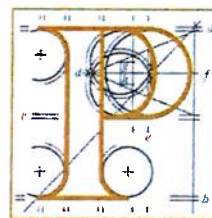


Our Case Number: ABP-319866-24

Planning Authority Reference Number:



**An
Bord
Pleanála**

Sharon Burke
College Road
Gormanston
Co. Meath
K32 NX03

Date: 16 August 2024

Re: Proposed development known as North Irish Sea Array ("NISA") Offshore Wind Farm
Located off the coast of Counties Dublin, Meath and Louth (www.northirishsearraysid.ie)

Dear Sir / Madam,

An Bord Pleanála has received your recent submission and fee in relation to the above-mentioned proposed development and will take it into consideration in its determination of the matter. Please accept this letter as a receipt for the fee of €50 that you have paid.

The Board will revert to you in due course with regard to the matter.

Please be advised that copies of all submissions/observations received in relation to the application will be made available for public inspection at the offices of Dublin City, Fingal, Meath and Louth County Councils and at the offices of An Bord Pleanála when they have been processed by the Board.

More detailed information in relation to marine infrastructure development can be viewed on the Board's website: www.pleanala.ie.

If you have any queries in the meantime, please contact the undersigned officer of the Board or email marine@pleanala.ie quoting the above mentioned An Bord Pleanála reference number in any correspondence with the Board.

Yours faithfully,



Ellen Moss
Executive Officer
Direct Line: 01-8737285

OA03

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Submission on Bord Pleanala Case Reference OA29N.319866

By

Sharon Burke, College Road, Gormanston, County Meath, K32NX03

I set out below the many concerns I have with the development proposed under the above Case Reference.

1. Lasting damage to birds within the Special Areas of Protection

The subject area of this case will affect no less than **five** special protection areas for birds (SPA's) which have EU protection under EU Birds Directive (2009/147/EC), these being the new North West Irish Sea Special Protection Area which relates to important marine waters for a range of bird species throughout the year, the River Nanny Estuary and Shore SPA, Skerries Islands SPA, Rockabill SPA and the Boyne Estuary SPA. There could not be a more unsuitable place to situate a wind farm along the Irish Coast, which would affect so many important marine waters and bird life.

European and national legislation places a collective obligation on Ireland to maintain habitats and species in the Natura 2000 network in favourable conservation condition. The Government and its agencies are responsible for the implementation and the enforcement of regulations that will ensure the ecological integrity of these sites.

An extract from the Conservation Objectives for the North West Irish Sea SPA, from the National Parks and Wildlife Services is detailed below.

"North-west Irish Sea SPA provides essential resources for adjacent seabird colonies. Red throated diver is a Special Conservation Interest (SCI) for this site. Red throated divers are found on Gormanston Beach. This bird is just one example of the birds in this area that are mobile and any disturbance to their habitat area will have profound effects. We have a duty to protect them.

The Conservation objectives describe any disturbance to the site as

"The impact of any significant disturbance (direct or indirect) to the non-breeding population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of over-winter mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution."

"Barriers limiting the population's access to this SPA or ecologically important sites outside the SPA will ultimately affect the achievement of targets for population trend and/or spatial distribution. Factors such as the number, location, shape and area of potential barriers must be taken into account to determine their potential impact. Access to ecologically important sites outside the SPA must also be considered as a single SPA may not satisfy all the ecological requirements of the non-breeding

population, and it may require access to other SPAs or undesignated sites for certain activities, such as additional foraging when preferred foraging areas are unavailable due to disturbance, prey availability, or other factors”

I would respectfully ask that the Bord take these factors into account in making their decision.

At top speed the wind turbines will reach 208 km an hour. Any bird that is unfortunate enough to collide with a turbine will simply be liquidised. No car is allowed travel at such a speed in Ireland.

Rockabill SPA

The Rockabill SPA is going to be greatly affected by this proposed development. Rockabill which has huge significance from an EU perspective firstly is not highlighted on the plans/maps lodged with the planning application. Therefore it is extremely hard to see how this important SPA is enclosed in the subject area and how near the wind turbines will be to it. 58% or more of the world's Roseate Tern population breeds on Rockabill. The Roseate Tern is one example of the many birds who feeds on the habitat of Gormanston Beach and will have to pass through the proposed Wind Turbines and facilities. It simply cannot be contemplated the damage to such birds if the wind farm goes ahead. The chosen location is not suitable for such a windfarm.

Other Birds

The Brent Geese must travel from Northern Ireland right down the east coast, stopping at Gormanston and other destinations on the east coast. These are just one example of a migratory bird which will be affected. The list goes on and on.

There is also no mention of the short-eared owl who nests directly beside the subject area and which area they say they had assessed on land from Balbriggan to the mouth of the Delvin for bird species.

The Cable route crosses over known kingfisher territory in Malahide.

Under the ornithology surveys several months are excluded, why is this? This may preclude recording of species in the area.

“

2. Completely Ineffective Proposals for Marine Mammal Mitigation in Appendix 10

The applicant are suggesting that the marine mammals will flee to avoid permanent hearing damage but where will they flee to? As the fishermen will be pushed out, such seals, porpoises, sharks and whales may just then get caught in nets

and be killed or die of starvation or exhaustion in trying to flee. If they stay in the impact area they will suffer immediate onset PTS permanent hearing loss

In the planning application, it observes that the "predicted impact ranges for PTS on minke whale and harbour porpoise are greater than the distance which can be mitigated for with embedded measures; therefore, use of ADDs or noise abatement would be required to encourage individuals to leave the impact range or to limit the extent of the impact. The greatest impact ranges correlated with the locations with the deepest water depth."

The mitigation steps cited are simply not good enough, untold damage will occur. They cannot possibly know exactly at what levels PTS will occur in these species. While they say they will have to observe for such mammals in the area, simple observation is simply not satisfactory, human error and mammals under water means that mammals will die as a result of this, if this proposal goes ahead.

"Noise Abatement In the event that impact ranges predicted by the underwater noise modelling to be undertaken based on the final design for the proposed development post-consent are larger than distances capable of passive mitigation (MMOs and PAM) and ADDs, Noise Abatement Systems (NAS) **may be used** to minimise the risk of injury". This is too vague and not acceptable.

The applicant admits in their summary the risk to the Harbour porpoises

For harbour porpoise, the predicted SBP source levels exceed the PTS-onset threshold and as such, use of this equipment has the potential to cause PTS"

"For seals and minke whales, only the upper limits of potential sources levels are expected to exceed the PTS-onset thresholds. Whilst it is possible that the use of this equipment could operate at source levels below the PTS-onset thresholds for these species, at this stage of the proposed development it is difficult to determine whether that will be the case. Noise modelling for pipeline surveys have previously indicated PTS-onset in minke whales within 5 m of the source when SBP pingers operate with a sound source of 220 dB re 1 μ Pa (SPL_{peak}; Shell 2017), and ~10 m for seals (Department for Business Energy & Industrial Strategy 2019)."

This is pure conjecture as the applicant's report admits it is difficult to determine. If it cannot be determined it should not happen.

"6. UXO Mitigation Methodology 6.1 Introduction This section of the MMMP has been developed for the purpose of mitigating the risk of physical trauma and auditory injury (PTS) to marine mammals by the proposed UXO clearance activities. The Department of Art, Heritage and the Gaeltacht guidance to manage the risk to marine mammals from manmade sound sources in Irish waters (DAHG, 2014) does not specifically cover UXO; however, it does provide guidance on blasting. Reference is also made to the JNCC guidelines for minimising the risk of disturbance and injury to marine mammals whilst using explosives (JNCC, 2010; 2021; 2023b) as well as best practices from other wind

farms in other jurisdictions.” This is a huge unknown and is not covered within the Department of Art, Heritage and Gaeltacht guidance, therefore it should not be allowed to proceed.

In “6.2 Summary of PTS Risk Table 6-1 summarises the impact ranges for the various FHGs against various charge weights. **The Developer has committed to this MMMP to reduce the risk of physical trauma or PTS-onset as far as reasonably practicable.**” It says the developer has committed. How has he done that? Has it signed a legally binding contract not to? As far as reasonably practicable has a wide vague meaning.

Bubble curtains are mentioned as an option which can be somewhat effective in reducing noise in the water but again the report doesn’t say for definite that they will be used if necessary.

Appendix 22 is largely conjecture and does not cover a large enough area in where the applicant proposes to situate the wind turbines. I feel this study is of no relevance to the North Irish Sea Array windfarm.

Estimating the effect of disturbance from pile driving on harbour porpoises. It is clear from their reports it is all based on probabilities not facts. To summarise they simply do not know.

Key statements in this report are “The residency patterns of harbour porpoise in the Rockabill and Dalkey Island SAC is unknown. While studies have shown that porpoise are present year round, **it is not known** if the porpoise present are resident or transient in the area. Berrow et al. (2021) reported a 46% decline in density estimates within the SAC in 2021 compared to the survey in 2016. **Porpoises can move within an area for food etc. so it will be very hard to monitor and the danger of harm to the said porpoises is very great.**

3. Excessive Height and Width of Proposed Wind Turbines

The construction of possibly up to 49 fixed bottom wind turbines, with turbine heights of up to 318 metres above sea level, in the centre of this hugely important area of wildlife cannot be contemplated. These heights would be higher than any wind turbine in the world. In the UK the proposed Dogger Bank Wind Farm is proposing wind turbines of 260 metres which although high, will be situated between 130 km and 190 km from the north east coast of England. Here the proposed development before An Bord Pleanála proposes to situate these enormous turbines between 13.25km and 17.36km from shore. Their rotor sizes are again incompatible with any worldwide.

The applicant's proposals include wind turbines which are too close to shore, not in keeping and not meeting the recommended minimum European Standards of 22-24km from shore. The argument that the water is too deep out further is no argument for allowing them to breach normal EU practice on Wind Farms and to bring their turbines so close to shore. I believe it is simply an attempt at maximising their profit. The heights suggested for the wind turbines are far too tall at a maximum of over 300 metres high, more or less the same size as the Eiffel Tower and being the tallest wind turbines in the world. These will simply be monstrosities along our East Coast.

The proposed wind turbines are of an unprecedented height and width, therefore the potential visual impact on coastal lands must be looked at very closely and analysed. Potential visual impact on coastal lands has emerged as a major concern in the development of offshore wind facilities in the United States and Europe. Optimal siting of offshore facilities requires accurate knowledge of the relationship between distance and the visibility of wind turbines

As early as 2009, Ladenburg cautioned against placing offshore wind farms too close to the coast and concluded that the future acceptance of such wind farms is closely tied to the location of existing and new offshore installations. Following Ladenburg's study, various contributions have highlighted that the potential visual impact on coastal areas has become a significant concern in the development of offshore wind facilities around the world (Sullivan, et al., 2013; Maslov et al., 2017; Kim et al., 2019). To determine the best locations for offshore facilities, it is crucial to have precise information about how distance influences the visibility of wind turbines. The images shown by the applicant at the public presentations were from what distance? This was not indicated.

4. Destruction of Off-Shore Archaeology and Cultural Heritage

The proposed cabling route is far too close to the megalithic mounds and the rich archaeology of the area. It is also not clearly marked where in fact the cables will come ashore initially. I requested maps showing where the cabling comes in from the sea. I finally got a map from Lisa Enright of Statkraft, ARUP Drawing No. 281240. However, the onshore cable marked in light blue and the alternative onshore cable option in luminous green do not appear to be highlighted on the map. At no time in any of the presentations completed by the applicant were there maps showing where exactly the cabling was going to come in, therefore the public were not adequately advised of this and did not know if it affected an area that they wanted to protect. The applicant cannot simply be vague about this and say this will be decided later on in consultation with others.

Under **Chapter 18 of their application, offshore archaeology and cultural heritage**, table 18.7 shows high-value potential in situ of prehistoric sites and also high potential palaeoenvironmental evidence.

One of the many examples listed is "There is a shipwreck (SS Downshire (WA7009) in the array area, which is over 100 years which is subject to statutory protection. This is considered to be a high value wreck and is situated in an area spanning 94X24.3 metres. This is in addition to 9 other possible wrecks within the ECC and 4 further wrecks within the wider study area (Figure 18.3).

The list goes on and on in this chapter outlining what is present and could be present.

Another point of note in this chapter is

“The wreck of the Belle Hill (WA7000; NMS W00543- also known as Bell Hill) is located immediately north of the ECC close to the landfall. It was an 800-ton iron barque built in 1866 and was wrecked at Bremore in February 1875 while on passage from Liverpool to Valparaiso with a general cargo. 24 of the 25 crew were drowned, and a cairn on the foreshore at Bremore is known as Sailor’s Grave in memorial of them (WA1001, discussed in the intertidal section). While this receptor is outside the ECC, it is within 150m of it (and within the study area) and is over 100 years in age so has statutory protection. Additional intertidal and shallow water marine geophysical survey has been completed to cover the recorded position of the Belle Hill and infill the nearshore section of the ECC, so there is a possibility of extending any assigned AEZ to include the results of this survey. However the data was unavailable at the point of writing and so will not be integrated into this chapter.” This Sailors Grave mentioned here is a tourist attraction and a well known feature on the Balbriggan Coast. The cables must not be allowed to enter anywhere near this beloved cairn. Indeed this walk is mentioned as Walk 1 in Active Balbriggan Walk, Run and Cycle brochure at Balbriggan.ie, [Active-Balbriggan-Walk-Run-Cycle-Brochure.pdf](#)

In 18.3.2.6 **it is recognised** that “ In areas of the array area and ECC that have been surveyed, where data quality is lower; or, smaller partially buried and otherwise indistinct features are preserved on or in the seabed, **there is potential for unidentified offshore archaeology and cultural heritage assets**”

“The study area falls within an area of significant historic shipping and navigation activity. The applicant admits further “There is potential for the presence of archaeological material of maritime nature spanning from the Mesolithic period to the present day within the study area”

Other foreshore features noted in the previous reports include prehistoric remains on Bremore Point to the north of the ECC and remains of the 16th/17th settlement of Newhaven which includes field systems, structures and a small church and graveyard. These demonstrate the utilisation of the coastline in both prehistory and the post-medieval periods, and therefore the potential for related material within the intertidal zone.

This highlights the magnitude of potential damage to Ireland’s heritage and simply cannot be allowed. Indeed your records will show that some years back when planning permission was sought for a Deep Water Port at Bremore the site of where the applicant herein wishes to have landfall. At that time it was recognised that this area was of such significance and heritage that such a port could not be situated there and it would have to be moved further north.

As local community historian Brendan Matthews has said this area from Gormanston to Balbriggan’s Martello Tower is exceptionally important in archaeological terms, containing megalithic burial sites which are believed to be earlier than that of Newgrange. This area and its known and unknown archaeology must be protected.

Further Under 18.4 where the Characteristics of the proposed development are described, they mention under both Options 1 and 2, a landfall site just south of “Bremore point”.

Bremore point has been described as (www.tuatha.ie/bremorepassagetombs) “Braymore Point, the rocky headland at the north end of Bremore Bay Beach, juts out between two long expanses of softer shorelines of glacial till and sand that form the northern stretch of Fingal’s coastline. As you clamber up onto the headland using the narrow coastal path that skirts its edge, you see that it is about 400 metres wide and most of it is still in use as farmland. Its geographical prominence is not all that makes this headland special, however. **As you look to its northern shore, you can see a large earthen mound. This is the largest of the Bremore Passage Tombs, which have been standing here for more than 5,000 years, since some time in the later 4th millennium BC.** “

The proposed landfall site is therefore directly beside a passage tomb built more than 5,000 years ago. Would this be allowed to happen beside Newgrange?

18.4.2 Construction outlines the potential damage that will occur to offshore archaeology and cultural heritage. This includes nearly everything that will be required concerning the proposed project.

Appendix 25.4 under volume 10 (onshore appendices) is quite hard to locate. This is the Cultural Heritage and Mitigation Strategy. It makes for very grim reading. Firstly it is labelled a “Draft” which indicates it is still a work in progress. How can a document addressing an area of this significance not be completed and still a draft? It can have no relevance if only a draft document. This document goes on to say that “the onshore archaeology, architectural and cultural heritage assessment has been conducted with the assumption that the onshore cables will be located **anywhere within the landfall/ grid facility site and all archaeological features identified in this area have the potential to be impacted.**

This simply again cannot be allowed to happen. Too vague on what could have devastating consequences and where people in the area are still in the dark as to where such cables will or will not go.

5. Loss of Recreational Facilities and Amenity

The subject area is widely used by a large community on the East Coast, Sailing Yachts in Skerries, Currachs in Balbriggan, small fishing boats, speed boats, etc. Gormanston beach is known for paragliding amongst other many known recreational activities. The wind turbines pose a risk to Paragliders being blown into the nearby wind turbines. Also danger to commercial flying planes flying into Dublin over the beaches, Gormanston in particular, being a regular route, the height, width of the proposed turbines and lighting on same could be a cause for danger. So too the Army facility at Gormanston which trains pilots in low flying aircraft, there is a potential for a serious accident.

6. Damage to local Fishing industries

Both Balbriggan and Skerries have long-standing fishing history and these vessels and the people who make a livelihood from fishing will be greatly impacted by the exclusion zone.

7. Loss of Visual Amenity

The coast facing the proposed wind farm is an area of immense natural beauty and visual amenity which is needed by the huge population that resides on this coast. If the wind turbines were further out in line with EU recommendations of 22

The proposed landfall site with its large warehousing and ancillary substations etc. will result in industrialising a rural area and ancillary nighttime lighting will affect birds, bats, owls and other wildlife in the area.

8. Lack of Materials for Wind Turbine Blades and Issues with Recycling

There is a worrying lack of materials going forward for the production of the wind turbines and the amount of waste generated thereof which is not recyclable. Where will its waste go?

Wind turbine blades are often made up of composite materials, which are difficult to recycle/re-manufacture. 2.5 million tonnes of composite material are in use in the wind sector globally. 14 000 wind turbine blades will be decommissioned in Europe in the next five years. This is a major challenge, both environmentally and economically. Because there is a need to reduce polluting extraction of raw materials and to decrease dependency of the European economy may on raw materials produced in third countries. Applying circular economy approaches, along the life-cycle of installations, is of key importance. (From the draft

Currently, there is no European production of the four main materials used for the production of wind rotors (i.e. boron, molybdenum, niobium and Rare Earth Elements (REEs)). For other raw materials, the EU share of global production is below 1%. China is the largest global supplier for about half of the raw materials needed for wind generators. The EU import reliance for processed REEs (especially neodymium, dysprosium, and praseodymium) used for permanent magnets, is 100%, with 98% being supplied by China. Future materials shortage or supply disruptions could prove to be a risk, given the low substitutability for many raw materials, especially those in high-tech applications (JRC, China – Challenges and Prospects from an Industrial and Innovation Powerhouse, 2018, JRC116516JRC, [Materials that are critical to our green future]). It would be of grave concern that the applicant would be granted permission and build the windfarm causing untold damage as per earlier comments, only for it not to be feasible to be used in the future due to lack of materials.

9. Lack of Wind at Proposed Site

Compared to wind on the west coast, the east coast has relatively light winds. Moreover what wind the east coast has, would be out much further than the proposed distance of the turbines. The EU in their draft Commission Staff Working Document accompanying the Report from the Commission to the European Parliament and the Council [Progress on competitiveness of clean energy technologies 2 ,3 Windpower.

In that document they state that to be “viable, wind energy installations should be placed in high wind potential sites, therefore there are geographical limitations which should be taken into account. In addition, important wind potential is often observed in sites where the grid is not strong enough or is not nonexistent, necessitating important investment in grid infrastructure. Concerns of environmental, visual and noise impact of wind installations still exist, and in some cases, like offshore installations, are not well known. The intermittent and variable nature of wind is also a concern when wind reaches high grid penetration levels, nevertheless this can be managed through grid interconnection, wind forecast and transmission planning. For offshore wind, the multiple uses of the ocean (e.g. fisheries, biodiversity, energy production) is a matter of concern, which requires Maritime Spatial Planning and collaboration between Member States.”

Conclusion

While I support green energy I am afraid that in our haste to increase our wind energy capacity, we will rush in and put wind farms in the wrong places and will live to regret it. We could end up being a showcase to the world as to **how not** to do wind farms.

Thank you for the opportunity to express my concerns and reservations through this submission.