An Coimisiún Pleanála - Case reference: PA16.318701

Located in the townlands of Glenora, Altderg, Keerglen, Ballykinlettragh, Ballycastle, Ballyglass, Killeena, Glencullin and Lugnalettin, Co. Mayo. (www.glenorawfplanning.com)

SID

Mary Clarke-Boyd, Ballinlena, Carrowmore-Lacken, Ballina, Co Mayo, F26K2A8

Summary of the 7 observations on Glenora Wind Farm recommending the refusal of Glenora Wind Farm application by An Coimisiun Pleanala

Observation 1 - The false logic is proposing unclassified land where 15 of the turbines are located should be designated as Tier 1 and Tier 2 of the Mayo RES 2011-2020 completely undermines the site plan and undermines local planning rules in County Mayo and elsewhere in Ireland. The reasons for designation as unclassified are obvious when you examine the terrain and the water courses and slope in this area of the site.

Observation 2 – Adverse environmental impacts conflicting with proper planning and sustainable development objectives of RES 2011-2020 and the Mayo County Development Plan 2020-2028

Observation 3 - The preservation of rare species and the impact of the surrounding environment was not adequately considered showing that National and European Environmental Policy is to preserve rare species, such as, Saxifrage Hirculus L conflicts with policy of ensuring wind farms comply with these policies.

Observation 4 - Inadequate evaluation of the meaning of Cultural Heritage and Biodiversity, and the disregard of the archaeology of the Ceide Fields and Mayo Boglands System and the carbon sequestration value of the Boglands of North Mayo. Visuals just considered.

Observation 5 - The neglect and risk in ignoring important aspects of health and well-being in the North Mayo population as outlined in Glenora Wind Farm EIAR, Chapter 5 on Population and Human Health. The inadequacy, in particular, of the Source Pathway and Receptor (SPR) model in assessing health of the population in the Glenora hinderland. The presentation of very outdated research in Appendix 5.1 and no cognisance taken of recent scientific advances in this field of research.

Observation 6 - The Ceide Fields and the Boglands of North Mayo are an invaluable under researched international archaeological site and the mapping of the extend of the site indicates that that all of the Boglands of North Mayo should be designated as a UNESCO site. It warrants greater consideration than just assessing whether the wind turbines break the ridgeline to be observed from the Ceide Fields.

Observation 7 – It was quite challenging to gather the essential information in writing these observations. Firstly, because the complexity of presentation of the EIAR and the numerous Appendices. Secondly observations by individuals and prescribed bodies were not available on the An Coimisiun Pleanala site until the 13 January which was very close to the submission date and thirdly while some information was available on the An Bord Pleanala old cases site on the Inagh and the Glenora applications in 2003 and 2004, the full case application was not available to the

public and endeavouring to purchase the same from An Coimisiun Pleanala came too late to include in these observations.

Observation 1 - False logic in terms of unclassified land designation in the Glenora Site plan

McCarthy Keville O'Sullivan Ltd (MKO) argue that the unclassified lands designation in the Mayo Renewable Energy Strategy 2011-202 (RES) are the same as Tier 1 and Tier 2 is totally unsubstantiated. There are no grounds for granting planning permission to the Glenora Wind Farm application, on that basis.

The MKO Response Report and the Glenora Planning Report say that the turbines on unclassified land are acceptable as they resemble Tier 1 and Tier 2 and share 'similar characteristics and suitability factors with the classified lands' as outline in the quotation below focusing on 'identical landcover and topography'.

'7 No. turbines proposed in the Proposed Development site are located within Tier 1 (Large Windfarm) and Tier 2 (Open for Consideration) lands for wind turbine provision in the Mayo RES. The remaining areas of the proposed site, although unclassified, share similar characteristics and suitability factors with the classified lands and the areas where the turbines are proposed all have identical landcover within a highly modified landscape of low landscape sensitivity. 15 No. turbines are proposed on lands that are unclassified in the RES.'

'This Glenora Planning Report also outlines the rationale for the areas where the turbines are proposed to be placed as being appropriate for the siting of turbines.

'The "unclassified" lands within the Proposed Development site share the same characteristics as the Tier 1 and Tier 2 areas in terms of proper planning and sustainable development principles due to their identical landcover and topography, and therefore the entire site should be considered as a mix of Tier 1 and Tier 2.'

Fifteen of the 22 turbines are located in unclassified lands, where coincidently the gradient exceeds 10% and is therefore prone to bog slides. MKO argue that these unclassified lands are now suitable for the placement of the majority of the turbines. This is biased and flawed reasoning. These lands were classified by experts under the Landscape Appraisal Guidelines for County Mayo, by reference to the Renewable Energy Strategy (RES). Their classification cannot be arbitrarily altered now by MKO or indeed An Coimisiun Pleanala (ACP) – to do so would legally undermine this classification system nationwide.

MKO also suggests that the RES is now outdated relative to developments in national renewable energy policy but still selectively quotes it when it supports its arguments. Irish planning law stands until it is amended. It cannot be arbitrarily changed willy, nilly when the occasion suits a planning application.

Observation 2 – Adverse environmental impacts conflict with the principles of proper planning and sustainable development in 'a vision for Mayo' in RES 2011-2020 and in the Mayo County Development Plan 2022-2028.

The Renewable Energy Strategy (RES) in respect of County Mayo sets out a tiered classification system for lands which are considered suitable for wind energy developments. Notwithstanding this classification, the protection of the County's 'natural amenity and local economies' is dependent on the assets of tourism, culture heritage, archaeology, walkways, etc.

This aspect is emphasized and supported in various observations of the Lacken Ballycastle Landscape Protection Community. Based on previous peat slides and flood occurrences, Kevin Loftus outlines the anticipated risk of flooding and landslides on this site by many river headwaters.

In the course of their observations on this specific planning application, **An Taisce** also observe the dangers of installing wind turbines on these sensitive waterways and they say that the Strategic Infrasturtural Development (SID) needs to be assessed under Directive 4 of the Water Framework Directive (WFD) to ensure high water quality and no pollution effects.

The Department of Housing, Local Government and Heritage observes the potential for bog slippage, pollution downstream and impacts on bird, fish and plant life. They emphasise the vulnerability of the drainage of the Inagh Bog Natural Heritage Area (NHA). Turbines 1, 2, 3 and 4 are located in close proximity to the NHA and indeed the Inagh river, as shown on this map.

The RES in respect of County Mayo also emphasises the need for *proper planning and sustainable development*. On page 52 it states:

'Notwithstanding the potential areas identified in this Strategy all proposed renewable developments will be assessed on the principles of proper planning and sustainable development, ensuring minimal adverse environmental impact, including flooding, and taking full account of the presence and requirement to protect all Natura 2000 sites and (proposed) Natural Heritage Sites. Projects will be subject to Habitats Directive Assessment where considered appropriate.'

The EIAR Chapter 6 (Biodiversity) does not include an evaluation of the botanical or habitat surveys, as pointed out in observations by the NPWS. By this omission, MKO are clearly not applying *the principles of proper planning and sustainable development.*

The Glenora Planning Report states the following on page 40:

'Following a review of the constraints applied in the RES it is unclear as to why there is a different designation to the Tier 1 and Tier 2 areas within the subject application site. As outlined in Figure 4, project level constraints were applied to the site and this left a "remaining viable area". Hence, it is submitted that the location of the turbines is suitable for wind energy development and as such, this area should be regarded as favourably designated for wind energy development. The siting of the turbines is deemed appropriate and is not expected to result in adverse environmental effects.'

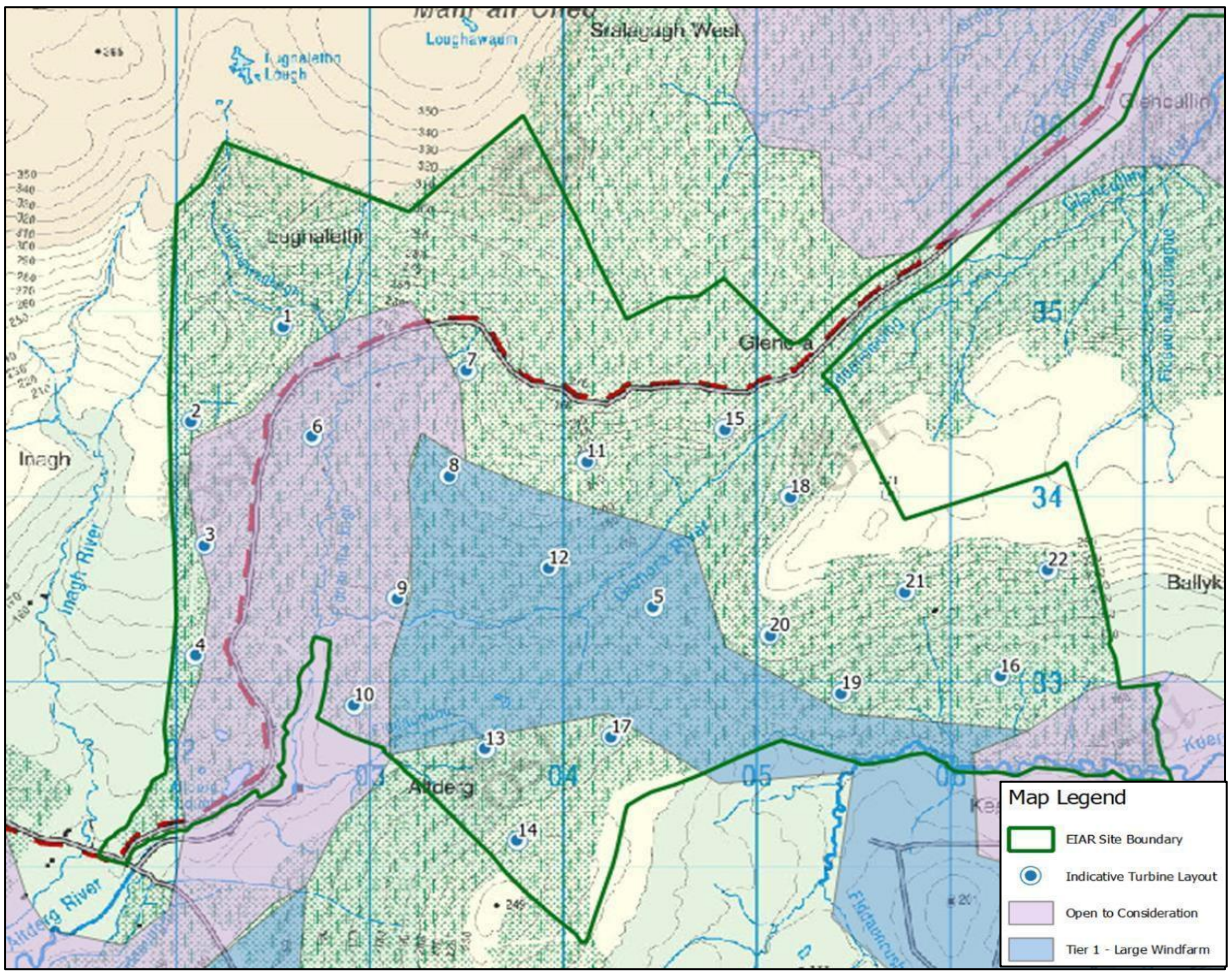
The following comments are to be considered in consultation with Figure 6 Site Layout with RES Designation Overlay in the Glenora Planning Report by MKO below.

It shows on the western perimeter of the site Turbine 1, 2, 3, and 4 positioned just at the headstream tributaries of the Inagh River. It shows the Inagh river flowing south along the western boundary of the site. It is very clear why the area is unclassified in green and that the pink area is the 'open to consideration'.

The Inagh with its very sensitive habitats flows south into the Altderg river and eventually into the Owenmore river, all salmanoid rivers. The Western Way walking route (outlined in broken red markings) goes through the middle of the proposed wind farm. To say the least, it is incongruous that one would inflict turbines of this scale on walkers (local or tourist) who seek peace and solitude – not turbine noise and infra noise.

Turbines 20, 21, 22, 19 and 16 are positioned to the east on the northern banks of the Keerglen river. This is just across the river from 8 other proposed turbines in Keerglen that are the subject of an appeal to An Coimisiun Pleanala at present. The Glenora turbines referred to already, are nearest to the Glenamoy Special Area of Conservation in the Ballykinletra and Arghoose valley of the Umumasharry river. I will discuss these internationally protected special habitats later.

Figure 6 Site Layout with RES Designation Overlay in Glenora Planning Report by MKO



It is a sloped landscape also with the risks of bog slippage and the decimation of bogland that will take place with 2 windfarms being co-located. Both wind farm proposals (Keerglen and Glenora) need to be jointly assessed for their cumulative impacts and what is in effect project splitting. Both proposals also involve significant tree felling and this impact on peat slippage also needs evaluation. The impacts of heavy vehicles on saturated peat terrain also needs evaluation, as well as annoyance and interference with the daily life of the area from a high volume of traffic. All of this disturbance will undoubtedly have adverse environmental effects. Please refer to Appendix 1 which outlines the serious impact of location beside the Inagh river and Inagh SAC, bird mortality, Golden Plover and other species of bird, and lack of habitat surveys in this area which is very well stated by the DHLGH.

There are only three turbines 8, 12 and 5 in the Tier 1 on the RES designation. This area includes the Alderg River and the Fiddaunfrankagh rivers running south to the Owenmore River and the Keerglen running east and then north to Bunathrahir Bay beside Ballycastle town. The map below shows that many of the turbines in the unclassified lands are located very close to the boundary of either Tier 1 or Tier 2 lands, with 8 being less than 250m distance. They are not suitably positioned on an unclassified area despite the developer's erroneous contention that it should be classified as Tier 1 or Tier 2 because of 'identical landcover and topography'. This points to the fact that location of turbines even in Tier 1 or Tier 2 are not suitable if a decision had to be made to to located them just outside in the unclassified area. Why could they not have been located in the blue zone, Tier 1, which is designated as suitable for windfarm development?

Observation 3 – The objective of National and European Environmental Policy is to preserve rare species, specifically Saxifrage Hirculus L.

Saxifraga Hirculus L. has protective status in Ireland, specifically listed on Annex II of the EU Habitats Directive. This species is primarily found in the Northwest of Ireland, particularly in County Mayo and County Sligo, where it is protected due to its fragmented distribution and the conservation concerns. The species is also listed under the Flora Protection Order, which mandates the protection of rare and threatened plants in Ireland.

Saxifraga Hirculus L grows on the banks of the Owenpollaphuca tributary of the Ballinglen River runs through the townlands of Ballinkinletragh and Aughoose. This river and species is located in the Glenamoy Special Area of Conservation (SAC) and has a protected status. This is not referenced in Chapter 6 on Biodiversity on the Glenora Wind Turbine application and it is one of the most significant aspects of biota there. Both wind farms (Glenora and Keerglen) situated on each side of the Keerglen river drain into the Ballinglen river. The Keerglen river is one of 3 tributaries of the Ballinglen river. Ireland has an international responsibility to protect this species through its designation under Annex II and Annex IV of the EC Directive 92/43/ (EU Habitats Directive).

The Saxifraga Hirculus L. plant in the Glenamoy SAC is located on the Owenpollaphuca tributary of the Ballinglen river north of the Keerglen tributary of the Ballinglen River. **(SAC, see Map 1 and Map 2 below).**

The Executive Summary of Muldoon C S, Waldren S and Lynn, D (2015) Monitoring recommendations for Marsh Saxifrage (Saxifraga hirculus L.) in the Republic of Ireland. Irish Wildlife Manuals, No. 88. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland highlights the international significance and Ireland's responsibility in preserving this plant. It outlines the plant *as 'A perennial herbaceous plant with a wide circumpolar distribution, Saxifraga hirculus L. has a highly fragmented distribution outside the northern Polar Regions. In Europe, its range has been reduced dramatically with records from the 19th century showing the loss of habitats, mainly due to habitat degradation and fragmentation, afforestation and drainage. Given its restricted distribution, Ireland has an international responsibility to protect this species through its designation under Annex II and Annex IV of the EC Directive 92/43/EEC (EU Habitats Directive). In Ireland, ……., at nine sites (with eighteen populations) in northwest Co. Mayo and one site in Co. Sligo. Restricted to mineral flushes in what is otherwise ombrotrophic blanket bog,* ***it is one of the rarest flowering plants in Ireland****.'*

The Glenora Wind Farm (in the townlands of Glenora, Altderg, Keerglen, Ballykinlettragh, Ballycastle, Ballyglass, Killeena, Glencullin and Lugnalettin, Co Mayo) is drained by a number of rivers, the Glenora and the F tributaries of the Altderg flowing south and by the Keerglen river flowing east and then north that feeds into the Ballinglen river and then into Ballycastle Bay. The Keerglen river is one of the three main tributaries of the Ballinglen river of which a part is located on the Glenamoy SAC 000500, which is under a European Union (EU) Directive. Changes to the hydrology by increased waterflow and the danger of bogslides or decreased water flow due to excavation of the bog, taking out 0.5 hectares of forestry in the case of the Keerglen Wind Farm and 116 hectares by the Glenora Wind Farm, pollutants from construction moving downstream, etc, will impact on this sensitive and rare plant in the vicinity of the Owenpollaphuca and the Ballinglen rivers in the Glenamoy SAC.

The Keerglen Wind Farm (that is the subject of an appeal with An Coimisiun Pleanala) has 8 turbines located in the south of the Keerglen valley and the Glenora Wind Farm, with 22 wind turbines [PA16.500344 a Strategic Infrastructure Development (SID), at present up for decision with An Coimisiun Pleanala] are located in very close proximity to one another.

The Keerglen Wind Farm is located on the southern banks of the Keerglen river and the tributaries at its source meander through the wind farm itself. The Glenora Wind Farm is on the southern banks of the Keerglen river with turbines very closely packed together. The source of the Keerglen river is in the Ummerantarry Natural Heritage Area and runs west to east between the Keerglen river valley.

The Keerglen River drains the Natural Heritage Area of Ummerantarry Bog and flows directly through Keerglen and Ballinakinnletra and into Bunathahir Bay in Ballycastle, Co Mayo. **The red lined area where the turbines are located** in both instances of Keerglen Wind Farm and Glenora Wind Farm is totally inadequate and such red lines do not take sufficient cognisance of the impacts of such developments on the Keerglen river itself and the downstream implications. The visual, environmental, archaeological, hydrological and other aspects of this location on the Boglands of North Mayo and on the preserved and as yet fully unresearched Ceide Fields complex are ignored.

This is a link to Irish legislation on Ummerantarry Natural Heritage Area 001570, (Irish Statute Book, order 2005) which is the source of the Keerglen river and its many tributaries.
Ummerantarry Bog NHA 001570, order 2005
https://www.irishstatutebook.ie/eli/2005/si/480/made/en/print

Wind Farm EIARs in the Ballycastle/Kilfian and Belderrig area ignore the connectivity and interaction of habitats outside their red line areas. To show this in the case of Glenora and Keerglen where each wind farm is on opposite side of the Keerglen river, I will quote from the Keerglen application, as follows:

In Chapter 7.3.16 on designated sites and habitats in the Keerglen EIAR it states that *'The Glenamoy Bog Complex SAC (Site Code: 000500) is located ~1km northeast of the Wind Farm Site'.* That statement is inaccurate, as The Glenamoy SAC is actually North West of the Keerglen and Ballinglen rivers with a small pocket of the Glenamoy SAC on to the north of the Ballinglen river**.** *It continues to state – 'This SAC is of ecological importance due to a number of E.U. Annex I habitats, including two priority habitats blanket bog and machair. The site also supports populations of Habitats Directive listed plant and animal species. The SAC stands at a significant elevation above the Ballinglen River (~149m). Surface and groundwater will flow from the SAC towards the Ballinglen River. Therefore, the SAC has no potential to be affected by the proposed development.'*

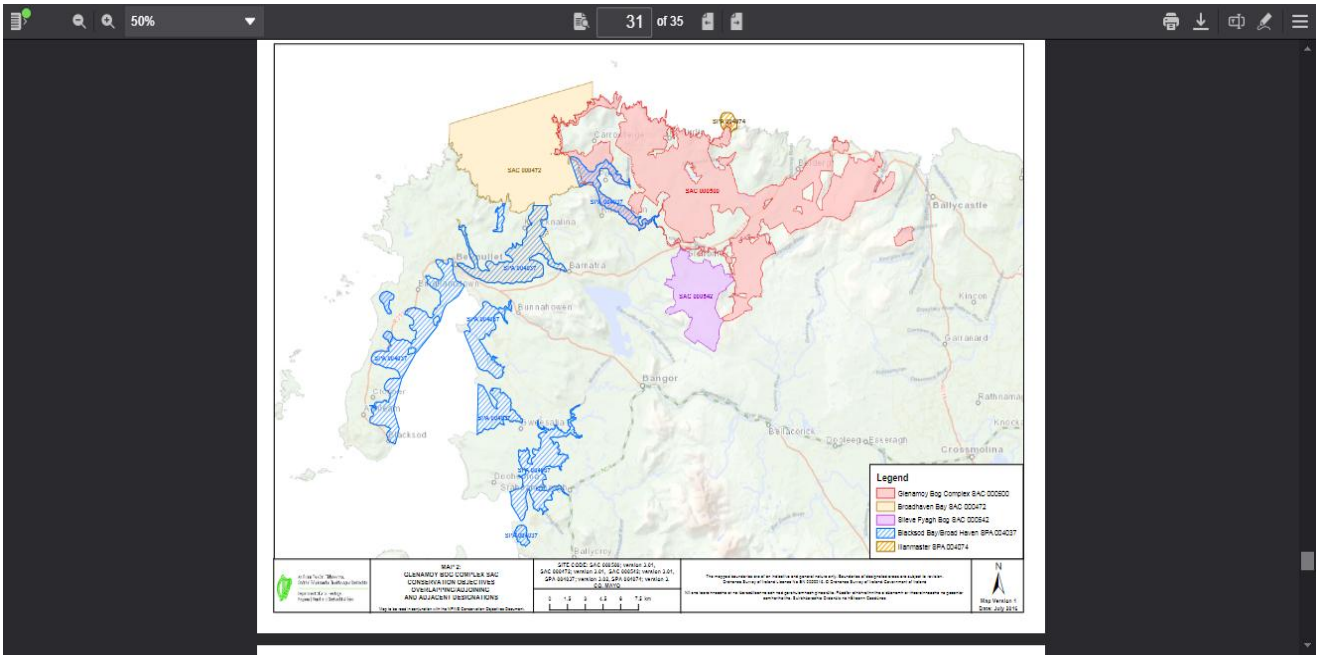
It is clear from this statement that the Owenpollaphuca, the last western tributary of the Ballinglen river is not taken into consideration by the developers. The Saxifraga Hirculus L (see **Map 2**) is a part of the Glenamoy SAC IE000500.

The Glenora Wind Farm, by reference to chapter 6.12 states that the wind farm is 0.2 km from the site boundary of the Glenamoy SAC and the 1.2 km from the grid cable route. It further goes on to state that the Glenamoy SAC is not a Zone of Influence and no further assessment is required as no impact-source-pathway exists. I have to totally disagree with this statement as else where in Chapter 6 on Biodiversity, it is acknowledged that pollution will occur through the waterways.

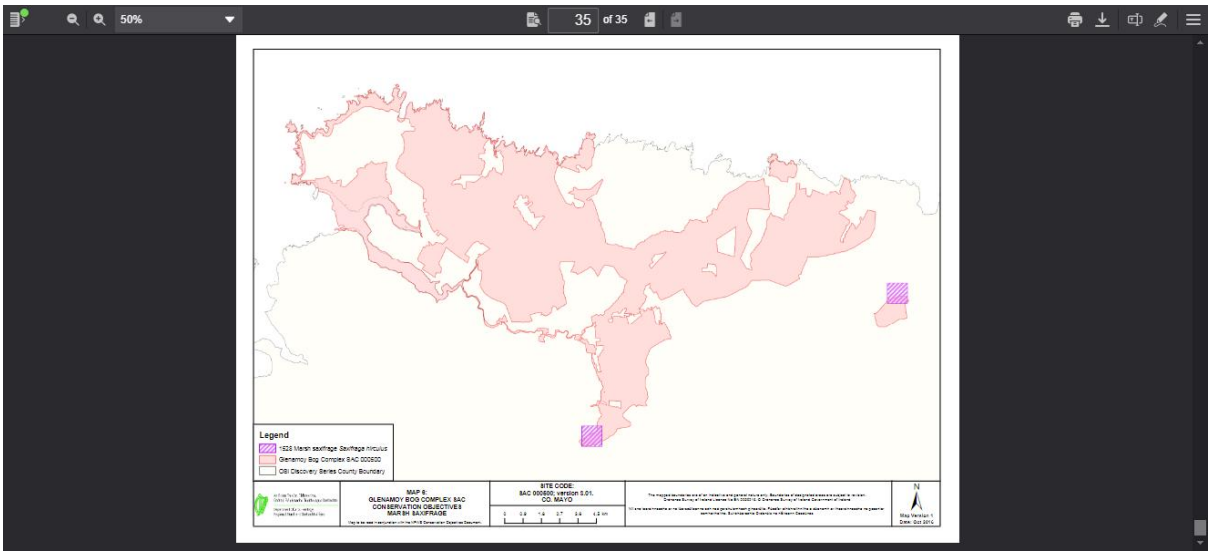
'6.12 There is potential for the construction activity to result in the runoff of silt, nutrients, and other pollutants such as hydrocarbons and cementitious material into these watercourses. This could result from the removal of scrub and conifer plantation, movement of peat or the use of concrete and other construction materials. The proposed development will cross a number of small drainage ditches, which are not themselves ecologically sensitive but do provide connectivity to the larger watercourses that surround the site. The construction phase of the proposed watercourse crossings represents a potential indirect effect on the identified aquatic receptors in the form of habitat degradation through water pollution.

These effects on water quality are fully described in Chapter 9 'Water' of this EIAR and are described here in relation specifically to ecology. Note: Whilst this impact assessment is in the habitats section, it also assesses the impact on the proposed development on aquatic species including salmonids, lamprey, white clawed crayfish, European eel, aquatic invertebrates, and other aquatic species. The proposed development will have no direct impact on the aquatic habitat of these species and there is no potential for disturbance. The only pathway for effect to occur is as a result of water pollution and this is discussed in this section in relation to habitats and species.'

So, if this pollution can impact through the waterways it will also impact on all sensitive flora, including the particular species Saxafraga Hirculus L, therefore further assessment is required in this case and not granting planning permission is the only effective way to mitigate against destruction of the habitat. Increased in water flow or landslide events can totally destroy this sensitive habitat or decreased water in flow equally impact the Owenpollaphuca habitat and thereby the flora therein.



Map 1 - The Glenamoy SAC is in pink and the relevant area to the Keerglen Wind Farm is the little pink island to the right on the Owenpollaphuca tributary of the Ballinglen river flowing into Bunatrahir Bay.



Map 2 - This is a visual depiction in the colour purple of the location of the Saxifraga Hibuscus L. on the banks of the Owenpollaphuca tributary of the Ballinglen river.

Granting planning permission to the installation of wind farm turbines in proximity to this plant is in direct conflict with the objective of its preservation and is at variance with national legislation and European Directives on biota.

Observation 4 – The Glenora Wind Farm EIAR neglects important aspect of health and well-being in the chapter on Population and Human Health.

The World Health Organisation (WHO) and the Health Services Executive (HSE) define health 'as a state of complete physical and social well-being and not merely the absence of disease or infirmity'. In this observation I will endeavour to show that aspects of quality of life and general well-being could be influenced by environment noise, including from wind turbines and traffic disruption, etc.

Wind turbine noise may be below defined decibel thresholds, but still cause sleep disturbance, stress and annoyance, especially to vulnerable population like children, adults with particular vulnerabilities. Noise annoyance can be influenced by background noise, infrasound sensitivity, individual's personality and vulnerabilities.

The academic research on noise levels shows that chronic exposure to environmental noise, especially industry, transport and wind turbines is a significant public health issue. Annoyance and perceived lack of control can lead to physiological stress responses that can be measured by elevated cortisol, blood pressure and heart rate variability changes (Basner & McGuire, 2018). Children exposed to chronic noise show measurable cognitive delays in reading and attention in particular (Stansfeld & Clark, 2015). The WHO (2018), the European Environment Agency in 2020 also point out that prolonged noise exposure above 45dB night time increase the risk of sleep disturbance, cardiovascular disease, reduced quality of life and cognitive impairment. Research shows that older adults with hypertension, arrhythmias, sleep apnoea and children with neurodevelopment conditions, for example Attention-Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD) and epilepsy show great susceptibility to stress and sleep disruption from noise due to diminished restorative sleep even at lower noise exposure levels.

The HSE in a recent extract from an Irish Parliamentary Question in November 2025 states that:

'It is the opinion of the HSE that the changed nature, size and location of wind turbines over the last 10 years warrants a comprehensive review of the current Department of Housing, Local Government and Heritage Wind Energy Development Guidelines (2006) which are the current guidance for assessing likely significant effects on health from wind turbine development. This review should include the most up to date evidence on likely impacts on Population and Human Health and the health protection standards that should be incorporated into any new guidance issued.'

'The Environmental Protection Agency (EPA) guidance document states that no guidance for a definition for the term Human health has been issued in the context of the 2014 EIA Directive (2014/52/EU) but the same term has been used in the SEA Directive (2001/42/EC). The Commission provided a notion of human health being considered in the context of the other issues mentioned in environmental factors such as soils, water, and air. Human Health should be considered through assessment of environmental pathways which have the potential to affect it such as air, water, or soil'.

The assessment of human health warranted a comprehensive Health Impact Assessment (HIA) which has a broader scope than the Source Pathway Receptor (SPR) model to measure physical and social well-being.

'Health Impact Assessment (HIA) uses quantitative, qualitative and participatory techniques in assessing human health. It provides a way to engage with members of the public affected by a particular development. It helps decision-makers make choices about alternatives and improvements to prevent disease or injury and to actively promote health. It is based on the four interlinked values of democracy (promoting stakeholder participation), equity (considering the impact on the whole population), sustainable development and the ethical use of evidence'. This is a quotation from the following reference paper which is very valuable in pointing out the strengths of the HIA approach with a 'Health in all Policies' principle for addressing health inequalities in projects (Cave B, Claßen T, Fischer-Bonde B, Humboldt-Dachroeden S, Martin-Olmedo P, Mekel O, 2020)

Given the three quotations above, firstly the HSE advocates for proper health protection standards and more up-to-date evidence to be part of new guidelines. Secondly, wind farms are in many cases following a Source Pathway Receptor (SPN) model of identifying physical pathway to measure the impact on health in communities, ie, soils, water, air, flicker noise, etc. Thirdly the EPA focuses on environmental factors impacting health only.

To get a full appreciation of the many factors that influence physical health and well-being and not merely absence of disease or infirmity as in the definition of health by the WHO and the HSE, a HIA is required. In particular indirect effects, for example, people interaction with biodiversity, landscape, material assets are not considered to any degree. The cumulative effects of the impact on health as a result of existing and proposed windfarms in the North Mayo area. This is required by the EPA.

The question here in relation to the Glenora Wind Farm is, has a quantitative, qualitative and participatory research taken place in assessing the health impacts of its wind turbines? Has it considered the health and well-being impacts of the cumulative trajectory of numerous wind farms going for planning in the North Mayo area? It appears that the desk research is too dated and independent research or consultation with the local people in the hinterland of Glenora on health issues did not take place.

Professor Simon Chapman in Appendix 5.1 of the Proposed Development summarises the main conclusions reached in 25 reviews of the research literature on wind farms and health worldwide. He has had a career in academia in Australia and this analysis was updated on the 15 April 2015. The research cited was published between 2003 and 2015 which is almost 26 years ago and the later studies still 11 years ago. This is very outdated and more recent research still points to the dearth of quality research and further independent studies are required.

The links attached to the comments on health in the Appendix 5.1, I found, in most cases, were not linked to live material on the internet, so it was difficult to evaluate content. Some of the available articles to which there was access showed in many cases; inconclusive results; some advocated for higher quality research; others had difficulty with comparative reviews as the research methodologies varied so significantly. Loren D Knopper and Christopher A Ollson (2011) (item 17) state in their conclusion

'Assessing the effects of wind turbines on human health is an emerging field and conducting further research into the effects of wind turbines (and environmental changes) on human health, emotional and physical, is warranted'.

Further research was needed in 2011 and also the quality research had not been achieved in 2023 as the Environmental Noise and Health in the UK A report by the Ad Hoc Expert Group on Noise and Health Chairman: Professor Robert Maynard Editor: Dr Andy Moorhouse research concludes in 2023 that the following areas need to be further researched. They include: engagement with the community; improvement in the measurement of noise; examination of the relationship between farm noise and health effects; and investigation of the social and environmental circumstances in the understanding of health and well-being.

The social and environmental circumstances are really important to be appreciated in the context of industrial sized wind farms, including Glenora, being forced on very rural, economically underdeveloped communities and the dramatic and ancient landscapes of North Mayo. North Mayo's appeal is its unique combination of 'adrenalin and quietude, adventure and wilderness'. This description by Failte Ireland in its draft Wild Mayo Destination and Experience Development Plan gets to the heart of the matter. The culture shock and the loss of cultural identity is real and will affect health and well-being and it will have a cumulative effect on visual landscapes and identity, tourism, recreation, enjoyment of place, etc. This draft plan has a vision or preserving the landscape, identity and population of North Mayo and I think the proliferation of windfarms will militate and conflict with its valuable objectives.

Wind farm developers need to consider what is going on in the community and to consult with the population. Here are some examples of the questions that need to be considered and these have not been considered in Chapter 5 relating to Population and Health.

- visual intrusion leading to stress by blocking off the views of the mountains or coastal visas;
- stress from being aware of bird kill and destruction of natural unique habitats;
- stress from the reality of declining biodiversity and degradation of the North Mayo Boglands;
- lack of consultation with the community and feelings of being unheard;
- lack of trust in the planning process, uncertainty and disempowerment, where many windfarms are being proposed in remote rural sensitive populations;
- lack of trust in corporations where profit motives are dominant, communities' concerns are ignored and eventually companies are sold down the line to multinational corporations;
- perceived lack of respect by developers for, ancient monuments, cultural heritage, biodiversity, health of the population, hydrology, etc.
- community and/or family conflict and division arising from new developments in rural areas;
- visual intrusion and loss of landscape identity affects health in rural communities;
- reduced quality of life;
- reduced quality of recreational facilities, walking, hiking, bothys, cycling paths overshadowed by wind turbines and the whoosh whooshing sound.
- uncertainty, loss of autonomy, changing the culture and fear of new developments in quiet rural areas of high scenic value to inhabitants and visitors alike;
- lack of trust and lack of social cohesion affects health outcomes;

- and varying noise or flicker sensitivities in different populations;
- the consequences of having a lack of up-to-date wind energy guidelines and the risks to health and many other factors.

Observation 5 - Cultural Heritage, Biodiversity, the Ceide Fields and the Boglands of North Mayo

The Heritage Chapter in the Glenora presents a very narrow and inadequate definition of cultural heritage. The methodology used in assessing the impact of the Wind Farm on these rich valuable historic rural communities of Glenora, Altderg, Keerglen, Ballykinlettragh, Ballycastle, Killeena, Glencullin and Lugnalettin is very limited.

'The Heritage Act 1995 states that the national heritage includes monuments, archaeological objects, heritage objects, architectural heritage, flora, fauna, wildlife habitats, landscapes, seascapes, heritage parks and gardens, wrecks, geology and inland water ways'.

In 2003, UNESCO adopted the inclusion of intangible cultural heritage into the meaning of heritage through the Convention on the Value of Cultural Heritage for Society (The Faro Convention). The Convention encourages us to recognize that objects and places are not, in themselves, what is important about cultural heritage. They are important because of the meanings and uses that people attach to them and the values they represent.

The Mayo Heritage Plan goes on to say 'In essence our heritage is what we have inherited from the past, to value and enjoy in the present, and to preserve and pass on to future generations. It comprises: the tangible – our historic sites, buildings, monuments, objects in museums, artefacts and archives; the natural – our rivers and lakes, landscapes, woodlands, bogs, uplands, native wildlife, insects, plants, trees, birds and animals; and the intangible – including our customs, sports, folklore, crafts, skills and traditions.'

The introduction to the present Mayo Heritage Plan explains this well and defines what heritage is. This aspect of the definition is sometimes totally ignored in policy implementation and its unintended consequences. Many aspects of heritage and biodiversity are sometime completely ignored and development and the profit motive of international corporation take precedence. This is irrespective of communities need to be listened to and to be allowed to be key actors in their own survival. There needs to be joined up thinking and rural proofing applied and this definition of cultural heritage if incorporated into the methodology of the Glenora Wind Farm on Cultural Heritage would clearly point to a refusal of planning permission.

The Ceide Fields and the Boglands/Peatlands of North Mayo, is a world-renowned archaeological site, that was recently removed from the tentative UNESCO list, without community discussion or any valid explanation provided. It appears that it was cynically removed, lest its successful inclusion could militate against the proliferation of wind farms in proximity. This issue needs to be revisited.

Equally so, apart from its inclusion on the Wild Atlantic Way, the beautiful coastline of North Mayo has been seriously neglected. One must however pay justifiable tribute to North Mayo Tourism in their efforts to promote the Wild Atlantic Way and its tourism potential. They recognise the importance of pristine rural scenery in attracting visitors to local towns and rural areas. It is

unfortunate however that their efforts are not well supported by local and national political representatives who prioritise wind farm developments in scenic tourist areas. While these developments appear to enrich the few (wind farms sold off to multinational companies) they will do untold damage to our pristine rural scenic areas. They also impact rural residents visual experience, but also impede their capacity to get planning for rural houses. They also seriously undermine and devalue existing houses disputing the evidence presented in the Glenora application.

The Ceide Fields and the Boglands of North Mayo need to be given the status it deserves by reinstating its UNESCO status. Ruining the Boglands of North Mayo with wind turbines militates against this objective. Farming and business communities, the environment and the cultural identity of this area would benefit enormously from designation of UNESCO status.

Neglected Peatlands/Boglands of Ireland

Peatlands represent only 3% of the Earth's surface, yet they store 25% of terrestrial carbon. Peatlands account for 1% of Ireland's surface area, equal to one third of the earth's bog area. Irish Bogs are therefore internationally significant and an invaluable resource in achieving climate goals. Unfortunately, we do not hold bogs in high regard and recent press reports stated that Eur 40 million of peat was illegally exported from 38 sites around Ireland.

In similar and equally neglectful fashion, we are destroying these unique landscapes with wind farms. We are effectively damaging our environment in a wanton mission to save it. A recent report produced by the Irish Academy of Engineers in November 2025 stated that the 2030 and 2050 CO2 reduction goals were unachievable and indeed futile. Ireland is in effect virtue signalling, while countries with huge fossil fuel reserves continue as before. In fact, they now accept that Renewable Energy is so ineffective that it needs 100% backup by fossil fuel plants. The duplicate cost involved is making our electricity costs extremely high and internationally uncompetitive.

Peat bogs are critical carbon sinks, storing vast amounts of carbon accumulated over millennia. Construction of windfarms on peatland involves drainage and excavation, which releases stored carbon dioxide and methane, greenhouse gases far more potent than CO_2, negating much of the climate benefit of wind energy. It makes more sense to preserve the boglands and their store of carbon.

GAEC 2, National Peatlands Strategy and Climate Action Plan (updated April 2025)

The Irish GAEC 2 guidelines for farmers, the National Peatland Strategy and the Climate Action plan all recognise peatlands/boglands are among the most carbon-dense ecosystems on Earth. When intact, they act as long-term carbon sinks, but disturbance, such as drainage for turbine foundations, heavy vehicular traffic and access roads, turns them into a major carbon source. In the Irish context boglands store an estimated 1-1.5 billion tonnes of carbon, comparable to tropical forest.

County Mayo has a high proportion of boglands and it needs to have a policy of protecting these valuable carbon sinks rather than degrading this resource by locating wind turbines that damages and released carbon at building of the foundation stage, drainage and excavation and secondly

over time as the weight of vehicles, interference with water flow, carbon release and turbines continue to degrade the bogs.

The interference of water systems in the larger hinterland not just on the red-lined demarcation of the wind farm footprint, has hydrological impacts for biodiversity and farming. The carbon savings are not delivered by wind farms as construction and ongoing weight damage over many years, as yet unresearched, outweighs over many years, operational benefits.

Research points out that carbon calculators underestimate disturbance from the damage to bogs when considering the outside red-line areas as part of the planning EIARs. This is so particularly in the case of Keerglen's 8 turbines being appealed to An Coimisiun Pleanala at present, and this site of 22 turbines in Glenora each on opposite bank of the Keerglen river.

The impact on the Keerglen river flowing out of the Umerantarry NHA and right down through Glenora Wind Farm and down to the Keerglen Wind Farm will have untold damage on the water systems that connect Keerglen river. The boglands in the vicinity including parts the Glenamoy SAC will become drier and the whole ecology will suffer. Erosion and carbon release all impact on the overall ecology of the area and the planet. The waterways of North Mayo are all connected and enhance and maintain biodiversity.

The 22 turbines of the Glenora Wind Farm is positioned at the source of so many rivers it is unimaginable that planning permission could be sought in this location. I have discussed this complex of waterways in various parts of these observation already.

Good Agricultural and Environmental Conditions 2 (GAEC 2)

Good Agricultural and Environmental Conditions 2 (GAEC 2) is a mandatory condition for the payment of the Basic Income Support for farmers (BISS) to protect wetlands and peatlands – high carbon soils. The Department of Agriculture, Food and the Marine points out that EU regulations require all Member States to have this standard in place from the start of 2025. It is a standard baseline protection for carbon rich soils and still allowing farming in terms of ploughing, reseeding and maintenance of existing drains is allowed.

The Department goes on to point out that:

'Climate change (mitigation and adaptation) is the main environmental issue this standard aims to address through 'Protection of carbon-rich soil'. It is well recognised that carbon soils are important stores or 'sinks' for carbon. At approximately, 20% of the country, these sinks are akin to Ireland's rainforests and thus must be protected. Activities such as drainage and deep ploughing can impact the integrity of these stores, causing release of carbon. In addition, wetlands and peatlands are very valuable ecosystems for habitat, biodiversity, water quality and the protection and quality of soil.' (Department of Agriculture, Food and the Marine, 2025)

The on-farm GAEC 2 requirements relate to the maintenance and repair of existing drains as long as drains are not deepened nor is there and extension of the drained area beyond what previously existed, otherwise this will be considered new drainage and subject to planning permission. Shallow ploughing of up to 30 cm in depth may take place annually for arable crops, but for grassland rejuvenation of permanent grassland, ploughing must not take place more frequently

than once every 4 years. Deep ploughing greater than 30 cm depth for grassland or arable crops is not allowed.'

When these 3 polices are examined in relation to boglands, it does not make sense to give planning permission to the Glenora Wind Farm and the other windfarms that will follow down the line. Farmers themselves are rightly restricted to ploughing up to 30 cm only which preserves ecology and then wind farms can cause major harm to this sensitive bogland environment. The elements of policy conflicts in this very rural community all accentuate the argument that the value and cultural identity of the areas need to be preserved.

Wind Take (Extract from page 34 of the outdated 2006 wind energy guidelines).

The turbines in Glenora are also densely packed and are opposite the Keerglen river where 8 turbines closeby are not following efficient guideline parameters of today.

'The question of 'windtake' should be dealt with at scoping stage and/or during pre-application discussions, to ensure that any proposed layout of wind turbines takes into account the development potential of an adjoining site for a similar development. In general, to ensure optimal performance and to account for turbulence and wake effects, the minimum distances between wind turbines will generally be three times the rotor diameter (=3d) in the crosswind direction and seven times the rotor diameter (=7d) in the prevailing downwind direction. Bearing in mind the requirements for optimal performance, a distance of not less than two rotor blades from adjoining property boundaries will generally be acceptable, unless by written agreement of adjoining landowners to a lesser distance. However, where permission for wind energy development has been granted on an adjacent site, the principle of the minimum separation distances between turbines in crosswind and downwind directions indicated above should be respected.'

Turbine model selection has not been made in the case of Glenora Wind Farm either and this begs the question how can planning permission be granted to a wind farm that has not yet decided what model of turbine they are going to use and its exact location.

Observation 6 - The Ceide Fields and the Boglands of North Mayo are an invaluable international archaeological site and the mapping of the extend of the site indicates that that all of the Boglands of North Mayo should be designated as a UNESCO site.

The **Céide Fields** and **Downpatrick Head** are mentioned in the Non-Technical Summary of the Environmental Impact Assessment Report. These important archaeological and distinctive landscapes are only considered in relation to the possibility of the turbines being obvious from their location and the mitigation to minimise peat disturbance. There is no analysis of their cultural relevance or the evidence that points to the boglands covering many of the field systems of the Ceide Fields themselves. Here are the relevant details:

1. **Céide Fields**: The report mentions that there is no visibility of the proposed turbines from the Céide Fields, which is identified as the most sensitive receptor in the North Coast Plateaux Landscape Character Unit (LCU). The report concludes that the proposed development will not have significant landscape effects on the Céide Fields.
2. **Downpatrick Head**: The report identifies Downpatrick Head as a highly sensitive visual receptor due to its popularity as a tourist destination and its designation as an Ordnance Survey Ireland

(OSi) viewpoint. The visual assessment concludes that Downpatrick Head will experience a "Moderate" residual visual effect due to the visibility of the majority of the proposed turbines. However, the turbines are located approximately 11 km away, and their visual impact is limited to a small horizontal extent in the background.

3. **Bogland Carbon Sink**: The report discusses the impact of the proposed development on peatlands, which are significant carbon sinks. It acknowledges that the development will result in direct impacts and loss of peat in the area of the development footprint, as well as indirect impacts due to drainage. However, the report states that the proposed development will save more CO_2 than is released, and mitigation measures will be implemented to minimize the disturbance of peatlands.

No specific archaeological features are mentioned in the Non-Technical Summary, but the report states that no recorded cultural heritage assets, including UNESCO World Heritage Sites, National Monuments, recorded monuments, Protected Structures, or NIAH sites, are located within the proposed development site

The red-lined areas of the 22 turbines and its connection route to Tamhnachmore, Killala are very misleading and do not take into consideration the interconnectivity of waterways, the carbon sink element of the boglands, the special natural heritage area, areas of special conservation and special protection areas, archaeological sites of international importance that criss-cross its hinterland and in the case of the archaeology may be hidden deep within the bogs of Ballycastle, Kilfian, Glenamoy, Belderrig and the Lacken foothills.

Likewise, the red-lined areas outlined around the turbines has not taken into consideration the connected environment in terms of flora, fauna and people living in this area of North Mayo.

I am attaching the two following reportsin the References that clearly shows the precious archaeological heritage of the Ceide Fields and the Boglands of North Mayo. The value of this archaeological find has remained hidden beneath the boglands and only some areas have been exposed out of respect to achieve the objective of preserving its history. There has been a dearth of research funding in recent years to carry out appropriate research. This is why Keerglen Wind Farm, Glenora Wind Farm, Tyrawley Wind Farm and others proposed down the line on these historic hills would totally destroy the achievements of the Ceide Fields and the Boglands of Mayo and its future recognition as a UNESCO site. This is equally and more important than other designated areas of Mayo, for example the Nephin Complex and others in North Mayo. This area of Mayo has been severely neglected as it sits on boundary of the Ballina Municipality and the Belmullet-Westport Municipality and the fringes near the boundaries tend to be neglected, but this fringe area is the jewel in the crown of County Mayo in terms of: a landscape equalling, if not surpassing, the Cliffs of Moher; the internationally renowned and unique Down Patrick Head; the archaeology of international note in the Ceide Fields and North Mayo Boglands to mention one of the most famous; its biodiversity in terms of migratory pathways across the Atlantic; the flora and fauna of the boglands and marine life, the Wild Atlantic Way and its economic and social value for inhabitants and the diaspora, and many more. The granting of any planning permission in this landscape is not at all feasible and mitigations do not suffice in this area.

The following two reports on excavations on the Ceide Hill (Caulfield S, Byrne G, Dunne N, & Warren G, 2011) and Rathlacken (Byrne G, Warren G, Rathbone S, Mullreavy D & Walsh P, 2009)

go on to prove the significance of this archaeology and it should be clear that these parts of North Mayo are not suitable for wind farm development under any circumstances. The evidence points to the Ceide excavation as being only the tip of the iceberg and that the field complex extends across the mountains and into parts of the mountains beneath this Glenora Wind Farm and into other parts of the parishes of Ballycastle, Lacken, Kilfian and Belderrig and other areas.

Observation 7 – Access to information to fully evaluate the full context of the site and the history of application was limited.

It was quite challenging to gather the essential information in order to write these observations. Firstly, because the complexity of presentation of the EIAR and the numerous Appendices required time to evaluate. Secondly, observations by individuals and prescribed bodies were not available. on the An Coimisiun Pleanala site until the 13 January which was very close to the submission date. This was crucial to ensure the same points were not being repeated and a comprehension of observations by individuals and prescribed bodies and the MKO response to these was presented. Thirdly, while some information was available on the An Bord Pleanala old cases site on the Inagh and the Glenora applications in 2003 and 2004, the full case application was not available to the public and endeavouring to purchase the same from An Coimisiun Pleanala came too late for to include in these observations. The Inagh and Glenora application were refused by An Bord Pleanala and An Coimisiun Pleanala in 2003 and 2004 respectively.

This related specifically to the MKO response to observations where it is purported that all information is available to the public in making observations on SIDs. This point was raised by the Lacken Ballycaste Landscape Protection Group in their observations in 2024 on power imbalance.

The MKO response on page 9 states:

'Furthermore, while local communities may not always have access to consultants to review application documents, public consultation and access to information is a fundamental part of the planning process as enshrined in the Aarhus Convention and the Board is required to have regard to the submissions and observations made on the planning application. The Aarhus Convention is an international agreement that gives people the right to access information about the environment. It also promotes public participation in decision-making and provides access to justice on environmental matters.

Public consultation provides opportunities for community members to voice their concerns and provide feedback on proposed developments and public bodies, including An Bord Pleanala are required to consider this feedback when making decisions'.

While information on the Aahus Convention, the Non-Technical Summary and the need for consultancy are all appropriate. The technical chapters and the appendices require perusal and there are not always easy to understand by the public. High standards of community education and participation are required to enable meaningful public engagement.

Conclusions and summary of the observations showing that planning permission should not be granted to Glenora Wind Farm

Observation 1 - The false logic is proposing unclassified land where 15 of the turbines are located should be designated as Tier 1 and Tier 2 of the Mayo RES 2011-2020 completely undermines the site plan and undermines local planning rules in County Mayo and elsewhere in Ireland. The reasons for designation as unclassified is obvious when you examine the terrain and the water courses and slope in this area of the site.

Observation 2 – Adverse environmental impacts conflicting with proper planning and sustainable development objectives of RES 2011-2020 and the Mayo County Development Plan 2020-2028

Observation 3 - The preservation of rare species and the impact of the surrounding environment was not adequately considered showing that National and European Environmental Policy is to preserve rare species, such as, Saxifrage Hirculus L conflicts with policy of ensuring wind farms comply with these policies.

Observation 4 - Inadequate evaluation of the meaning of Cultural Heritage and Biodiversity, and the disregard of the archaeology of the Ceide Fields and Mayo Boglands System and the carbon sequestration value of the Boglands of North Mayo.

Observation 5 - The neglect and risk in ignoring important aspects of health and well-being in the North Mayo population as outlined in Glenora Wind Farm EIAR, Chapter 5 on Population and Human Health. The inadequacy, in particular, of the Source Pathway and Receptor (SPR) model in assessing health of the population in the Glenora hinderland. The presentation of very outdated research in Appendix 5.1 and no cognisance taken of recent scientific advances in this field of research except in relation to why application in this area were refused before in 2003 and 2004.

Observation 6 - The Ceide Fields and the Boglands of North Mayo are an invaluable under researched international archaeological site and the mapping of the extend of the site indicates that that all of the Boglands of North Mayo should be designated as a UNESCO site. It warrants greater consideration than just assessing whether the wind turbines break the ridgeline to be observed from the Ceide Fields. Consultation and review of up-to-date research was not incorporated into the plan.

Observation 7 – It was quite challenging to access the essential information on line. Firstly, the complexity of presentation of the EIARs and the numerous Appendices. Secondly observations by individuals and prescribed bodies were not available on the An Coimisiun Pleanala site until the 13 January which was very close to the submission date and thirdly while some information was available on the An Bord Pleanala old cases site on the Inagh and the Glenora applications in 2003 and 2004, the full case application was not available to the public and endeavouring to purchase the same from An Coimisiun Pleanala and came too late to include in these observations.

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Appendix 1

Extract from Department of Housing, Local Government and Heritage

Planning Ref: PA16.318701
(Please quote in all related correspondence)

20 February 2024

Nature Conservation

These observations are intended to assisting An Bord Pleanala in meeting their obligations in relation to National and EU legislation and policies for nature conservation and biodiversity, in the context of the current application.

Drainage impacts on lnagh Bog NHA:
Chapter 9 of the Environmental Impact Assessment Report (EIAR) on Hydrology and Hydrogeology identifies the potential of the proposed application to have a drainage effect on the lnagh Bog Natural Heritage Area (NHA). The EIAR states that in a worst case scenario approximately 3ha (equivalent to approximately 0.5% of the area of the NHA) could be affected by lowering the water levels in the peat, caused by drainage associated with the proposed infrastructure.

The Department notes that that the potential drainage impact on the lnagh Bog NHA is not characterised in Chapter 6 of the EIAR on Biodiversity. **No botanical or habitat surveys were conducted in the areas of the lnagh Bog NHA which may be affected by the drainage impacts associated with the proposed wind farm infrastructure.**

Consequently, the relative sensitivity of those areas potentially effected within the lnagh Bog NHA, identified in Chapter 9 of the EIAR, are not characterised or discussed in terms of their conservation value. The Department recommends that any assessment of the significance of this potential impact should be undertaken with reference to the relative sensitivity of those areas affected and not simply done with reference to the quantity (3ha) of the site that may be effected. For example, the site synopsis states that the highest quality Blanket Bog habitat within the lnagh Bog NHA is located in the south eastern corner of the site, which may correspond to the area affected without further characterisation and analysis.

The Department recommends that any potential deterioration or loss of Blanket Bog, particularly active Blanket Bog, inside the lnagh Bog NHA should be avoided. The Department also notes that any such deterioration

or loss of Blanket Bog inside the lnagh Bog NHA, for which this site is designated, may be in material contravention of the following policies and objectives in the Mayo County Development Plan 2022-2028 depending on how these policies are interpreted by An Bord Pleanala.

Characterisation and analysis of Collision Mortality Impacts:
The department considers that the Bird Impact Assessment Report does not accurately use the methodology outlined to determine the significance of the potential mortality caused by collisions with the proposed turbines. The Bird Impact Assessment Report makes reference to the methodology outlined by Percival (2003) for determining the magnitude of an effect on a given population (e.g. High = < 20% population remains, Negligible= < 1 % population lost). According to Percival (2003), the magnitude of impact on a species population as a result of collisions, would be negligible if the estimated mortalities does not increase the natural mortality rate by 1%. However, Percival (2003) states that *'one issue in this process concerns the precise area or bird population against which the degree of impact should be judged.*

Golden plover species were recorded in the zone of influence of the turbines during both the breeding and wintering period. As the population and distribution of Golden Plover in Ireland during the breeding season is significantly smaller than during the wintering season the Department considers that a separate analysis should be undertaken where collision mortality impacts occur in both seasons. The population of breeding Golden Plover in Ireland during the breeding season is approximately 150 pairs and has a very regional distribution in Ireland with the wider area of the application site being a stronghold for breeding Golden Plover. Consequently, a relatively small impact on the breeding population in this area caused by the current application, either alone or in-combination with other similar developments, could have a significant effect on the national breeding population of this species.

Outside of protected sites Percival (2003) recommends that an analysis be undertaken as to whether a homogenous area of suitable habitat occurs with which a population may be associated and the density of this population within this area. In their guidance on this topic. However, in relation to the current proposed application, the Bird Impact Assessment Report makes reference to the national populations only when undertaking an analysis of the magnitude of the predicted collision risk impact on the species identified. For example, Section 4.3.3 of the Bird Impact Assessment Report makes reference to the national wintering population of Golden Plover, which is stated as 92,060 birds, when contextualising the estimated collision mortality of 10.491 bird per year during the lifetime of the proposed application. The Department also notes that the output, and subsequent analysis, of the collision risk modelling does not differentiate between the potential collision mortality on wintering populations and breeding populations. Section 3.3.1.9 of the Bird Impact Assessment Report

outlines the records for Golden Plover during the surveys undertaken to inform the impact assessment. Golden plover were recorded in the zone of influence of the turbines during both the breeding and wintering period. As the population and distribution of Golden Plover in Ireland during the breeding season is significantly smaller than during the wintering season the Department considers that a separate analysis should be undertaken where collision mortality impacts occur in both seasons.

Given to the potential cumulative impacts of the current proposed application with the proposed Oweninny Wind Farm Phase 3, which is currently being considered by An Bord Pleanala, on Golden Plover. The proposed Oweninny Wind Farm Phase 3 occurs adjacent to the current proposed application and will also result in a predicted collision mortality of Golden Plover. The Departments notes that while Section 4.6 of the Bird Impact Assessment Report identifies the potential for a cumulative effect in relation to this impact no analysis is undertaken of the significance of this impact on the relevant population. Furthermore, no differentiation is made between the potential mortality impacts on the breeding or wintering population of this species in Section 4.6. Such a differentiation would be useful to better understand the potential impacts on local populations. Section 4.6 also notes that there was no collision mortality analysis undertaken for Oweninny Phase 1 and Phase 2. Consequently, the cumulative impacts on Golden Plover, in relation to the wind farms already built, and under consideration for consent, in the wider area remains uncertain.

The Department notes that An Bord Pleanala should consider that Golden Plover are a red listed species whose population is in decline. The breeding population in Ireland is unevenly distributed with North West Mayo being one of its national strongholds due to the presence of suitable habitat. The Department recommends that any potential impact on this species should be characterised accurately in any EIAR and NIS provided with the application in order to ensure An Bord Pleanala has sufficient information while undertaking their determinations.

The Department also notes that while the above point has been illustrated with the use of Golden Plover as the example it is recommended the appropriate use of the methodology outlined by Percival (2003), and proposed in the EIAR, is used for all target species identified at risk of collision mortality, especially those for which a relatively substantially annual mortality is predicted (such as kestrel for the current proposed development).