 | 27.6 | 31.7 | 35.5 | 37.8 | 38.1 | 38.1 |
| H55 | 516774 | 835227 | 28.7 | 32.8 | 36.6 | 38.9 | 39.2 | 39.2 |

### *Shadow Flicker – Dwelling H52*

The EIAR identifies my dwelling, **H52**, as being approximately **808 metres from turbine AT15**.

Table 15.3 of Chapter 15 predicts that H52 will experience:

- **45 hours 58 minutes worst-case shadow flicker per year**

- **04:36 hours expected shadow flicker per year**
- **37 minutes maximum expected shadow flicker per day**

This exceeds the **2006 Wind Energy Development Guidelines recommendation of no more than 30 minutes per day by 7 minutes.**

I consider this significant because the applicant's own modelling confirms that my home is one of the receptors where the guideline threshold is exceeded. The issue is not a theoretical concern — the impact has already been identified within the EIAR.

While the EIAR refers to mitigation measures in **Section 15.2.9.3**, including turbine control measures/shadow flicker control systems, I do not consider reliance on future mitigation alone to be sufficient justification for permitting a development that is predicted to create an exceedance at my home.

The mitigation proposal effectively acknowledges that turbines have the potential to cause unacceptable shadow flicker impacts unless active intervention occurs. This raises concerns regarding:

- long-term reliability of control systems;
- monitoring and enforcement arrangements;
- responsibility if mitigation fails;
- whether shutdown will occur automatically or only after complaints;
- how compliance at H52 will be independently verified throughout the lifetime of the wind farm.

|     |       |       |       |
|-----|-------|-------|-------|
| H49 | 44:35 | 05:30 | 00:34 |
| H50 | 00:00 | 00:00 | 00:00 |
| H51 | 47:55 | 08:36 | 00:35 |
| H52 | 45:58 | 04:36 | 00:37 |
| H53 | 74:00 | 11:29 | 00:33 |
| H54 | 32:58 | 05:37 | 00:31 |
| H55 | 40:42 | 07:06 | 00:33 |

I further note that the **Draft Revised Wind Energy Development Guidelines (2019)** recognise that modern turbine technology can prevent shadow flicker and move towards a **zero shadow flicker approach at sensitive receptors.**

Given that H52 is already predicted to exceed the 2006 daily guideline, I submit that the appropriate standard should be prevention rather than management.

The Tirawley Wind Farm application has not demonstrated with sufficient certainty that nearby residents can be adequately protected from operational noise, low-frequency noise, amplitude modulation and the associated impacts on residential amenity and quality of life. Accordingly, the following matters should be carefully reviewed by An Coimisiún Pleanála

#### ***Concerns Regarding Predicted Noise Levels***

The Board's review identified concerns that:

- Predicted operational noise levels exceed recommended night-time limits at some receptors.
- Compliance in some cases depends on turbine curtailment and operational restrictions.
- Several turbines do not achieve preferred separation guidance distances.

Any development requiring ongoing operational intervention to remain compliant demonstrates that residential amenity impacts are a genuine planning concern.

### *Sleep Disturbance and Health Effects*

Even where statutory noise limits are technically achieved, residents may still experience:

- Sleep disturbance.
- Stress and annoyance.
- Reduced quality of life.
- Mental wellbeing impacts.
- Loss of enjoyment of their homes and gardens.

International studies and WHO guidance which recognise noise annoyance and sleep disturbance as important health outcomes associated with environmental noise exposure.

### *Low Frequency Noise and Infrasound*

Conventional noise assessments may not fully capture:

- Low-frequency noise.
- Infrasound.
- Pressure sensations.
- Amplitude modulation ("swishing" and "thumping" effects).

Numerous international studies, government inquiries and medical papers are cited to argue that these effects remain scientifically contested and should not be dismissed as irrelevant.

While the applicant considers the risk from infrasound and low-frequency noise to be negligible, the evidence presented does not eliminate reasonable scientific uncertainty regarding their potential effects on residential amenity and wellbeing.

Recent reporting on an investigation undertaken by Delft University of Technology highlights concerns regarding the potential health and amenity effects of prolonged exposure to low-frequency noise. The findings suggest that conventional dBA-weighted noise assessments may not fully capture low-frequency sound impacts

### *Residential Amenity Beyond Noise Limits*

Planning authorities should consider more than simple decibel compliance.

Additional considerations include:

- Rural tranquillity.
- Character of the area.
- Outdoor enjoyment of properties.
- Visual dominance of turbines.
- Psychological impacts of continuous turbine operation.
- Cumulative effects on residents.

Residential amenity can be harmed even where statutory noise thresholds are satisfied.

### *Separation Distances*

Research and guidance from a number of international jurisdictions indicate that greater separation distances may be appropriate for modern large-scale wind turbines due to their increased height and generating capacity. Studies have suggested that effects such as noise annoyance, sleep disturbance and loss of residential amenity may extend beyond minimum planning setbacks in certain

circumstances. International recommendations and best-practice guidance frequently advocate more conservative setback distances than those proposed as part of this development.

Of particular concern is the proximity of several turbines to nearby dwellings. While the proposed layout may comply with applicable minimum standards, compliance alone does not necessarily demonstrate that residential amenity will be adequately protected. Given the scale of the proposed turbines and the rural character of the receiving environment, it has not been conclusively demonstrated that the proposed separation distances are sufficient to avoid adverse effects on nearby residents.

### ***Reliance on Mitigation and Curtailment***

The proposal includes:

- Noise Optimisation Modes.
- Curtailment strategies.
- Operational monitoring.
- Control systems designed to reduce turbine output during certain conditions.

If mitigation is required to prevent exceedances, then the underlying impact is already significant and should be given substantial weight in the planning balance.

### ***Precautionary Principle***

- Scientific debate on low-frequency noise and infrasound remains unresolved.
- Evidence regarding long-term health effects is contested.
- Significant uncertainty exists regarding cumulative impacts on nearby residents.

Therefore, the precautionary principle should apply where there is reasonable doubt regarding protection of residential amenity and human health.

### ***Telecommunications & Remote Working***

I am concerned that the application has not adequately demonstrated that existing telecommunications services will be protected throughout the construction and operational phases of the proposed development. Reliable telecommunications infrastructure is essential to my household, as both my wife and I work remotely and depend upon consistent access to mobile communications, broadband services, internet connectivity and remote access systems for our employment.

The planning documentation does not clearly establish whether the proposed turbines, associated infrastructure or construction activities could affect existing telecommunications services, nor does it provide sufficient detail regarding monitoring, mitigation or contingency measures should service disruption occur. Given the increasing importance of digital connectivity to employment, education, business activity and everyday life in rural areas, any interruption or degradation of telecommunications services could have significant consequences for affected households.

Remote and hybrid working play an important role in supporting the sustainability of rural communities by enabling people to live locally while maintaining access to employment opportunities. Consequently, the protection of telecommunications infrastructure is not merely a technical matter but an important component of rural development, population retention and community sustainability.

Accordingly, I submit that the Board should be satisfied that the proposed development will not adversely affect existing telecommunications services and that appropriate monitoring and mitigation measures are in place. In the absence of such certainty, insufficient regard has been given to the potential impact on households whose livelihoods depend upon reliable digital connectivity.

## **Conclusion**

The Tirawley Wind Farm would be located in close proximity to a substantial number of residential properties, with 266 dwellings within 2 km of the proposed turbines. The development relies on operational curtailment and mitigation measures to achieve noise compliance, while acknowledged uncertainty remains regarding low-frequency noise, sleep disturbance and long-term residential amenity impacts. Given the scale of the turbines, the rural character of the receiving environment and the potential for significant adverse effects on nearby residents, it has not been demonstrated that the proposal is compatible with the protection of residential amenity or the proper planning and sustainable development of the area

## **6. Traffic and Infrastructure Impact**

The proposed development would give rise to significant impacts on the local road network during the construction phase due to the transportation of abnormal loads, turbine components, construction materials and associated heavy goods vehicles. The scale of the development will necessitate substantial road improvement works, including road widening, junction alterations,

temporary traffic management measures and modifications to existing infrastructure. These works have the potential to cause considerable disruption to local communities, businesses and road users over an extended period.

Particular concern arises regarding the suitability of the existing local road network to accommodate abnormal loads associated with the delivery of turbine components. Many of the roads within the area are rural in nature, serving local residents, agricultural traffic, school transport and tourism-related traffic. The proposed construction activities have the potential to significantly affect traffic flow, road safety and accessibility throughout the construction period.

As a local resident, I am concerned about the extent of disruption that the proposed road works and construction traffic would have on my daily activities, including travelling to work, attending appointments and accessing local services. The cumulative impact of road closures, traffic management measures and abnormal load deliveries may result in significant inconvenience for residents and has not been adequately addressed from the perspective of those living within the affected area.

I am also not satisfied that sufficient structural assessment and traffic analysis have been undertaken in relation to Palmerstown Bridge to conclusively demonstrate its suitability for the proposed abnormal load movements. Given the critical role of this structure within the proposed haul route, greater certainty is required regarding its structural integrity, load-bearing capacity and ability to safely accommodate the exceptional transport requirements associated with the development. In the absence of such certainty, there remains a risk that unforeseen impacts on the bridge and wider road network could arise during construction.

Furthermore, the assessment appears to focus primarily on the movement of construction traffic associated with the Tirawley Wind Farm in isolation. Greater consideration should be given to the

potential cumulative effects of construction traffic arising from other existing, permitted or proposed developments in the wider North Mayo area, particularly where these projects may overlap in construction timelines or utilise sections of the same road network.

## Conclusion

Given the scale of the proposed construction activities, the reliance on rural road infrastructure and the uncertainty regarding the suitability of key structures such as Palmerstown Bridge, it has not been adequately demonstrated that the development can be delivered without significant adverse effects on road safety, network efficiency, local accessibility and residential amenity. Accordingly, these matters warrant careful consideration by An Coimisiún Pleanála in determining the application

(Reference: EIAR Chapter 17 - Traffic and Transport, Pages 6-10; Appendix 1.6 Community Engagement Report, Pages 11-12)

## 7. Community Consultation

Concerns remain regarding the accessibility and effectiveness of the consultation process undertaken for this development. In particular, it is understood that only one public information event was held in the Ballina Manor Hotel on 6<sup>th</sup> June 2023, a venue located outside the immediate project area. Given the scale and significance of the proposed development, many residents may reasonably have expected that public information events would have been held within the affected local communities, including Lacken or Ballycastle, where those most directly impacted by the proposal could more easily participate and engage with the applicant.

Given the scale, visibility and long-term implications of the proposed development, it is not evident that the consultation process provided a sufficiently meaningful opportunity for local communities to engage with the project or influence its evolution. Furthermore, it has not been clearly demonstrated how concerns raised by residents regarding landscape impacts, tourism, biodiversity, residential amenity, traffic disruption and cumulative development pressures have been reflected in the final design of the proposal.

The level of concern expressed by local residents and community groups suggests that significant issues remain unresolved. Accordingly, I respectfully submit that the limited opportunities for local engagement, together with the apparent lack of meaningful incorporation of community feedback, should be taken into account when determining whether the proposed development represents the proper planning and sustainable development of the area.

## 8. Fire Safety

Fire safety is a relevant planning consideration for the Tirawley Wind Farm, particularly given the proposal includes both **16 wind turbines** and a **Battery Energy Storage System (BESS) with up to 150 MW storage capacity**. The Planning Commissioner's pre-application requirements specifically requested a **Fire Risk and Safety Assessment** and an **Emergency Response Plan** for the BESS, indicating that fire safety was recognised as a matter requiring detailed assessment.

### *Fire Safety Assessment – Insufficient Information*

The Fire Safety Assessment and Advice Report submitted with the application is a preliminary desktop study and does not provide sufficient information to enable a full assessment of the fire, explosion and environmental risks associated with the proposed Battery Energy Storage System (BESS).

### *Unspecified Battery Technology*

The report expressly states that:

“no particular product data or specifications have been provided”

and

“a make/model of BESS unit is not known”.

Consequently, the assessment is not based on a defined battery system and therefore cannot assess the actual characteristics of the technology proposed for deployment. Critical information including:

- battery chemistry,
- container configuration,
- fire suppression systems,
- gas detection systems,
- explosion venting arrangements, and
- thermal runaway performance

remain unknown at application stage.

As a result, the Planning Authority is being asked to assess a development for which the principal fire safety components have not yet been specified.

### *Preliminary Nature of the Assessment*

The report repeatedly acknowledges that it is preliminary in nature and may require substantial revision prior to construction. The report states that:

“the content of this Report may, in all likelihood, be outdated by the time of construction”

and further states that the report:

“MUST BE the subject of a full review prior to commencement of construction”.

The report also acknowledges that future changes in legislation, guidance, technology and design standards may require reassessment of the proposed development.

This raises concern that important aspects of the fire safety strategy remain unresolved and have effectively been deferred until after planning permission has been granted.

### *Reliance on Future Mitigation Measures*

Many of the key mitigation measures relied upon within the report are not presently developed and are instead proposed for completion at a later stage, including:

- Fire Risk Assessments.
- Emergency Response Plans.
- Consultation with the Fire and Rescue Service.
- Operational management procedures.
- Maintenance and inspection programmes.
- Staff training and competency procedures.

The report therefore relies heavily on future management arrangements rather than demonstrating that risks have already been fully assessed and mitigated.

### *Environmental Consequences Not Adequately Assessed*

The report principally addresses life-safety considerations and explicitly states that its purpose is to satisfy life-safety requirements rather than property protection considerations.

There is limited assessment of potential environmental consequences arising from a major BESS incident, including:

- contaminated firewater runoff,
- impacts on watercourses,
- groundwater contamination,
- soil contamination,
- peatland contamination,
- impacts on habitats and species,
- air quality impacts arising from smoke and off-gassing.

Given the ecological sensitivity of the receiving environment, these matters should be fully assessed as part of the planning application rather than deferred to future stages.

### *Fire Service Access and Water Supply*

The report acknowledges that firefighting arrangements remain unresolved and that consultation with the Fire and Rescue Service is still required regarding:

- firewater provision,
- hydrant requirements,
- site access,
- emergency response procedures, and
- operational preparedness.

These are fundamental fire safety design considerations which would reasonably be expected to be addressed before a planning decision is made.

### *Off-Site Fire Spread*

The report acknowledges that:

“there is a credible risk that a fire in the facility could spread beyond the site to the forestry/vegetation”

and further states that the risk could become:

“extremely high” during prolonged periods of hot or dry weather.

Despite this acknowledgement, no detailed quantitative assessment has been provided regarding:

- wildfire spread,
- radiant heat effects,
- peat ignition,
- forestry fire scenarios,
- or impacts on adjoining lands and environmental receptors.

## **Conclusion**

The Applicants Fire Safety Assessment and Advice Report is a preliminary desktop study rather than a detailed assessment of the proposed Battery Energy Storage System. The report is not based on a specified battery technology, repeatedly acknowledges that key design information remains unknown,

and confirms that further safety assessments, fire service consultations and emergency planning will be required prior to construction. The report also identifies numerous international BESS fires, explosions and thermal runaway incidents whilst providing limited assessment of environmental consequences including contamination of soils, watercourses and peatland habitats. Accordingly, the application fails to provide sufficient information to enable the competent authority to fully assess fire, explosion and environmental risks, contrary to the precautionary principle and the requirements of proper planning and sustainable development

## **9. Planning Policy Conflict**

### ***Conflict with the Mayo Renewable Energy Strategy***

The proposed development raises concerns regarding consistency with the Mayo Renewable Energy Strategy (RES).

The final turbine layout is not wholly located within lands identified by Mayo County Council as preferred locations for large-scale wind energy development:

- 3 turbines are located within a Tier 1 Preferred Large Wind Farm Area.
- 8 turbines are located within a Tier 2 Area Open for Consideration.
- 5 turbines are located on lands that are not designated within either tier, albeit within approximately 820 metres of designated areas.

While the Mayo RES allows wind energy proposals outside designated areas to be considered on their individual merits, the majority of the proposed turbines are not located within the areas identified by the planning authority as being most suitable for large-scale wind energy development.

In my view, the applicant has not adequately demonstrated that the siting of turbines outside the preferred areas can occur without unacceptable impacts on landscape character, biodiversity, residential amenity and tourism assets.

### ***Conflict with Landscape and Scenic Amenity Objectives***

The proposed development is located within a highly sensitive coastal landscape associated with:

- The Wild Atlantic Way.
- Céide Fields.
- Downpatrick Head.
- Lackan Strand.
- The Western Way walking route.
- Scenic roads and viewpoints identified within County Mayo and neighbouring County Sligo.

The Scoping Opinion issued by An Coimisiún Pleanála specifically required assessment of:

- Sensitive and vulnerable coastal landscapes.
- Scenic roads in Mayo and Sligo.

- Designated viewpoints.
- The setting of the protected Lacken Gazebo Folly.

The requirement for detailed assessment reflects the recognised sensitivity of the receiving environment.

In my view, the scale and visibility of the proposed development would conflict with County Development Plan objectives seeking to protect scenic landscapes, visual amenity, tourism assets and the character of North Mayo's coastal environment.

#### *Conflict with Residential Amenity Objectives*

The documentation accompanying the application identifies a number of issues relating to residential amenity, including:

- Predicted operational noise exceedances at certain receptors.
- Nine turbines not complying with recommended turbine separation criteria.
- Reliance on operational curtailment measures to achieve compliance.

A development that requires ongoing operational restrictions to avoid adverse impacts on nearby residents raises legitimate concerns regarding compatibility with planning policies that seek to safeguard residential amenity, quality of life and human health.

#### *Conflict with Biodiversity and Environmental Protection Objectives*

The proposed development site contains:

- Blanket bog habitat.
- Forestry.
- Protected bird interests.
- Bat populations.
- Watercourses connected to European sites.

The application documentation and review process identify a number of areas of uncertainty including:

- Collision risk modelling.
- Migratory bird assessment.
- Bat surveys.
- Cumulative ecological impacts.
- Potential transboundary ecological impacts.

Where uncertainty remains regarding impacts on protected species, habitats and ecological networks, there is potential conflict with environmental protection objectives contained within Irish planning legislation, the Habitats Directive and the Birds Directive.

### *Conflict with Tourism Objectives*

The Mayo County Development Plan policies support tourism development while protecting environmental and visual amenity. The proposal is located close to key tourism attractions and recreational assets including the Wild Atlantic Way and the emerging "Céide Coast Experience."

The policy conflict argument is that:

The industrialisation of a nationally important tourism landscape may be inconsistent with County Development Plan objectives that seek to develop tourism while protecting the scenic resources upon which that tourism depends.

### *Precautionary Principle*

There is significant scientific uncertainty remaining regarding:

- Biodiversity impacts.
- Long-term habitat effects.
- Bird and bat mortality.
- Cumulative landscape effects.
- Noise impacts.
- The effectiveness of certain mitigation measures.

The planning argument is therefore that where uncertainty exists regarding potentially significant environmental impacts, the precautionary principle should apply and planning permission should not be granted unless reasonable scientific doubt has been removed.

### Conclusion

While national and regional policy strongly supports the transition to renewable energy, such support does not outweigh the requirement that developments be appropriately sited and consistent with proper planning and sustainable development.

In my view, the proposed Tirawley Wind Farm conflicts with key objectives of the Mayo County Development Plan and the Mayo Renewable Energy Strategy due to:

- The location of a significant proportion of turbines outside preferred wind energy areas.
- Potential adverse effects on landscape character and scenic amenity.
- Risks to tourism assets and the visitor economy.
- Uncertainty regarding biodiversity impacts.
- Concerns relating to residential amenity.
- The cumulative effects of existing, permitted and proposed developments in North Mayo.

Taken together, these issues raise serious doubts as to whether the proposed development is compatible with the proper planning and sustainable development of the area. Accordingly, permission should be refused.

## 10. Human Health

I suffer from dilated cardiomyopathy, a serious cardiovascular condition that requires ongoing medical management and careful attention to my overall health and wellbeing. An important aspect of managing this condition is maintaining a stable living environment that supports adequate rest, good sleep quality and the avoidance of unnecessary physical and emotional stress.

The World Health Organization (WHO) recognises environmental noise as an important public health issue and identifies links between noise exposure, sleep disturbance, annoyance, stress responses and wider health and wellbeing outcomes. While I acknowledge that the scientific literature regarding wind turbine-related health effects remains the subject of ongoing research and debate, there is broad consensus that sleep disturbance and chronic environmental annoyance can adversely affect quality of life and general wellbeing.

The Draft Revised Wind Energy Development Guidelines (2019) acknowledge that certain characteristics of wind turbine noise, including amplitude modulation, tonal noise and low-frequency noise, may result in greater levels of disturbance and annoyance than would be indicated by noise levels alone. As such, the assessment of residential amenity should extend beyond simple compliance with numerical noise limits.

I am concerned that the EIAR adopts a largely generalised assessment approach and does not appear to consider whether individuals with pre-existing medical conditions may be more susceptible to the effects of environmental disturbance, noise-related sleep disruption or prolonged stress. While I do not suggest that the proposed development will necessarily give rise to direct health effects, I believe that the potential consequences of sleep disturbance and reduced residential amenity for medically vulnerable residents warrant careful consideration.

In circumstances where a person with a serious cardiovascular condition resides in close proximity to a proposed wind energy development, I respectfully submit that a precautionary approach should be adopted. The Board should be satisfied not only that technical noise standards can be achieved, but also that the residential amenity, wellbeing and quality of life of affected residents can be adequately protected throughout the operational lifetime of the development.

The EIAR reports understates the potential health and wellbeing impacts of the proposed wind farm and relies too heavily on studies that conclude there is no proven direct causal relationship between wind turbines and adverse health effects. Scientific evidence remains contested and that the precautionary principle should apply

.

### *Applicant's Position*

The EIAR states that there is **no reliable or consistent evidence that wind farms directly cause human health problems**, relying on reviews such as:

- NHMRC Australia (2013).
- Frontiers in Public Health review (2014).
- International health agency assessments.

The applicant concludes that properly sited wind turbines are not associated with adverse health effects and that any effects are primarily related to annoyance from noise.

### *Objector's Main Argument*

While direct causal links between wind turbines and specific medical conditions remain disputed, the issue of sleep disturbance, annoyance and reduced quality of life remains an important planning consideration.

A number of studies and reviews have identified associations between environmental noise exposure and:

- Sleep disturbance.
- Chronic annoyance.
- Anxiety and stress.
- Headaches.
- Tinnitus.
- Heart palpitations.
- Reduced wellbeing.
- Loss of residential amenity.

The issue is therefore not solely whether direct health impacts can be conclusively proven, but whether the proposed development may adversely affect the living conditions and wellbeing of nearby residents.

### *WHO Recognition of Health Effects*

WHO guidance identifies several outcomes associated with environmental noise exposure, including:

- Noise annoyance.
- Sleep disturbance.
- Potential cardiovascular effects associated with long-term environmental noise exposure.
- Impacts on mental wellbeing and quality of life.

Even where direct disease outcomes cannot be demonstrated, persistent interference with sleep, tranquillity and residential amenity can represent a significant adverse effect on wellbeing.

### *Noise, Infrasound and Low-Frequency Noise*

I remain concerned that the assessment may not have fully addressed the potential effects of infrasound and low-frequency noise on nearby residents. The applicant concludes that these forms of noise are not likely to give rise to significant health impacts; however, this remains an area of ongoing scientific discussion and uncertainty.

Studies referenced in the wider literature have examined potential associations between exposure to infrasound and low-frequency noise and a range of effects, including:

- Sleep disturbance.
- Increased stress and annoyance responses.
- Reduced wellbeing and quality of life.
- Cognitive and concentration-related effects.
- Potential cardiovascular impacts associated with prolonged environmental noise exposure.

While scientific opinion on these issues remains divided, the absence of complete scientific certainty should not be interpreted as evidence that all potential risks have been excluded. Given the proximity of a substantial number of residential properties to the proposed turbines, it is important that any remaining uncertainty regarding the effects of infrasound and low-frequency noise is carefully considered.

Furthermore, the assessment should not focus solely on whether direct health effects can be conclusively proven. Consideration should also be given to potential impacts on residential amenity,

sleep quality, tranquillity and overall wellbeing, particularly within a rural environment where background noise levels are typically low. In circumstances where reasonable scientific uncertainty remains, a precautionary approach is warranted to ensure that the amenity and wellbeing of nearby residents are adequately protected

### *Emerging Environmental Health Concerns*

Concerns about potential long-term environmental health risks from:

- Microplastic emissions from turbine blade erosion.
- Bisphenol-A (BPA) release.
- PFAS contamination associated with turbine materials and renewable energy infrastructure.

These issues are still emerging and not fully addressed within the EIAR.

### *Precautionary Principle*

Where credible scientific evidence identifies the potential for impacts on health, wellbeing or residential amenity, planning authorities should exercise caution before permitting development that could adversely affect nearby residents.

In my view, the burden rests with the applicant to demonstrate that the proposed development can operate without creating unacceptable impacts on residential amenity, sleep quality and wellbeing throughout its operational lifetime.

## **Conclusion**

While the precise nature and extent of potential health effects associated with wind turbine development remain the subject of ongoing scientific debate, there is recognised evidence linking environmental noise exposure with sleep disturbance, annoyance, stress and reduced quality of life. These factors are particularly relevant in a rural setting where existing background noise levels are generally low and where residents have a reasonable expectation of tranquillity and residential amenity.

In my own case, I suffer from dilated cardiomyopathy, a serious cardiovascular condition that requires ongoing medical management and careful attention to my overall wellbeing. The maintenance of good sleep quality, adequate rest and the avoidance of unnecessary stress are important aspects of living with this condition. Consequently, I am particularly concerned about the potential for noise disturbance, sleep disruption and reduced residential amenity arising from the proposed development. Given the proximity of a substantial number of dwellings to the proposed turbines, the reliance on mitigation measures and operational controls to achieve compliance, and the acknowledged uncertainty surrounding the long-term effects of turbine noise, low-frequency noise and amplitude modulation, I believe a precautionary approach is warranted. It has not been demonstrated with sufficient certainty that the proposed development can operate without adversely affecting the health, wellbeing and residential amenity of nearby residents, particularly those with pre-existing medical conditions. Accordingly, these concerns should be afforded significant weight in the Board's assessment of the proposed development.

## **12. Peat, Water & Carbon – Summary of Objection**

The proposed Tirawley Wind Farm is located within a sensitive peatland environment where construction and operational activities have the potential to adversely affect peat soils, hydrology,

water quality and carbon storage. Given the ecological and environmental importance of peatland systems, a precautionary approach is required.

### *Peatland Concerns*

The site contains areas of blanket bog and peat soils which perform important ecological and carbon storage functions. This objection argues that:

- Excavation for turbine foundations, roads and hardstands will disturb peat deposits.
- Peat removal can release stored carbon into the atmosphere.
- Peatland damage may be permanent and difficult to restore.
- Carbon losses from construction may offset some of the claimed climate benefits of the project.

### *Water Quality Risks*

The construction of the proposed development would require:

- Extensive earthworks.
- Road construction.
- Forestry removal.
- Drainage works.
- Spoil deposition areas.

These activities have the potential to increase the risk of:

- Sediment release into streams.
- Changes in drainage patterns.
- Deterioration in surface-water quality.
- Impacts on downstream aquatic ecosystems and protected sites.

### *Hydrology and Hydrogeology*

While the EIAR concludes that hydrological and hydrogeological effects can be mitigated through drainage controls, buffer zones and pollution prevention measures, it has not been demonstrated with sufficient certainty that significant long-term impacts can be avoided. Peatland hydrological systems are particularly complex and sensitive to disturbance, and predictive modelling cannot fully account for future environmental conditions, including the potential effects of more frequent extreme weather events associated with climate change. In light of these uncertainties, greater consideration should be given to the potential for unforeseen impacts on water quality, drainage patterns and downstream aquatic environments over the operational life of the development

### *Carbon Balance*

The applicant places significant emphasis on the carbon savings associated with renewable electricity generation. However, the carbon balance assessment may not fully reflect the potential carbon losses arising from:

- Peat excavation and disturbance.
- Peat oxidation following drainage and exposure.
- Forestry felling and land-use change.
- Habitat degradation and loss of carbon sequestration capacity.

Given the sensitivity of peatland environments, it is important that any claimed carbon benefits are assessed against the full lifecycle carbon impacts of the development.

### **Conclusion**

The proposed development is located within a peatland environment that provides important carbon storage, biodiversity and hydrological functions. While mitigation measures are proposed, significant uncertainty remains regarding the extent of peat disturbance, the effectiveness of hydrological mitigation measures, the potential for long-term impacts on water quality and drainage systems, and the true carbon balance of the project.

In my view, the applicant has not demonstrated with sufficient certainty that these impacts can be avoided or adequately mitigated throughout the lifetime of the development. Accordingly, the precautionary principle should apply, and substantial weight should be given to the potential adverse effects on peatland integrity, water resources and carbon storage in the Board's assessment of the proposed development.

## **13. Cumulative Effects – Summary of Objection**

A significant concern arising from the proposed Tirawley Wind Farm relates to the adequacy of the cumulative effects assessment. The environmental assessment places considerable emphasis on the effects of the development in isolation and does not sufficiently evaluate the combined impacts of existing, permitted and proposed renewable energy developments across North Mayo, including projects such as Glenora, Keerglen and associated electricity infrastructure. The environmental consequences of Tirawley should be assessed within the context of the wider pattern of renewable energy development that is emerging across the region.

### *Landscape and Visual Impacts*

The cumulative landscape effects of multiple wind energy developments are likely to be substantially greater than the effects of any individual project considered in isolation. Tirawley would add to existing and consented wind farms, substations, grid infrastructure and associated development, contributing to the progressive industrialisation of a landscape that is currently valued for its rural, coastal and scenic character. The combined visibility of multiple developments has the potential to alter the character of the wider North Mayo landscape and diminish the sense of openness, remoteness and natural beauty that defines the area.

### *Biodiversity and Ecological Effects*

The cumulative impacts on biodiversity require careful consideration, particularly in relation to protected bird and bat species. While the impacts of an individual development may appear limited, habitat loss, disturbance, displacement and collision mortality can accumulate over time when multiple wind energy developments are located within the same region. Protected species such as the Hen Harrier utilise extensive landscapes and are unlikely to be affected by a single project in isolation. There is a risk that the combined effects of multiple developments may place additional pressure on vulnerable populations and ecological networks throughout North Mayo.

Furthermore, the ongoing fragmentation of habitats through forestry removal, road construction, turbine infrastructure and associated development has the potential to erode ecological connectivity across the wider landscape. Existing assessments may underestimate these broader regional effects.

### *Tourism and Cultural Landscape*

North Mayo's tourism offering is heavily dependent upon its high-quality landscape, coastal scenery, cultural heritage and sense of place. While a single wind farm may not fundamentally alter visitor perceptions of the area, the cumulative presence of multiple wind energy developments could gradually erode the landscape qualities that attract visitors to the region. Particular concern arises regarding the potential combined effects on key tourism assets, including the Wild Atlantic Way, Downpatrick Head, Céide Fields and the emerging Céide Coast Experience. These attractions derive much of their value from the surrounding landscape setting, which may be progressively altered by continued large-scale energy development.

### *Residential Amenity and Community Impacts*

The cumulative effects assessment should also consider the combined impact of multiple developments on local communities and residential amenity. These impacts extend beyond individual noise assessments and include the visual presence of multiple wind farms, increased traffic movements, infrastructure works and the gradual loss of rural character. Residents are being asked to accommodate not one development but a growing concentration of renewable energy projects within the same geographical area. The cumulative effect on quality of life, amenity and community identity warrants careful consideration.

### *Assessment Uncertainty*

A recurring concern throughout the application is the extent to which the cumulative assessment relies on modelling assumptions and predictive methodologies. Uncertainty remains regarding the potential cumulative impacts on migratory birds, protected species, tourism, landscape character and long-term environmental change. Given the complexity of these interactions and the scale of development proposed across North Mayo, it is difficult to conclude with confidence that all cumulative effects have been fully identified and assessed.

## Conclusion

The cumulative effects assessment does not adequately demonstrate that the combined impacts of existing, permitted and proposed renewable energy developments across North Mayo have been fully assessed. When considered in combination with developments such as Glenora, Keerglen and associated infrastructure, the Tirawley Wind Farm would contribute to the progressive industrialisation of a sensitive coastal landscape, increased pressure on biodiversity and ecological networks, and the gradual erosion of the scenic and tourism assets upon which the region depends. In the absence of a robust assessment demonstrating that these cumulative effects are acceptable, it has not been established that the proposed development is consistent with the proper planning and sustainable development of the area

## 14. Conclusion and Grounds for Refusal – Summary of Objection

The Board is required to determine whether the proposed Tirawley Wind Farm represents the proper planning and sustainable development of the area. In my submission, the application has failed to demonstrate that the proposed development can proceed without giving rise to significant adverse effects on residential amenity, biodiversity, landscape character, tourism, human health and the wider environment.

Particular concern arises in relation to my home (Receptor H52), where the applicant's own assessment predicts shadow flicker impacts in excess of the recommended daily guideline limit. When considered alongside concerns regarding operational noise, cumulative effects from multiple turbines, and the potential impacts on health, wellbeing and quality of life, it has not been demonstrated that residential amenity can be adequately protected over the lifetime of the development.

The proposed Tirawley Wind Farm would introduce a large-scale industrial development into a sensitive North Mayo coastal landscape and would conflict with the landscape, tourism and environmental protection objectives of the Mayo County Development Plan. The proposal gives rise to unresolved concerns regarding biodiversity, protected species, peatland disturbance, hydrology, telecommunications, traffic and infrastructure, as well as the cumulative effects of existing, permitted and proposed wind energy developments throughout the region.

Furthermore, acknowledged uncertainties, assessment limitations and information gaps within the application documentation prevent the competent authority from concluding with sufficient certainty that significant adverse effects can be avoided. In these circumstances, the precautionary principle should apply.

For these reasons, I respectfully submit that the proposed **Tirawley Wind Farm** is not an appropriate development in this location and cannot be regarded as consistent with the proper planning and sustainable development of the area. Accordingly, I respectfully request that **An Coimisiún Pleanála refuse permission** for the proposed development in order to protect residential amenity, environmental quality, landscape character, biodiversity, tourism and the long-term interests of local communities in North Mayo

I also wish to adopt and support the detailed submission made by Lacken Ballycastle Community Group in relation to the proposed Tirawley Wind Farm development (PAX16.324258). In particular, I

endorse the concerns raised regarding cumulative wind farm developments across North Mayo, impacts on the Ceide Fields cultural landscape, effects on tourism and recreation, biodiversity impacts, inadequacies in community consultation and the assessment of the Battery Energy Storage System. While I do not repeat those detailed arguments in full, I request that they be considered as forming part of my submission.

Thank you for considering my submission.

Yours faithfully,

David Kelly