

SECTION 131 FORM

File With Una Crosse S. 37

Appeal NO: ABP 322154-25

Defer Re O/H ☐

Having considered the contents of the submission dated/ received 22/4/25
from

Con Sheehan I recommend that section 131 of the Planning and Development Act, 2000
be/not be invoked at this stage for the following reason(s): No new planning issues

E.O.: Daniel & Connor

Date: 24/4/25

For further consideration by SEO/SAO

Section 131 not to be invoked at this stage. ☐

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____

Date: _____

S.A.O.: _____

Date: _____

M _____

Please prepare BP _____ - Section 131 notice enclosing a copy of the attached
submission

to: _____ Task No: _____

Allow 2/3/4weeks – BP _____

EO: _____

Date: _____

AA: _____

Date: _____

File With _____

CORRESPONDENCE FORMAppeal No: ABP 322154-25

M _____

Please treat correspondence received on 22/4/25 as follows:

1. Update database with new agent for Applicant/Appellant _____

2. Acknowledge with BP _____

3. Keep copy of Board's Letter ☐

1. RETURN TO SENDER with BP _____

2. Keep Envelope: ☐3. Keep Copy of Board's letter ☐Bulk Lodgement

Amendments/Comments

Observation from Con Sheehan

4. Attach to file

(a) R/S ☐(d) Screening ☐(b) GIS Processing ☐(e) Inspectorate ☒(c) Processing ☐RETURN TO EO ☐

EO:

Daniel O Connor

Date:

24/4/25Plans Date Stamped ☐Date Stamped Filled in ☐

AA:

Date:

25/04/25

College road, Carrignavar, Co Cork.

14/04/2025

Bord Pleanála, 64 Marlborough St, Rotunda, Dublin 1

Re: Bord Pleanála Case reference: PL10.322154

Kilkenny Co Council Planning Authority Case Reference: 2560003

Applicant: Briskalagh Limited.

AN BORD PLEANÁLA	
LDG-	_____
ABP-	_____
22 APR 2025	
Fee: €	50 Type: CHO
Time:	11:15 By: Hand

Planning Application to Kilkenny County Council for a Renewable Energy Development and all associated works in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

Dear inspector,

Further to my submission to Kilkenny Co Council on this project I am now submitting my observation on the MKO response, inserted below, to my initial observation :

4.1.15 Insufficient Turbine Spacing

One third-party submission made an observation relating to the spacing between the proposed turbine locations stating that it does not comply with the separation distances recommended within the Guidelines (i.e. 3 rotor diameters in the cross wind direction and 7 rotor diameters in the prevailing wind direction).

The design of the Proposed Wind Farm has been an informed and collaborative process from the outset involving the designers, developers, engineers, landowners, environmental, hydrological and geotechnical, archaeological specialists and traffic consultants. The aim being to reduce potential for environmental effects while designing a project capable of being constructed and viable.

The reference to 3 and 7 rotor diameters from the Guidelines relates to the required separation from any existing wind turbines rather than the required separation between the proposed turbines. As stated in Chapter 4, Section 4.3.1.1 of the EIAR, the proposed wind turbine layout has been optimised using wind farm design software (WindPro) to maximise the energy yield from the Proposed Wind Farm, while maintaining sufficient distances between the proposed turbines to ensure turbulence and wake effects do not compromise turbine performance.

In conclusion, the proposed turbine layout has been carefully designed using industry-standard software to optimise energy yield while maintaining appropriate separation distances. The referenced guideline distances apply to existing turbines rather than those within a new development. The design process has been a collaborative effort, ensuring technical feasibility while minimising environmental impact.

Please refer to Chapter 3 and Chapter 4 of the EIAR for further details in relation to the locations of the Proposed Wind Farm turbines.

Wind turbine to wind turbine spacing comes under "Windtake" on page 34 of the WEDG2006 guidelines shown below

34

Guidelines

5.13 Windtake

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.

The beginning of the second paragraph lays out this minimum spacing "to ensure optimal performance and to account for turbulence and wake effects". It is then confirmed at the end of that paragraph whatever the scenario is.

It is not specific to distances to existing wind turbines on another windfarm. That would not make sense. The applicant cannot say that the distance required from proposed turbines to existing turbines on another windfarm is any different to the distances required between turbine to turbine on a proposed windfarm.

Insufficient turbine separation distances results in excessive wear and tear, increased noise and reduced output capacity.

The 2006 guidelines have those minimum distances stated for a reason and should not be compromised for reasons of profit while at the same time increasing the risk of noise nuisance.

Yet again, and since my initial observation, another noise nuisance case has been admitted to by a windfarm operator at Gibbett Hill in Co. Wexford a couple of months ago. It appears the "Industry standard software" and the "collaborative design process" is not protecting human health and wellbeing. The lack of understanding of the design teams regarding the critical issue of turbine separation distances is worrying, especially in afforested and hilly terrain. It's consequences are showing up with multiple noise nuisance cases coming before the courts and families having to abandon their homes.

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SEAI have published in 2024 a series of documents on how to design and plan a windfarm layout, see the following link:

<https://www.seai.ie/sites/default/files/publications/Community-Toolkit-Planning-Process.pdf>

Noise Levels

Noise generation is perceived to be an adverse impact of wind turbine operations, although noise levels of modern wind energy are generally very low. Improvements in technologies have reduced mechanical noise impacts significantly. However, it is important that turbines are located an appropriate distance from noise sensitive developments to minimise any adverse impacts upon local amenity.

Wind turbines also create noise, which can impact on the amenity of the occupants of any nearby dwellings. As such, it is recommended that a separation distance of at least 500 metres or four times tip height is incorporated between the turbine and any other dwelling.

Appropriate Distance

You will need to consider appropriate distance between all wind turbines and power lines when planning for grid connections. The minimum clearance for all turbines and overhead transmission lines must be falling distance (measured from the edge of the foundation) plus an additional 'flashover' distance for the relevant voltage. EirGrid advises that the distance between an overhead transmission line (110kV, 22kV or 400kV) and a commercial wind turbine should not be less than three and a half rotor diameters unless EirGrid has agreed a reduction based on a risk assessment. ESB Networks should be consulted on applications, and evidence of any pre-application discussions should be submitted as part of the planning application.

It is advisable to achieve a safety setback from national and regional roads and railways of a distance equal to the height of the turbine to the tip of the blade plus 10%.

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 in the crosswind direction and seven times the rotor diameter 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.

→ Decommissioning and Site Restoration

Solar farms and wind turbines have a finite life and, should planning permission be granted, it is likely to be subject to a condition requiring the turbine to be decommissioned and removed when no longer in use. A condition may also be added requiring certain colours and finishes of the mast, blades and hub, but this will be specific to the turbine's location.

3.2 Identify Site Constraints

- Refer to the Wind Energy Maps or Renewable Energy Strategy in the County Development Plan to check wind energy designations. Refer to the Council's Landscape Assessment (if any) to see where the site lies in relation to landscape sensitivity.



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Page 28 advice from SEAI (previous page), as shown and highlighted in red, does not agree with the MKO reading of the WEDG 2006 guidelines on page 34. It does not, as I mentioned earlier, differentiate between separation distances of turbines on a proposed windfarm to those on or adjacent to an existing windfarm. This SEAI advice is specifically for turbines within a proposed windfarm. They say the 3 rotor and 7 rotor spacing's are required on proposed windfarms.

MKO and other windfarm designers may be referring to the 2012 Irish Wind Energy Association "Best practice guidelines for the Irish Wind Energy Industry" (link below) instead of the WEDG2006 guidelines when preparing their applications. These IWEA 2012 guidelines are not in force.

<https://windenergyireland.com/images/files/9660bdfb5a4f1d276f41ae9ab54e991bb600b7.pdf>

I am not aware if the applicant has submitted, as I requested, the turbine manufacturer's recommended minimum spacing between turbines for the sample turbine (Nordex N163STE).

This will show the minimum spacing they require to provide a valid warranty for those turbines.

Account must also be given to the afforested and hilly terrain of this project which will increase those spacing's by approximately 20%.

Will ABP please insist on the supply of this critical information.

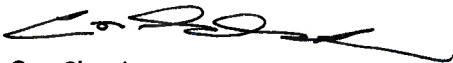
Will ABP ask the applicants to show on a plan the distances between the turbines and the number of rotor diameter's that those distances represent.

Having that said, they should still abide by the WEDG2006 guidelines that are in force, on the spacing between turbines.

I trust you will take this further observation on this application on board and I am available for oral hearing or other forum if required.

I enclose 50 euro fee made out to An Bord Pleanala.

Yours sincerely,



Con Sheehan,

Chartered Land surveyor FCSI



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Sheehan Land Surveys Ltd

Consulting Land surveyors and mappers.

College road,
Carrignavar,
Co. Cork.

Date: 13 January 2025

The Secretary,
Planning Department,
Kilkenny County Council,
County Hall,
John Street,
Kilkenny.

Re: Kilkenny County Council planning reference 25/60003

Applicant: Briskalagh Limited.

Planning Application to Kilkenny County Council for a Renewable Energy Development and all associated works in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

Dear planners,

I highly recommend this application be looked at in detail with respect to the turbine to turbine separation distances within this application site boundary.

I am a chartered Land Surveyor, in private practice since 1994, becoming a Fellow member of the Society of Chartered Surveyors of Ireland & the RICS in 2006.

Since 2017 I have been working in a professional capacity mapping distances and dimensions of various Windfarms in Cork, Kerry, Waterford, Limerick and Wexford counties on behalf of certain residents who have complaints of noise nuisance created by the operation of wind turbines. I was also the surveyor involved in mapping the dimensions of the Ballyduff wind farm on behalf of the Plaintiffs who were impacted by amplitude modulation and turbine noise to such an extent that one of the Plaintiffs had to abandon his home and was found to have suffered psychological injury. The findings in this case were made by the High Court in a Judgment of Ms. Justice Egan delivered on the 8th March 2024 (Webster & Anor -v- Meenacloughspar (Wind) Limited and Shorten & Anor-v- Meenacloughspar (Wind) Limited. In that Judgment regard is had to the proximity of the turbines to the homes of the Plaintiffs and to the many factors which may be contributing to turbine noise, including possible wake effects of one turbine on the other turbine (the particular windfarm in that case has just two turbines).

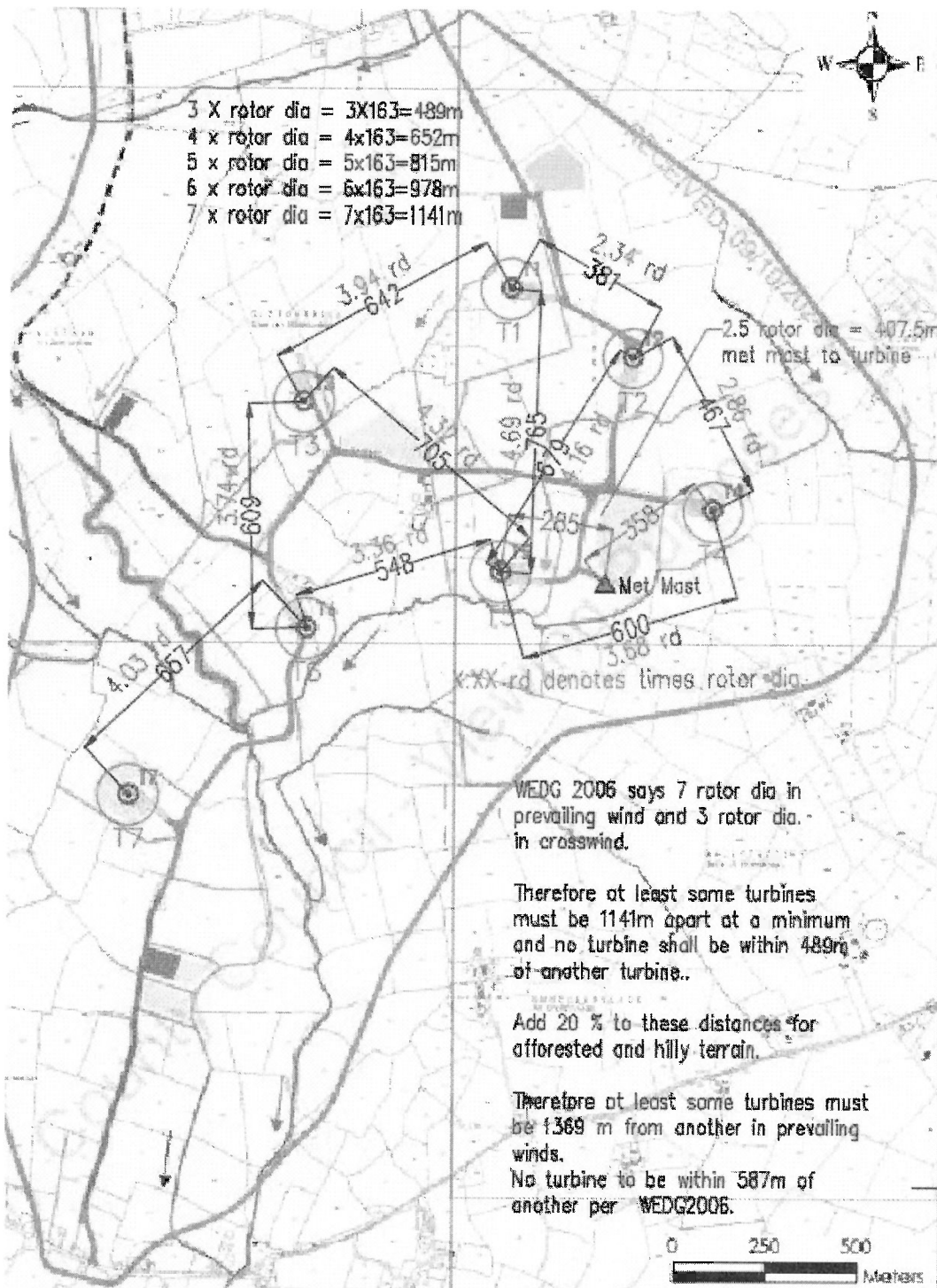
I have recently carried out a study of all of the Windfarms I have worked on (on behalf of injured parties) and one factor that I happened upon is present in all. This is the spacing of certain turbines relative to each other. It is a factor in wake turbulence at particular turbines, creating noise nuisance for nearby residents.

On reading the WEDG 2006 guidelines, referring to "wind take" on page 34, one could miss the recommended siting of turbines relative to each other (as distinct from siting relative to dwellings and adjacent windfarms / properties outside of the windfarm control).

It reads **"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."**

This application (planning reference 25/60003) in particular has challenged me, a Chartered Land surveyor with speciality in mapping and analysis of same, to find a suitable map in the entire application that enables me to properly scale anything. One has to go the Hydrology report to get the information where the seven turbines are all shown together with a scale and/or scalebar.

Planning reference 25/60003, to which this observation refers, has, as one can see in Map 1 (next page), completely ignored the turbine separation distances from adjacent turbines. Also note the location of the Met mast which I believe to be in a very poor location for the purpose it is intended. Turbulence from the adjacent turbines will make it ineffective. The recommended spacing from a met mast to a turbine is 2.5 rotor diameters.



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Map 1

Of the windfarms I have been involved in to date, those WEDG 2006 guidelines on turbine separation distances from adjacent turbines have not been complied with, as is the case here.

Recommendation

On the basis of what I have outlined and experienced, I highly recommend the following information be sought from the developers to enable the County Council and other parties carry out an in-depth analysis of the proposal, and if fact, the entire validity of the proposal in relation to the Wind Energy Development Guidelines 2006.

1: The manufacturer's specifications for the particular model of turbines used in their design (the Nordex N163 STE) with specific reference to the minimum separation distances from turbine to turbine within the windfarm (not windfarm to windfarm). This should also be shown on a dedicated plan and the rotor diameters between turbines given similar to Map 1 on page 3 of this observation.

(Turbine manufacturers recommend separation distances to avoid excess turbulence, wind shear, noise and other impacts on the integrity of the turbine).

This is to enable them provide a warranty for the turbine being used and indicate the actual power output that will be achieved versus the application stated output.

It is my opinion that the developers will not get a valid warranty for the eventual turbine, after their tender process, for a spacing less than 5 rotor diameters in the prevailing wind direction and 3 rotor diameters in other directions. The layout on Map 1 shows a significant lack of spacing, if this is the case.

In the event that the aforementioned information is not supplied to the County Council I highly recommend that this application is refused.

I am available for consultation or other forum if needed.

I enclose a cheque for 20 Euro made out to Kilkenny County Council.

Yours sincerely,

Con Sheehan,
Land surveyor /Fellow, "Society of Chartered Surveyors Ireland"
Fellow, " Royal institute of Chartered Surveyors"
College Road ,
Carrignavar,
Co Cork, T34 TK26
Ireland.

Phone: ++353 21 4884923
Mobile: ++353 87 2751882
Email: consheehan61@gmail.com



