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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 writing as a concerned citizen with a degree in Earth and Ocean Science from the University of Galway. I would like to make a submission about the proposed Tirawley Wind Farm project, submitted by Constant Energy Limited, to formally lodge my objection to this Strategic Infrastructure Development application. This development poses significant and irreversible risks to the local environment, biodiversity and local residents. In particular the proposal threatens critical habitats for protected species such as the Hen Harrier, involves substantial habitat removal including over 4 km of hedgerow, and raises serious concerns regarding visual impact, traffic disruption, and inadequate community consultation. These issues, coupled with shortcomings in the Environmental Impact Assessment Report, justify a refusal of permission for this project.

I wish to adopt and support the detailed submission made by Lacken Ballycastle Community Landscape Protection Group in relation to the proposed Tirawley Wind Farm development (PAX16.324258). In particular, I endorse the concerns raised regarding cumulative wind farm development across North Mayo, impacts on the Céide 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 this submission.

I am writing this observation as not only a concerned citizen, but as a qualified geologist with years of experience and a deep knowledge of renewable energy construction and the damage caused to local areas along with the environment.

Having reviewed the public information provided and engaged with the community consultation materials, I wish to raise the following concerns:

1. Residential and Property Impact

The proposed wind turbines are located uncomfortably close to existing homes. Despite the stated 540m buffer, the visual impact, noise pollution, and potential shadow flicker effects will significantly disrupt our residential amenity and quality of life. There is also a genuine concern about the likely devaluation of property prices due to proximity to large-scale industrial turbines.

(Reference: Appendix 1.6 Community Engagement Report, Pages 7-13)

2. Site Suitability and Landscape Impact

The location has been described as scattered and not suitable for a development of this scale. 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)

3. Environmental and Ecological Concerns

The site 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)

4. Impact on Hen Harrier Habitat

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.

5. Traffic and Infrastructure Impact

The construction phase will bring significant disruption to the local road network due to the delivery of abnormal loads and turbine components. The existing roads will require widening and modifications that will impact local traffic flow and road safety. The scale of this impact has not been adequately mitigated in the proposal. The bridge at Palmerstown is not able to take the amount of trucks and material that will be going into these turbines.

There is not full and efficient structural survey done on the bridge which is the only access from Killala to Lacken. This is of major concern if the turbines are being transported through Moygownagh there is an even smaller bridge for the lorries carrying the turbines to cross. I am speaking from experience when I say it is not possible and the landowners at these bridges have not given permission for the road to be widened so the development cannot go ahead as a result.

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

6. Community and Socio-Economic Issues

While I acknowledge the need for renewable energy and some regional economic benefits, the socio-economic impact on sustainable family farms and local amenities is concerning. The proposal does not sufficiently address the community's needs or provide clear, direct benefits to local residents. The proposed community benefit package remains vague and unconvincing.

(Reference: Appendix 1.6 Community Engagement Report, Pages 7-14)

7. Cumulative Impact and Strategic Considerations

The project overlaps with areas where other developments are planned or existing, increasing cumulative environmental, visual, and infrastructural pressures. 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)

8. Geology & Soils

There has been no survey of watercourse diversions carried out in this report. There is no place where it says where all the water will be diverted once the turbine construction has started.

The groundwater data report shows that the bedrock in the region is a poor Aquifer so this will affect drainage and could lead to contamination flowing into the Lacken Saltmarsh which is a protected area.

The report also states that landslides are common in areas of peat soils near the surface and in fine coarse range materials such as glacial till which is all found in the proposed boundary of the windfarm.

I am a qualified geologist and it states in the report that all geological investigations were carried out by a desk study. No actual field studies were carried out for the Environment Protection report. This is wholly inadequate proper field studies and tests should have been carried out as part of this planning process. The developer is clearly trying to cut corners by saving money.

The following are is the makeup of the bedrock geology in the locality of the proposed windfarm:

Downpatrick Formation:

Sedimentary rock types including shore marine mudstones and siltstones, alluvial and deltaic sandstones and siltstones along with fully marine bioclastic limestones interbedded with calcereous shales.

The Moyny Point Limestone:

Tabular-bedded limestone and shale.

The Mullaghmore Sandstones:

Series of cyclical units of siltstones and shales which coarsen upwards into coarse grained sandstones.

As a geologist I can state that limestone rocks are highly erosive in water and they will be exposed to a lot of water once construction begins. When limestone is eroded it can lead to sinkholes and caves in the bedrock think the Burren in Co. Clare. As the Lacken area is in close proximity to the Céide Fields and there is ample evidence that there is neolithic farms in the area this is of grave concern. National heritage could and would be destroyed should this windfarm go ahead as planned.

There is a strong possibility of landslides occurring should the proposed windfarm go ahead the turbines are to be constructed at elevated heights of over 130 metres. There is a series of houses situated below the prospective turbines should landslides occur houses and families will be destroyed.

(Reference: EIAR Chapter 8 Soils & Geology)

Soils:

The following observations can be observed from the soil section in the report. There will be 3 peat and soil storage areas within an abandoned quarry at Lacken Hill, together with 14 other discrete sites within the redline boundary. It does not state where the 14 discrete sites are but I believe the soil and peat will be dumped near the turbines this could lead to severe overloading of the land which will lead to potential landslides.

It states in the report that potential effects for the building of the turbines on the land as moderate significance, permanent and negative. This indicates a lasting irreversible degradation to the ecosystem which they state cannot be fully mitigated. Negative means it reduces the overall quality of the environment, lowers species diversity or diminishes ecological resistance.

It states in the report that soil sealing will occur when floating roads are constructed which will put agricultural land and biodiversity at increased risk of flooding. A detailed bedrock report has not been carried out to confirm otherwise. Stockpiling of peat can give rise to increased pore pressures and the possibility of a bog burst or peat slide. When peat is excavated it lead to the release of carbon dioxide (CO₂) and nitrous oxide (NO₂) which are both greenhouse gases. Peat being excavated will also give release to methane (CH₄) which is another greenhouse gas.

(Reference: EIAR Chapter 8 Soils & Geology)

9. Hydrology and Chemical Pollution

Inland fisheries state no turbines should be constructed high above groundwater as it could lead to contamination. The proposed windfarm is in a highly elevated area. No mapping of the wells that people use for their drinking water has been carried out. An extensive amount of homeowners in the Lacken /Ballycastle areas still use wells for their water as they are not connected to public water supplies.

Wells cannot be drilled in the local area due to red water. There is no mention of this in the report. There is mention of a siltbuster mineral being used to help unclog the build up of water once turbines have been constructed. There is no mention of this being tested in the local area and what affects this could have on the saltmarsh or local ecosystems. Is the chemistry of the siltbuster harmful to animals or the ecosystem this has not been investigated.

The turbines are to be constructed over geological faults which could affect the flow paths of water. Geological faults were caused by mini earthquakes at the time that the Atlantic Ocean was forming 200 million years ago. Lava would have come up through crevasses so the geological ingredients in the rock below the turbines will be different to the surrounding bedrock samples of these faults have not been taken. There could be minerals that could be potentially harmful if excavation is started. Increased pollution will raise the pH of the soil which will lead to a more acidic environment.

The geology and hydrology of the area are not separate. These entities are intertwined and movement of soil rock and minerals will have a serious impact when it is disturbed and mixed with water there could be unknown chemical reactions. There has been no study of the impact of the mixture of water with the soils and minerals so an accurate report of this document cannot be carried out so the application should be null and void as a result.

It is stated that microplastics will come off the turbines. The microplastics are called Bisphenol-A which the World Health Organization has stated that more than a picogram can be harmful to humans. The turbines will certainly give off more than a picogram of plastic which is going to cause untold damage to humans and the environment.

(Reference: EIAR Chapter 9 Hydrology and Hydrogeology)

10. Noise

The noise report that was carried out for this application is wholly unacceptable. Noise receptors were placed in the wrong areas and do not tally up with the actual local areas that they claim to be. No permission was got from the owners of the land where the reports were conducted so this application cannot be accepted. They have falsified claims in the noise report as to where tests were carried out.

Again, another desk study was carried out for 8 different locations. How can a desk study be deemed acceptable the so-called experts have not seen the area or the affect the noise will have on the local residents. It is very easy to pay someone to do a report and have it say that it won't have a serious effect on people's lives. But the cumulative effect of hitherto long term exposure will have untold lasting damage.

11. Grid Coordinates

Finally, my last observation for this submission is that the grid coordinates that were given in this report for the placement of the wind turbines is wrong. Turbine 2 is 257 metres off where it is supposed to be located as per the table and diagrams in the chapter on turbine placement. This is too much of a discrepancy and cannot be allowed this is not a typo it is a great error and I would respectfully ask ACP to reject this application as a result

In conclusion, I respectfully submit that the proposed Tirawley Wind Farm project is not appropriate for this location due to the significant negative impacts on residential amenity, local landscape, ecology, infrastructure, and the community. I urge An Coimisiún Pleanála to refuse permission for this development in the interests of proper planning and sustainable development.

Thank you for considering my submission.

Yours faithfully,

Seán McDonnell