An tOifig Náisiúnta um Sláinte Chomhshaoil
Feidhmeannacht na Seirbhíse Sláinte,
Urlár 2, Teach na Darach, Ascaill na Teile
Páirc na Mílaoise, An Nás, Co. Chill Dara.

National Office for Environmental Health Services
2nd Floor, Oak House, Lime Tree Avenue
Millennium Park, Naas, Co. Kildare
Eircode: W91KDC2

An Coimisiun Pleanala
64 Marlborough Street
Dublin 1

8th December 2025

Planning ref PAX03.323783

NEHS ref: ID5414

Enclosed are the observations of the National Environmental Health Service (NEHS) on planning application An Coimisiún Pleanála - Case reference: PAX03.323783

Planning permission for Cloonkett Wind Farm consisting of 14 no. wind turbines, a permanent 220kV substation and ancillary development.

Any clarification on the contents of this submission should be made, in the first instance Andrew.sulley@hse.ie quoting NEHS ID5414.

Andrew Sulley
Senior Environmental Health Officer

National Environmental Health Service Submission Report

Planning permission for Cloonkett Wind Farm consisting of 14 no. wind turbines, a permanent 220kV substation and ancillary development

Type of Consultation: SID with EIAR

The following HSE stakeholders were notified of the application on 4th November 2025:

- Emergency Planning
- National Capital Estates Office
- Director of National Health Protection
  REO Mid-West

The NEHS submission report is based on an assessment of documentation submitted with the planning application, particularly the accompanying EIAR.

All commitments to future actions in the planning application, including mitigation and further testing, have been taken as read and all data results have been accepted as accurate, unless specifically highlighted in the submission.

No additional investigations/measurements have undertaken by the NEHS.
This report refers only to those sections of the application documents that are relevant to the HSE which have likely significant Environmental Health or Public Health impacts

General

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 or Environmental 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 or Environmental 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.

Site Visit by the NEHS

A visit to the site of the proposed Cloonkett Wind Farm and its environs was carried out by the NEHS on the 18th of November 2025. The following observations were made:

a) The proposed development site is located in a sparsely populated rural area approximately 2 km east of the village of Cranny, 3.5km south east of Kildysert, 20km north east of Kilrush and 19km south west of Ennis.
b) The boundary of the site is bound to the north by the L2070 local road, to the east by a local road linking the L2066 to the L2070, to the west by the R487 and to the south by the L2066 Kildysert to Coolmeen Road.

It was difficult to determine the exact proposed siting of each of the wind turbines during the visit due to restricted access and locations off existing routes. Approximate distances are calculated from Cloonkett. Some properties and facilities may be located closer to individual turbines.

The area is characterised by hilly bogland with commercial forestry and agriculture being the main land use.

The proximity of the site to sensitive receptors

Occupied houses

The proposed site is in an area which is sparsely populated. Although a number of recently constructed dwelling houses were noted in the surrounding area, the majority of the properties are older single storey cottages and farmhouses, many of which are located along private laneways off the public roads along the boundary of the site.

It is estimated from the site visit that up to 50 homes are located within a 1km distance of the site boundary.

It is noted in Section 2.1 ‘Site and Environs’ of the Planning Statement accompanying the application that ‘*there are 161 residential properties within 2 km of the turbine array and 57 residential properties within 1 km of the turbine array as shown in the accompanying EIAR. The closest property to a turbine is located ca. 518 m distance.* ***This property belongs to an involved landowner****. All other residential properties are located greater than 600 m from the turbine array. The on-site substation is located 149 m from the nearest residential property’*

Schools

The nearest school, Cranny National School is located approximately 2km east of the site with Coolmeen National School a similar distance to the south of the proposed site. Kildysert National School and St John Bosco Community College secondary school are located approximately 3.5km from the proposed site as is Kildysert Kidz Care and Education Centre which is a pre-school facility.

Sports Facilities

Two GAA pitches are located in the area surrounding the proposed site – Coolmeen GAA pitch is approximately 2km from the proposed wind farm site and Kildysert GAA pitch is approximately 3.6km from the site

Food Premises

The nearest food premises are two public houses – Tir na nOg – located in Cranny and The Hilltop Bar located in Coolmeen which served food. The nearest shops are located in Kildysert.

The location of private wells and proximity of water courses, including streams, rivers or lakes

Clare Springs Water Company which bottles and supplies locally sourced spring water is located at Furroor, Lissycasey which is approximately 3km to the north of the proposed site.

Coolmeen, Cranny and Kildysert and surrounding areas are serviced by Kildysert Public Water Scheme

There are a number of waterbodies to the south east of the proposed windfarm site, including Lough Cloonsnaghta and Gortglass Lake. Both of these lakes are used as local recreational amenities in particular for trout fishing and swimming.

The main river in the area is the Cloon River (and its tributaries) which runs to the north and west of the site and eventually flows into the Shannon at Clonderalaw Bay

The site visit was unable to determine the number of properties supplied by private wells in the area.

O**ther industries in the area**

There are a number of existing windfarms in the south west Co Clare area including Cahermurphy wind farm (6km north of the proposed site); Kiltumper Windfarm (5km north) Boolynagleragh wind farm (6 km north east of the proposed wind farm), Tullabrack wind farm (18km west of the proposed site) and Slievecallan windfarm 15km north of the proposed site

Community Concerns

A change.org website has been set up to ‘Stop the wind farm affecting Gortglass Lake’ which is a petition site with the aim of ‘*keeping Gortglass Lake untouched and safe for future generations of wildlife and nature enthusiasts’*

Condition of roads around the proposed development

The proposed site is surrounded by local roads, many of the unnamed. The roads are narrow and single track in places and the condition is typical of local roads. Some of the road surfaces are bitumen while some are compacted gravel and many are potholed. There is no evidence of widespread resurfacing. Due to the winding and undulating nature of the roads, advance visibility is limited. There are few pull in laybys available in the event of meeting oncoming traffic

Criteria for Consideration of Likely Significant Effects on Public Health

The NEHS considers likely significant effects on Public and Environmental Health as per the EPA issued National Guidance (known as the EIAR Guidance): ***Guidelines on the information to be contained in Environmental Impact Assessment Reports,*** 2022 https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf

Particularly section 3 of the EIAR 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)[47] 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 Directives[48]. 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.

A 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. 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.

It is recommended that the Planning Authority also follows this method when consider Public Health in their decision making.

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 has 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 2013 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 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 of 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

Non-Technical Summary

The Non-Technical Summary of the EIA (NTS) is an important document that facilitates public access and understanding of the proposed development.

It should accurately summarise the likely significant impacts, proposed mitigation and the residual impacts after mitigation has been implemented, that are attributable to the proposed development.

This should be done in non-technical language and relate accurately to the specific chapters of the EIAR. The NTS should identify all sensitive receptors that are likely to be significantly impacted and clearly state the significance of the effects on them.

Chapter 5 Population and Human Health

The NEHS has considered chapter 6 of the EIAR.

Consideration of Population and Human Health should be done in a proportionate manner that is specific to the proposed development and any likely significant effects the proposal might have on Population Health.

Observations of the NEHS

The main consideration for protection Population and Human Health within an Environmental and Public Health remit is a source – pathway- receptor with regard to emissions into the environment during construction and operation of the proposed development.

Particularly:

a) Any likely significant effect from exposure to noise during construction and operation
b) Any likely exposure to shadow flicker during operation,
c) Any likely significant reduction in air quality during construction, particularly dust emissions,
d) Protection of ground and surface water during construction activities from contamination with hydrocarbon spillages or sedimentary run off.

It is the opinion of the NEHS that the EIA has identified these areas for assessment, and they are reported in the EIAR.

The NEHS recommends the Planning Authority consider Chapter 6 in the context of our previous recommendations in this submission, i.e. emissions into the environment and exposure of populations to the emissions and an evaluation against recognised health protection standards

It should be noted by the Planning Authority that the following ***'The HSE 'Position paper on wind turbines and public health***' has been withdrawn by the HSE and is under review.

Likely Significant Impact on Ground and Surface Water
Chapter 10 Soils, Geology and Hydrogeology
Chapter 11 Hydrology and Water Quality

The NEHS has considered Chapter 10 and 11 of the EIAR and the sections referenced. Based on the information provided in chapter 10 and 11, the NEHS would concur with the conclusions that there is adequate protection of surface and ground water during construction and operation of the proposed development if all the mitigation identified is implemented in full.

The following is noted:
From Chapter 10

Table 10-11: Summary of Groundwater Wells with 1km of the Proposed Development

Location ID	Easting	Northing	Type	Total Depth (m bgl)	Current Use	Yield Class (yield m³/day)	GSI Location Accuracy (m)	Approx. Distance to Nearest Infrastructure Element (m) Note 1
Located within the Site								
1115NWW001	522286	660608	Dug Well	13.10	Agri & domestic use	No Data	1km	T13 (within boundary)
1115NWW005	521177	661250	Dug Well	14.6	Agri & domestic use	43.6 (Poor)	1km	T12/T08 (within boundary)
Located within 1km of the Site								
1115NWW020	519328	661955	Borehole	7.6	Agri & domestic use	19.6 (Poor)	1km	T03 (700m)
1115NWW002	519373	661989	Dug Well	18.9	Agri & domestic use	32.7 (Poor)	1km	T03 (740m)
1115NWW007	517869	661094	Borehole	71.6	Agri & domestic use	55 (Moderate)	1km	T01 (990m)

Location ID	Easting	Northing	Type	Total Depth (m bgl)	Current Use	Yield Class (yield m³/day)	GSI Location Accuracy (m)	Approx. Distance to Nearest Infrastructure Element (m) Note 1
Located within the Site								
1115NWW006	517880	661187	Borehole	13.7	Agri & domestic use	No Data	1km	T01 (1,040m)

Note 1 – measured from the edge of the well boundary.

10.7.2.7 Groundwater

To mitigate against the increased vulnerability of the underlying aquifer to groundwater pollution, all excavations will be constructed and backfilled as quickly as possible. Excavations will stop during or prior to heavy rainfall events (status orange or higher). Details of mitigation measures related to spills and fuel storage are outlined in Chapter 11 - Hydrology and Water Quality.

The dewatering of the foundation excavations is not expected to cause interference with domestic wells in the area, due to large offset distances to known wells, relatively shallow depths of excavation and temporary short-term nature of dewatering, if required. To monitor groundwater during the construction phase groundwater monitoring wells will be installed between areas of deeper excavations and sensitive groundwater receptors, such as areas of shallow bedrock. The wells will be used to monitor groundwater levels and quality to assess any potential effects during the construction works.

The GSI Wells and Springs database is not complete; it is therefore probable that there are other wells in addition to those in the GSI databases, but are generally associated with houses, the offset to which from the turbines is a minimum of 750m. Given the limited depth of the excavations during the construction phase and the distance to sensitive groundwater receptors the potential risk posed to groundwater supply wells is considered to be imperceptible following the implementation of mitigation measures discussed above.

From Chapter 11

Mitigation measures identified in the Surface Water Management Plan (SWMP) [EIAR Volume III, Appendix 11.1]
Flood Risk Assessment Report [EIAR Volume III, Appendix 11.3]
Hydrological and Hydraulic Site Walkover Report [EIAR Volume III, Appendix 11.4]
Peat and Spoil Management Plan [EIAR Volume III, Appendix 10.3]

Consideration of Shadow Flicker – chapter 12

The EIAR clearly states the technology exists to reduce or eliminate shadow flicker where required. Chapter 12.

12.5 Mitigation Measures

Shadow flicker control modules, consisting of light sensors and specialised software, will be installed on the turbines to ensure that mitigation is implemented to reduce shadow flicker occurrence at any receptor. The calculated theoretical shadow flicker periods can be input into the turbine control software and when the theoretically optimal on-site conditions for shadow flicker are met (i.e. the light intensity is sufficient and shadow flicker might occur) during operation, then individual turbines would cease operation until the on-site conditions change, or the theoretical period has passed.

Cloonkett Green Energy Ltd will provide protection from shadow flicker by committing to curtailing turbines for all instances where shadow flicker effects may occur at residential dwellings within 10 rotor diameters of the turbines; this procedure is defined as "zero shadow flicker" mitigation. The "zero shadow flicker" mitigation strategy will reduce levels of shadow flicker to near zero hours a year. However, it should be noted that when the conditions for shut down due to shadow flicker are met, there is a short period of time before complete shutdown occurs as the turbines gradually slow down and stop turning. This will depend on the reaction time of the shadow flicker control modules and the particular turbine type, as well as a gradual reduction in rpm i.e., the blades will not come to a sudden stop.

Appendix 12-1 contains a list of times when each turbine could theoretically cause shadow flicker. These are given as an example of potential mitigation system inputs, and before any implementation a detailed review would be required for the key parameters such as final turbine locations and dimensions and detailed review of receptor rooms and windows.

Following mitigation, shadow flicker levels at all receptors within the study area will be reduced to negligible levels, and as such would not result in significant effects.

Observations of the NEHS

In the interest of the protection of public Health the proposed zero shadow flicker identified in chapter 12 of the EIAR should be conditioned if permission is given for the development.

Likely Significant Effects from Noise and Vibration - Chapter 8 of EIAR

The NEHS has considered Chapter 8 of the EIAR and the accompanying documentation on the noise impact assessment and makes the following observations:

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) From the 2006 Guidelines ***"However, in very quiet areas, the use of a margin of 5dB(A) above background noise at nearby noise sensitive locations is not necessary to offer a reasonable degree of protection and may unduly restrict wind energy developments which should be recognised as having wider national and global benefits. Instead, in low noise environments where background noise is less than 30dB(A), it is recommended that the daytime level of the LA90, 10min of the wind energy development be limited to an absolute level within the range of 35 – 40dB(A)."*** There is no evidence base to support the statement that this limit is not necessary to offer a reasonable degree of protection in low noise background areas.

e) The evaluation of significance of the effect should be 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 for 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. In in ***Webster/Rollo V Meenaclogher (Wind) Limited (2024 IEHC 136) 8th March 2024*** the Judgement supports this position, in that the judgement makes it clear that compliance with the current Planning Guidance does not preclude a private noise nuisance.

f) In the opinion of the NEHS, 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 is the most informative way of reporting the likely effect of operational noise in an EIAR.

g) The NEHS would consider the most appropriate criteria for assessing significance of the predicted noise would be 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

h) The use of the 2006 Guidance with regards to noise exposure, and in particular the 'balance between development and protection of public health' stated are resulting in a significant volume of complaints from communities exposed to noise from wind turbines post development. This position that the absolute noise exposure limits set in the 2006 Guidance do not necessarily

protect Public Health in specific development situations is now supported by Judgements of the Irish Courts, as reference previously in this submission.

i) It should be noted that concern with the 2019 draft guidance by acoustic consultants were concerns due to assessment methodology and not the proposed standards set to protect health. In the response from the Institute of Acoustics they specifically state: ***'The Group agreed and stressed in their responses that they believe the setting of suitable noise limits is a matter for Government policy. The Group was only concerned with aspects of technical accuracy and clarity'.***

j) Wind Energy Development Guidelines (WEDG) for consultation for Irish Department of Housing, Planning, Community and Local Government (DHPLG) | Institute of Acoustics

The changing of some of the absolute noise exposure limits at NSLs from a limit based on a low background to a non-low background at increased wind speeds increases the criteria for noise exposure limits.

If the wind turbine noise is the predominate noise source then the control of the level of noise exposure to protect health should be the same whatever the background level is. If the background level becomes the predominate noise source at higher wind speeds, then the wind turbine noise does not need controlling. There is no reasonable rationale on health protection grounds to increase the absolute noise exposure limit because the background level has increased, if the wind turbine noise is still the dominant noise source.

Predicted Operational Noise from the Transformer

Reference is made to 8.2.1

Table 8-21: BS4142 Assessment of Transformer Noise

Results	Daytime	Night time
Measured ambient plus predicted noise from transformer	(Residual 46 dB + specific 37 dB=) 47 $L_{Aeq, 60mins}$	(Residual 26 dB + specific 37 dB=) 37 dB $L_{Aeq, 15mins}$
Residual sound level	46 dB $L_{Aeq, 60min}$	37 dB $L_{Aeq, 15min}$
Background sound level (when source not in operation)	34 dB $L_{A90 (60mins)}$	23 dB $L_{A90 (15 mins)}$
Reference period	1 hour	15 minutes
Specific sound level	37 dB $L_{Aeq, 60mins}$	37 dB $L_{Aeq, 15mins}$
Acoustic character correction (none applied)	-	-
Rating level (no correction applied)	37 dB $L_{A90, 60mins}$	37 dB $L_{A90, 15mins}$
Background sound level	34 dB $L_{A90, 10mins}$	23 dB $L_{A90, 10mins}$
Excess of rating over background	+ 3 dB	+ 14 dB
Results	The difference of +3dB is below the level where there is an indication of an adverse impact (normally +5dB). The predicted noise level is low and steady in character and only marginally above the existing background noise.	The difference of +14 dB is above the difference (+10dB), which indicates a significant adverse impact, depending on the context. The context is important here as the noise levels are very low at night and therefore an absolute level is more appropriate.
Uncertainty of assessment	The uncertainty of assessment is unlikely to change the result	The uncertainty of assessment is unlikely to change the result

The conclusion that an absolute noise level is more appropriate with a low night-time background level is hard to reconcile with the protection of health, and particularly prevention of sleep disturbance.

The context is more appropriately considered as that night-time is when the change in the existing noise environment has the biggest potential to have adverse health impacts. The health protection standard should not be changed because there is a low existing background noise level. Introducing a new noise source into an existing low noise background requires mitigation to ensure there are no adverse impacts on health, not just a change in the evaluation criteria.

The EIAR clearly identifies that the standard being used to assess impacts (BS4142) states that an increase of +10dB indicates a ‘significant adverse impact’. The prediction is that night-time will be an increase of +14 dB, which on the logarithmic Decibel scale is a significant level above the level that has been identified as ‘significant adverse impact’. So, the conclusion from the EIAR does not reconcile with the assessment criteria used to evaluate ‘adverse effects’

In summary, the substation **predicted daytime noise levels are below the level that would lead to an adverse effect**. At night time, absolute noise levels are considered more appropriate and the **predicted noise levels are at a level that will not lead to any adverse effects**.

Mitigation measures should be implemented that reduce the change in the night-time noise environment to below the 10 dB that BS4142 indicates will have a significant adverse impact.

Wind Turbine Operational Noise

From the EIAR:

At 16 locations the noise limits are exceeded at the 6m/s windspeed by between 0.1 and 2.8 dB. The location where the largest exceedance occurs is north west and central to the Proposed Wind Farm. This location also exceeds the night time criteria very marginally (by 0.2 to 0.4 dB) at 7m/s and 8m/s. The noise criteria are met at all other locations for the night time and also the daytime. Section 8.7.2 sets out mitigation measures to reduce the noise level to within the noise limits. At the 16 locations where the noise limit is exceeded, as described in Section 8.3.4, there will be a **long term moderate effect.** For the remaining locations, at some receptor locations, a new source of noise will be introduced into the soundscape and it is expected that there **will be long-term slight to moderate effect.** The **moderate significance of effect** is at the closest dwellings to the Proposed Wind Farm.

It should be noted that if the 35 dB exposure limit had been adopted (which is permitted under the methodology) for low background levels instead of the 40 dB that was chosen, there would be significantly more NSL not meeting the adopted criteria.

As stated previously, the adopted noise criteria for low background areas permits changes in the noise environment significantly above 10dB.

Consideration of the predicted noise exposure from construction of the proposed development
The NEHS makes the following comments:

a) The NEHS is of the opinion that there is no requirement for additional noise mitigation measures during the construction phase providing those measures identified in the in the EIAR are implemented in full.
b) It is the opinion of the NEHS that conditioning hours of construction activity is an important element of the protection of Public Health. Particularly to prevent sleep disturbance. The recommended hours of construction are:
Monday to Friday 08.00 to 19.00
Saturday 09.00 to 14.00
No work on Sunday or Bank Holidays

Exceptionally work outside these hours at the express permission of the Planning Authority.

This recommendation is made in the interest of the protection of Public Health

Construction and Environmental Management Plan (CEMP)

The NEHS has considered the CEMP in Appendix 2.1
The plan is detailed and it is the opinion of the NEHS that there is adequate protection of Public and Environmental Health during the construction phased if all mitigation measures identified are implemented in full.

Additional considerations 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 of S.I. No. 122/2014 - European Union (Drinking Water) Regulations 2014,
b) There should be no direct emission to ground or surface water of any foul wastewater. All waste water should be contained and taken off site to a licensed treatment facility.
c) Site drainage should ensure the protection of surface and ground water during the construction phase. These are detailed in the CEMP and the NEHS has no additional comments.
d) The dust monitoring is a monthly average standard. Compliance with standard can incorporate short periods of very high levels of dust deposition followed by low levels and still be compliant. It is therefore important that dust minimisation is continually implemented, and any complaints are investigated and responded to.

The NEHS has no additional observations on the proposed mitigation measures and considers there will be adequate protection of Public and Environmental Health during the construction phased if all mitigation measures identified are implemented in full.