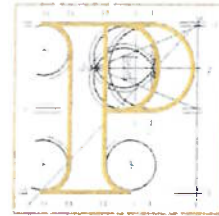


Our Case Number: ABP-320705-24



An
Bord
Pleanála

HSE National Environmental Health Service
Unit 6
Quin Road Business Park
Ennis
Co. Clare

Date: 06 November 2024

Re: Proposed development of 9 no. wind turbines, 110kV substation and ancillary development located in the townlands of Snatty, Hurdlestown, Oatfield, Drumsillagh, Sallybank, Gortacullin, Aharinaghbeg, Knockshanvo, Cloontra, Cloghoolia, Ballycullen and others, County Clare. And located in the townland of Court, County Limerick. (<https://knockshanvoplanning.ie/>)

Dear Sir / Madam,

An Bord Pleanála has received your submission in relation to the above mentioned proposed development and will take it into consideration in its determination of the matter.

The Board will revert to you in due course in respect of this 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 the local authority and at the offices of An Bord Pleanála when they have been processed by the Board.

More detailed information in relation to strategic 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. Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,


Lauren Murphy
Executive Officer
Direct Line: 01-8737275

PA09

Teil	Tel	(01) 858 8100
Glaio Áitiúil	LoCall	1800 275 175
Facs	Fax	(01) 872 2684
Láithreán Gréasáin	Website	www.pleanala.ie
Ríomhphost	Email	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902



**FSS Seirbhís Náisiúnta Sláinte Comhshaoil,
Ionad 6, Páirc Ghnó Bothar Chuinche,
Inis, Co. An Chlár.**

**HSE National Environmental Health Service,
Unit 6, Quin Road Business Park,
Ennis, Co. Clare.**

 **(065) 6706660**

An Bord Pleanála
64 Marlborough Street
Dublin 1
www.pleanala.ie

29th October 2024
EHIS ref 4305

Enclosed are the observations of the National Environmental Health Service (NEHS) on planning application
Case reference: PA03.320705

Any clarification on the contents of this submission should be made, in the first instance, to pehocclare@hse.ie
quoting NEHS ID4305.

Gerard Leen
Principal Environmental Health Officer

Proposed Development

9 no. wind turbines and associated infrastructure in in the townlands of Snaty (Massy), Hurdleston, Oatfield, Drumsillagh or Sallybank (Parker), Gortacullin, Aharinaghbeg, Knockshanvo, Cloontra, Cloghoolia, Ballycullen, Cloontra West, Formoyle More, Kilmore, Mountrice, Ballyvorgal South, Crag, Kyleglass, Glenwood, Snaty (Cooper), Ballykelly, Muingboy, Drumsillagh or Sallybank (Merritt), Kyle, Belvoir, Snaty (Wilson) and Cloontra East, Co Clare and in the townland of Court, Co. Limerick

The following HSE stakeholders were notified of the application on the 23rd October 2024:

- HSE Emergency Planning
- HSE Estates
- Director of National Health Protection
- Community Health Organisation

The HSE is a statutory consultee under Article 28 of the Planning and Development Act 2000 (as amended) and has a remit to make observations on a planning application accompanied by an EIAR with regard to any likely significant effects on Public Health. The NEHS can make observations on any planning application as a statutory consultee.

The objective of any observations by the NEHS are to inform the Planning Authority on any likely significant effects on Public Health and give an opinion on any proposed mitigation to protect Public and Environmental Health. Any observations made are to inform and assist the decision making of the Planning Authority in the planning process.

This submission is the observations and comments of the NEHS based on the submitted planning application and the accompanying Environmental Impact Assessment Report (EIAR). The NEHS does not carry out any independent environmental monitoring or validation of any measurements or data reproduced in an EIAR.

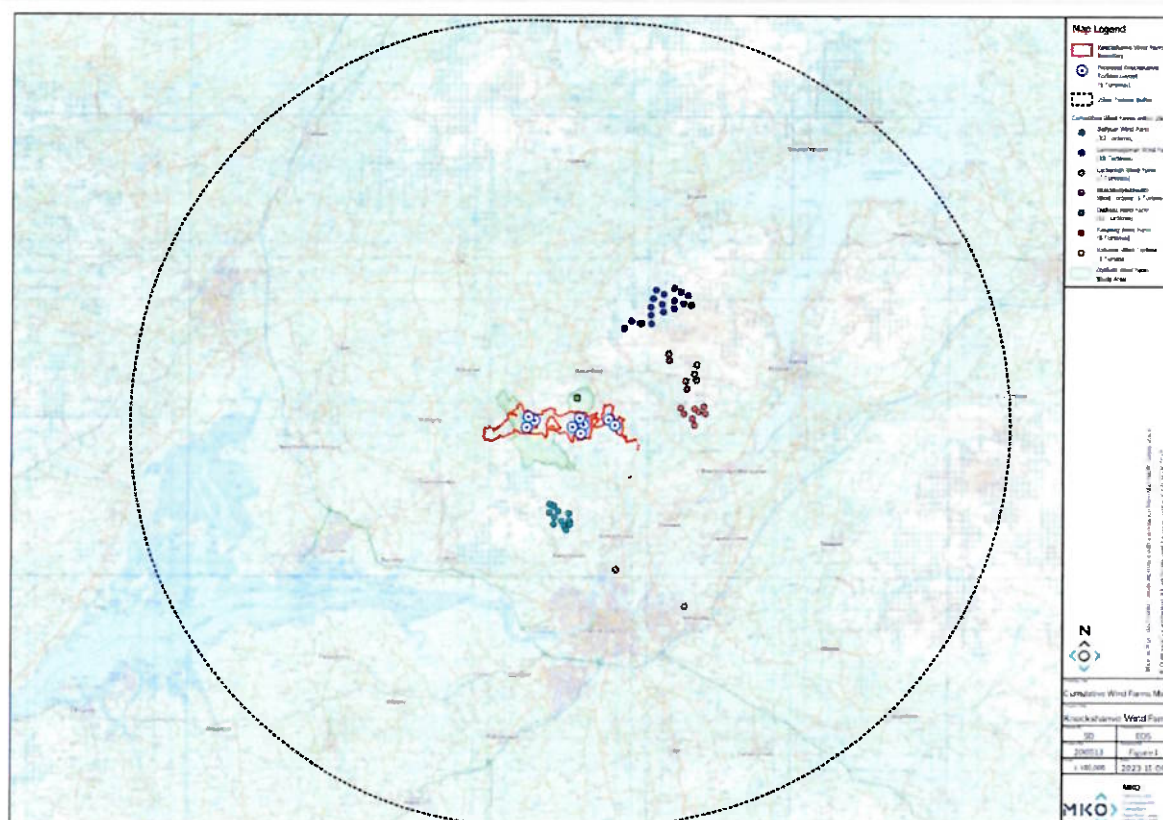
Scoping of the Environmental Impact Assessment (EIA)

The applicant made an informal scoping request to the HSE in January 2023. A response to this request was made by the NEHS dated 27th February 2023 (ref ID2996). This response is reproduced in scoping section of the EIAR.

The NEHS is satisfied that the areas identified in the scoping response dated 11th January 2023 that, in the opinion of the NEHS, should be included for assessment in the EIA have been included and reported in the EIAR.

The NEHS is also satisfied that reference has been made to the correct general guidance for carrying out the EIA and the content of the EIAR.

Site Location and Regional Wind Turbines



Criteria for Consideration of Likely Significant Effects on Public Health

The NEHS considers likely significant effects on Public Health as per the EPA issued National Guidance (known as the EIA Guidance): *Guidelines on the information to be contained in Environmental Impact Assessment Reports*, 2022 https://www.epa.ie/publications/monitoring--assessment/assessment/EIA_Guidelines_2022_Web.pdf

Particularly section 3 of the EIA Guidance on Human Health which is reproduced below:

Human Health

The recitals to the 1985 and 2011 Directives refer to 'Human Health' and include 'Human Beings' as the corresponding environmental factor. The 2014 Directive calls this factor 'Population and Human Health'.

While no specific guidance on the meaning of the term Human Health has been issued in the context of Directive 2014/52/EU, the same term was used in the SEA Directive (2001/42/EC). The Commission's SEA Implementation Guidance states "The notion of human health should be considered in the context of the other issues mentioned in paragraph (f): (Paragraph (f)⁴² lists the environmental factors including soils, water, air, etc). This is consistent with the approach set out in the 2002 EPA EIS Guidelines where health was considered through assessment of the environmental pathways through which it could be affected, such as air, water or soil, namely:

'The evaluation of effects on these pathways is carried out by reference to accepted standards (usually international) of safety in dose, exposure or risk. These standards are in turn based upon medical and scientific investigation of the direct effects on health of the individual substance, effect or risk. This practice of reliance upon limits, doses and thresholds for environmental pathways, such as air, water or soil, provides robust and reliable health protectors [protection criteria] for analysis relating to the environment.'

In an EIAR, the assessment of impacts on population & human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil etc.. **The Advice Notes provide** further discussion of how this can be addressed.

Assessment of other health & safety issues are carried out under other EU Directives, as relevant. These may include reports prepared under the Industrial Emissions, Waste Framework, Landfill, Strategic Environmental Assessment, Seveso III, Water Framework Directive, Floods or Nuclear Safety Directives¹⁸. In keeping with the requirement of the amended Directive, an EIAR should take account of the results of such assessments without duplicating them.

The NEHS therefore considers likely significant effects within a population and Human Health context that uses a source – pathway- receptor model, based on emissions through environmental media and population exposure. The exposure of populations, if any, is then considered against recognised health protection criteria.

Whilst EIAR Guidance recognises the requirement to identify sensitive receptors within the assessment process, the Planning Authority should be clear that it is within a Population Health approach.

Population Health approach to the sensitivity of receptors would not consider individual specific sensitivity of a human receptor, but the sensitivity of the established land use or service provision. For example, a school would be considered a sensitive receptor within a Population Health approach, but an individual student who was particularly sensitive to noise attending the school would not be specifically considered in the assessment criteria. But, a health care facility that provided services for people with recognised noise sensitivity would be considered in its entirety as a particular noise sensitive location.

The Population Health approach therefore has important differences in how likely significant effects on Population and Human Health are considered in EIA. The assessment should consider established land development and use and service provision and activities within communities and not individual members of communities.

The Planning Authority could also follow this method when considering Public Health in their decision making process.

Project Specific Guidance for Wind Energy Development

The current Guidelines for Wind Energy Development are: Wind Energy Development Guidelines (2006) <https://www.gov.ie/en/publication/f449e-wind-energy-development-guidelines-2006/>

It is recognised that the nature of wind energy development has significantly changed since the publication of these Guidelines, particularly the size of the turbines and the proximity to centres of populations and the cumulative effects with other wind energy development. There have also been substantial increases in the body of knowledge around the likely significant effects of the operation of wind farm development on Population Health, in particular around the characteristic of the noise emissions and health effects of shadow flicker.

A revision of the 2006 GWED commenced in 2013 and Draft Revised Wind Energy Development Guidelines were issued in December 2019. <https://www.gov.ie/en/publication/9d0f66-draft-revised-wind-energy-development-guidelines-december-2019/>

These are yet to be adopted.

The Revised WEDG 2019 states ‘the revised guidelines will provide greater consistency of approach in planning for onshore wind energy development, as well as providing greater certainty and clarity to the planning system, to the wind industry and to local communities’

The NEHS is aware of the High Court decision in *Webster/Rollo V Meenaclogher (Wind) Limited (2024 IEHC 136) 8th March 2024*, and details of the judgement. The judgement that the noise from the wind farm was a Private Nuisance is a predominately health based assessment, in that the elements that were deemed to create the nuisance were directly related to health effects on the complainants. It is the understanding of the NEHS that assessment of compliance with health protection conditions set in the consent process was not a material consideration in the judgement. The judge did state that she could consider nuisance irrespective of any compliance with consent conditions, particularly in the absence of up to date national Policy and Guidance in the area. The Judgement also states that the revised Draft Guidance has been withdrawn. There is no public indication this is the case. It is still on the Department’s website as of the date of this submission.

Nuisance from noise is fundamentally a subjective assessment based on ‘reasonable’ perception and reaction

to the effects of the noise exposure. This perception and reaction depends on situational specific conditions and land use. This was recognised in the Judgement after 51 days of evidence and consideration of the specific facts. It also the understanding of the NEHS that the Judgement did not make an order as to the level or characteristic of the noise that would abate the nuisance.

If the Planning Authority are now considering that they are under a duty to incorporate the likelihood of a Private Nuisance into their decision making, then they should consider the judgement in *Webster/Rollo V Meenaclogher (Wind) Limited (2024 IEHC 136) 8th March 2024*. This judgement identified, in the absence of Irish Guidance, the usefulness of UK Guidance in the investigation of wind farm noise as a Statutory Nuisance. This is, of course, a reactionary methodology where specific noise exposure is known and not a predictive methodology for the likelihood of a Private Nuisance.

<https://assets.publishing.service.gov.uk/media/5a795184e5274a3864fd5f82/pb-13584-windfarm-noise-statutory-nuisance.pdf>

Likely Significant Effects from Noise and Vibration

The NEHS has considered chapter 12 of the EIAR and makes the following observations:

In the EIAR section 12.3.2.2.2 the following is reproduced from the 2006 Wind Energy Guidance.

12.3.2.2.2 Wind Energy Development Guidelines

Section 5.6 of the *Wind Energy Development Guidelines* published by the Department of the Environment, Heritage and Local Government (2006) addresses noise and outlines the appropriate noise criteria in relation to wind farm developments.

The following extracts from this document is considered:

"An appropriate balance must be achieved between power generation and noise impact."

While this comment is noted it is stated that the Guidelines give no specific advice in relation to what constitutes an 'appropriate balance'. In the absence of this, guidance will be taken from alternative and appropriate publications.

It is the opinion of the NEHS that Environmental Impact Assessment does not have a function in deciding on 'appropriate balances' in a consenting process. The role of the EIAR is very clear under the EIA Directives in that it is a report on the likely significant effects of the proposed development, assess the significance of any likely effects against recognised criteria, identify any mitigation and report on the residual impacts after mitigation and any monitoring requirements. It is not a document to support the merits of a planning application or form opinion on 'balances' in the consenting process. Its role is to objectively inform the Consenting Authorities of the 'likely significant effects' of the proposed development.

- a) The 2006 Guidelines include guidance on how to derive noise limits for daytime and night-time periods, which can be summarised as: daytime limits take account of existing background noise levels and include a fixed limit of 45 dB, or background + 5 dB, whichever is the greater, except in low background noise environments where a fixed minimum limit in the range 35-40 dB should be considered.
- b) This criteria is therefore that turbine noise at noise sensitive locations should not exceed for daytime periods: 40 dB(A) where background noise levels are below 30 dB; and, 45 dB(A) or background noise plus 5 dB, whichever is the greater, where background noise levels are greater than 30.
- c) This criteria can potentially see a predicted increase of up to 15 dB(A) change in the noise environment as compliant with the criteria. Any change in the noise environment of this magnitude is highly likely to cause complaints and/or nuisance. *BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound* identifies an increase of 10 dB above existing rated

noise levels will have a significant adverse impact and is highly likely to cause complaints.

- d) The evaluation of significance of the effect is based on the most up to date scientific knowledge and data. The EIA process specifically requires the assessment to be ‘the likely significant effects’ and if the knowledge on an evaluation criteria of significance has developed since the publication of a guidance, then it is reasonable and correct to use the developed knowledge base in assessing the significance of any effect. This is particularly relevant to the protection of Public Health. Statutory Guidance issued under the Planning Development Act 2000 (as amended) has to be considered by the Planning Authority when making a decision, but it is not a consideration that precludes all other evidence and knowledge.
- e) Tabulation of the predicted change in the noise environment from the proposed development and the cumulative change in the original baseline noise environment before any wind farm development in the area would be the most informative way of assessing the likely effect of operational noise.
- f) The NEHS notes the rationale for not using the WHO Guidance detailed in section 12.3.2.2.5 in the EIAR for a health protection criteria. The NEHS would consider the most appropriate criteria for assessing significance of the predicted noise is consideration of the ***ENVIRONMENTAL NOISE GUIDELINES for the European Region, 2018*** The 2018 WHO Guidance set health protection levels from environmental noise. <https://iris.who.int/bitstream/handle/10665/279952/9789289053563-eng.pdf?sequence=1>
- g) The WHO is the most authoritative body with regards to the evidence base that sets health protection standards.
- h) The NEHS would consider it appropriate for the Planning Authority to use the existing noise data to carry out an assessment against the WHO 2018 Guidance noise criteria. This should include cumulative noise impacts from existing and planned wind farm development.

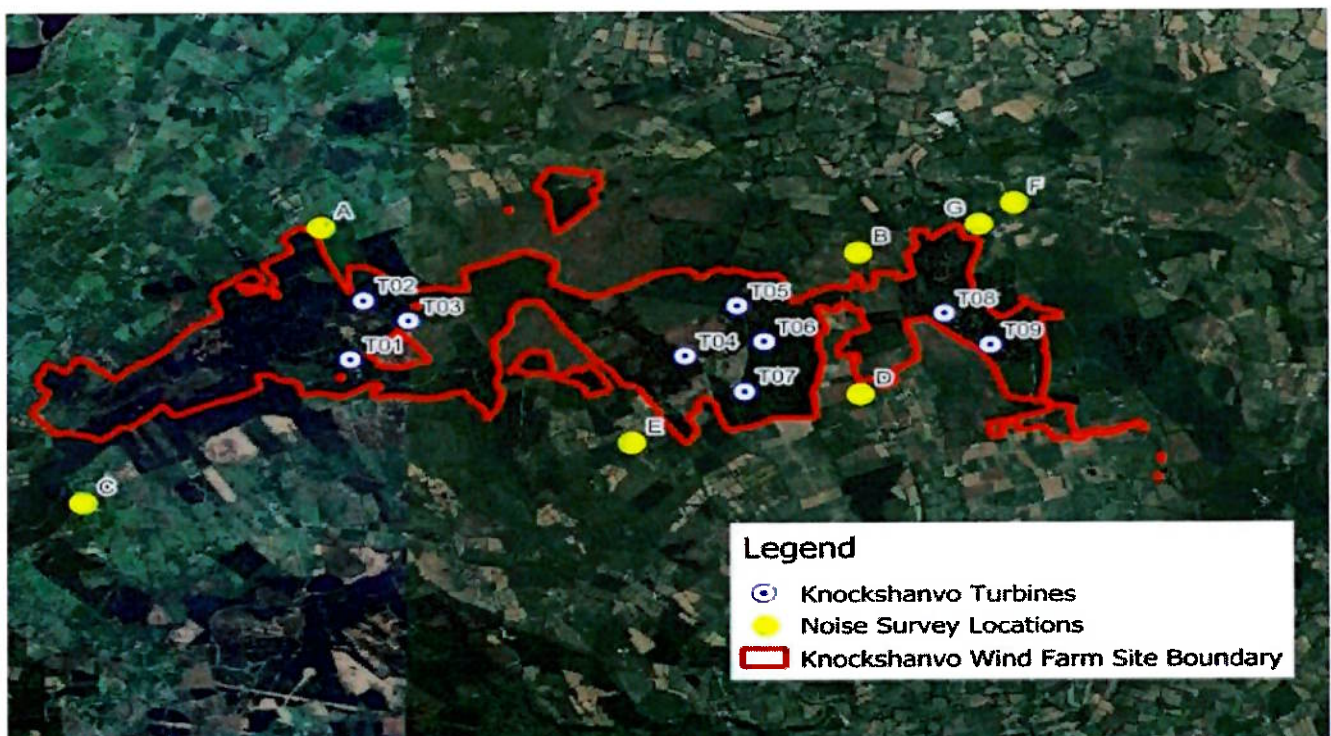


Figure 10.9 Noise assessment boundary

Health Evidence and Wind Farms – Chapter 5 section 5.5.1 of EIAR

The EIAR presents a number of papers and research outcomes and states:

5.5 Human Health and Public Perception of Wind Energy

5.5.1 Health Impacts of Wind Farms

5.5.1.1 Health Impact Studies

While there are anecdotal reports of negative health effects on people who live very close to wind turbines, peer-reviewed research has generally not supported these statements. There is currently no published credible scientific evidence to positively link wind turbines with adverse health effects. The main publications supporting the view that there is no evidence of any direct link between wind turbines and health are summarised below.

This is not a full interpretation of the research base used in this chapter.

The research referenced is into any evidence that there are **specific** health risks that are only associated with wind farm development, not that there is no evidence to positively link wind turbines with adverse health effects.

Wind turbines are a development in the environment and they have the potential for the same health effects as any other development through, for example, noise emissions, contamination of drinking water supplies during construction, emissions to air, and any other changes in the existing environment that might impact on Public or Environmental Health. It is not accurate to state 'there is currently no published credible scientific evidence to positively link wind turbines with adverse health effects'

The NEHS would also question if it is appropriate to use the EPA NG4 Noise Guidance for Scheduled Activities in the assessment criteria for the protection of Public Health. This is a Guidance document for industrial activities that have received planning permission, are usually in designated industrial development areas where the existing noise characteristics are completely different to the typical rural, low background noise, areas where wind farms are developed. The Guidance was reviewed in 2020 and the reviewed Guidance recognizes development in quiet areas has different impacts with regards to noise than development in established areas of higher background noise.

The EIAR states in section 5.5.4:

'A wind farm is not a recognised source of pollution. It is not an activity that falls within any thresholds requiring Environmental Protection Agency licensing under the Environmental Protection Agency Licensing Act 1992, as amended. As such, a wind farm is not considered to have ongoing significant emissions to environmental media and the subsequent potential for human health effects'

The requirement for EPA licensing to operate a facility is not threshold for the protection of Public Health. Noise emissions and shadow flicker from Wind farms can be an ongoing significant emission and the NEHS are not aware of any consensus or EPA Guidance that concludes or states that 'a wind farm is not considered to have ongoing significant emissions to environmental media and the subsequent potential for human health effects'

Shadow Flicker – section 5.8 of EIAR

As stated in the EIAR, the draft 2019 Guidelines proposed a planning condition of:

The adopted DoEHLG 2006 Guidelines are currently under review. The Draft DoEHLG 2019 Guidelines recommend local planning authorities and/or An Bord Pleanála impose conditions to ensure that:

"no existing dwelling or other affected property will experience shadow flicker as a result of the wind energy development subject of the planning application and the wind energy development shall be installed and operated in accordance with the shadow flicker study submitted to accompany the planning application, including any mitigation measures required."

The Draft DoEHLG 2019 Guidelines are based on the recommendations set out in the 'Proposed Revisions to Wind Energy Development Guidelines 2006 - Targeted Review' (December 2013) and the 'Review of the Wind Energy Development Guidelines 2006 - Preferred Draft Approach' (June 2017).

The EIAR also states:

The assessment herein is based on compliance with the current DoEHLG Guidelines limit (30 hours per year or 30 minutes per day). However, it should also be noted the Proposed Development is also in line with the requirements of the 2019 draft guidelines, should they be adopted while this application Proposed Knockshanvo Wind Farm, Co. Clare Ch 5 Population and Human Health F - 2024.08.29 - 200513 5-32 is in the planning system, and FuturEnergy Ireland's zero shadow flicker policy through the implementation of the mitigation measures outlined in Section 5.9.3.6.

In the interest of the protection of public Health the proposed condition in the 2019 Draft Guidance should be implemented if consent is given for the development. The technology has advanced since the publication of the 2006 Guidance and it is a reasonable health protection measure to be included in any conditioning of a wind farm development. The mitigation measures that will eliminate exposure to shadow flicker are identified in the EIAR. This mitigation should be implemented irrespective of whether the current guidance is updated.

Design Specifics and Final Siting of Turbines

The NEHS has previously made as a matter of record to ABP that it is the opinion of the NEHS that by not providing final turbine design, orientation and micro location in the EIA it could significantly affect the impact assessments. In this case the applicant is stating the turbine tip height could vary between 179.5 and 185m in height. The other variables were notified to the Board in April 2024. The Board should be satisfied that these variables do not materially affect the outcomes of the predictive assessments.

A meeting under Section 37CC(1) Consultation was held with the Board on the 4th April 2024. The design team gave an overview of the details unlikely to be confirmed at application lodgement, which were set out as follows:

- > Turbine total tip height
- > Turbine rotor diameter
- > Turbine hub height

The parameters within which the turbine specifications will fall were set out as follows:

- > Total tip height range of 179.5m – 185m
- > Rotor diameter range of 149m – 163m
- > Hub height range of 102.5m to 110.5m

It was also explained to the Board that the design flexibility requirement arises as the exact make and model of the turbine cannot be confirmed prior to making the application as this will be dictated by a competitive tender process of the various turbines on the market at the time of procurement and construction, which necessitates the requirement for associated unconfirmed details to be included in the application.

On the 21st May, the Board issued an opinion under Section 37CD to the applicant and determined that if it is satisfied that it is appropriate that the proposed application be made and decided before the prospective applicant has confirmed certain details of the application which include the following:

The certain details include the following:

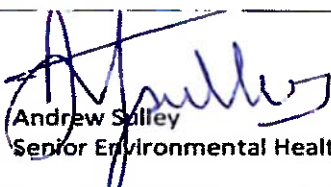
- > Turbine Dimensions
 - o Turbine Tip Height
 - o Rotor Diameter
 - o Hub Height

Construction and Environmental Management Plan (CEMP)

The NEHS has considered the draft CEMP in appendix 4.3 and the schedule of mitigation for the construction phase.

The NEHS is satisfied there will be adequate protection of Public and Environmental Health during the construction phase if all the mitigation measures are implemented in full. The following observations are in the interest of the protection of Public Health:

- a) All drinking water and water used for the preparation of food in the temporary construction compounds should meet the requirements European Union (Drinking Water) Regulations 2023, SI 99/2023
- b) There should be no direct emission to ground or surface water of any foul waste water. All waste water should be contained and taken off site to a licensed treatment facility,
- c) The NEHS notes the commitment to restrict the storage height of excavated peat to below 1.5m. This is an important measures to protect from any accidental slippages and contamination of ground and surface water during the construction phase.
- d) The NEHS has considered section 3.2. of the CEMP. This section covers proposed mitigation measures and the design of the site drainage. The main objective is the protection of surface and ground water during the construction phase. The NEHS is satisfied that if all the mitigation identified in this section is implemented in full there will be adequate protection of ground and surface water during the construction phase.
- e) The NEHS has considered section 3.6 and 3.7 on dust control and noise control during the construction phase are satisfied that if all the mitigation identified in this section is implemented in full there will be adequate protection of Public Health during the construction phase, with regard to the control of dust and noise.



Andrew Sulley
Senior Environmental Health Officer



Rory O'Dea
Senior Environmental Health Officer