Validation Checklist

Lodgement Number : **LDG-069364-24**
Case Number: **ABP-318689-23**
Customer: **Michael Mahon and Regina Hoctor**
Lodgement Date: **18/01/2024 11:28:00**
Validation Officer: **Daniel O'Connor**
PA Name: **Tipperary County Council**
PA Reg Ref: **2360763**
Case Type: **Normal Planning Appeal PDA2000**
Lodgement Type: **Observation / Submission**

Validation Checklist	Value
Confirm Classification	Confirmed - Correct
Confirm ABP Case Link	Confirmed-Correct
Fee/Payment	Valid – Correct
Name and Address available	Yes
Agent Name and Address available (if engaged)	Not Applicable
Subject Matter available	Yes
Grounds	Yes
Sufficient Fee Received	Yes
Received On time	Yes
Eligible to make lodgement	Yes
Completeness Check of Documentation	Yes

BP40 to issue to R.Hoctor and M.Mahon

✓

HB
19/01

Run at: 19/01/2024 11:35

Run by: Daniel O'Connor

S.37

File With

SECTION 131 FORM

Appeal No
ABP— 318689-23

Defer Re O/H

Having considered the contents of the submission dated/received from Michael Mahon + Regina Hartel 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 issues

Section 131 not to be invoked at this stage. ☑

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

Signed: Daniel O'Connor
EO

Date: 19/1/24

Signed
SEO/SAO

Date

M

Please prepare BP — Section 131 notice enclosing a copy of the attached submission.

To

Task No

Allow 2/3/4 weeks: BP

Signed
EO

Date

Signed
AA

Date

An Bord Pleanála

Planning Appeal Online Observation

Online Reference
NPA-OBS-003071

Online Observation Details

Contact Name	Lodgement Date	Case Number / Description
Regina Hoctor	18/01/2024 11:49:19	318689

Payment Details

Payment Method	Cardholder Name	Payment Amount
Online Payment	Michael Mahon	€50.00

Processing Section

S.131 Consideration Required

☑ Yes — See attached 131 Form ☐ N/A — Invalid

Signed Daniel Ó Conaol **Date** 19/1/24

EO

Fee Refund Requisition

Please Arrange a Refund of Fee of € [redacted] **Lodgement No** LDG—

Reason for Refund [redacted]

Documents Returned to Observer ☐ Yes ☐ No

Request Emailed to Senior Executive Officer for Approval ☐ Yes ☐ No

Signed **Date**

EO

Finance Section

Payment Reference ch_3OZu5zB1CW0EN5FC0g9l7gB1

Checked Against Fee Income Online

EO/AA (Accounts Section)

Amount €

Refund Date

Authorised By (1)

SEO (Finance)

Authorised By (2)

Chief Officer/Director of Corporate Affairs/SAO/Board Member

Date **Date**

Michael Mahon and Regina Hoctor

Clohaskin, Carrig, Birr, Co. Tipperary

[redacted]

To Attention of: An Bord Pleanála, Tipperary County Council

Nenagh

Co. Tipperary

Date 18th January 2024

Tipperary County Council Planning Application Reference Number: 2360763

An Bord Pleanála Case reference: PL92.318689

Applicant: Carrig Renewable Energy Limited

Description of Development: The construction of 7 no. wind turbines and associated works.

Location: In the townlands of Croghan, Clohaskin, Caherhoereigh, Ballykinash, Tinnakilly, Arragh More, Ballyloughnane, Faddan Beg, Coolderry, Tinlough, Sharragh, Doughkill, Ballaghgar, Faddan More, Cloncorig, Killeen, and Cornhill, Co. Tipperary

A Chara,

I refer to the above planning application appeal submission and wish to make the following observation in relation to the proposed development.

Sitting in relation to individual properties ('Setback'):
The 1st party appellant in their appeal submission (First Party appeal, Carrig Renewable Windfarm pg. 46) state that the proposed development complies with the Draft Wind Energy Guidelines 2019 set back distance from residential properties.

Within these guidelines, it is set out that a setback distance for "visual amenity purposes" of 4 times the Turbine blade tip height should apply between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a mandatory minimum setback of 500 meters. The proposed development is proposing a Turbine blade tip height of between 179.5m and 185m meters, requiring a minimum setback distance of between 718m and 740m depending on the final configuration.

The applicant has supplied setback distances from each household. This is shown with distances and ITM coordinates as reference by their document submission Table 5-8 in "Chapter 5 – Population and Human Beings" in their EIAR submission and locations of wind turbines in drawing pack 1 "Site Layout Plan Sheet 1 of 4". This can be seen in Table 1 below.

		House ITM Coordinates used by applicant		ITM coordinates for turbines				
House	Turbines	Easting	Northing	Easting	Northing	Distance to nearest turbine centre	House Coordinates	Turbine Coordinates
4	T01	600119	701641	599443	701335	742	53.06539654,-7.99822451	53.06264613,-8.00830997
5	T01	600227	701429	599443	701335	790	53.0634912,-7.9966132	53.06264613,-8.00830997
8	T04	599239	700512	598906	701230	792	53.0552493,-8.011351529	53.0617017,-8.016321194444444
14	T02	600160	701724	599431	701949	763	53.0661425,-7.9976127425	53.0681644,-8.008490081944444
36	T04	598648	700517	598906	701230	758	53.055293,-8.020167258611112	53.0617017,-8.016321194444444
37	T04	598601	700555	598906	701230	740	53.0556344,-8.020868504166668	53.0617017,-8.016321194444444
42	T01	600212	701377	599443	701335	771	53.0630238,-7.996837112222222	53.06264613,-8.00830997
44	T04	598718	700479	598906	701230	774	53.0549517,-8.019122944722223	53.0617016,-8.016321194444444
51	T05	597973	700790	598324	701442	741	53.0577445,-8.030237687500001	53.0636054,-8.025005053055557
52	T04	598490	700606	598906	701230	750	53.0560925,-8.022524500000001	53.0617016,-8.016321194444444
18	T04	598384	700583	598906	701230	832	53.0558855,-8.024105574722222	53.0617016,-8.016321194444444

Table 1

However, the measurements applied are flawed on several points. **Firstly, the measurements were taken to the center of the household and not to the nearest point of the curtilage of any residential property.** An example is shown for household 37 in Fig 2, using the ITM coordinates used by the applicant.

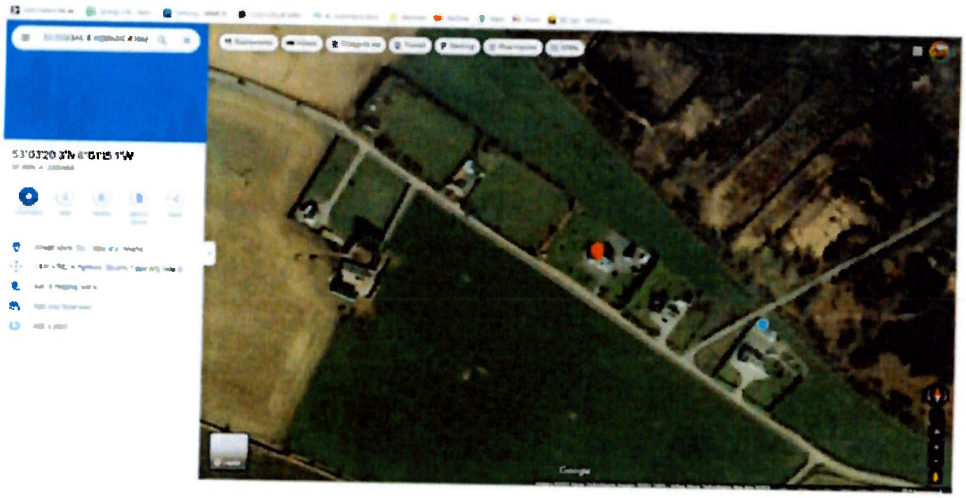

Fig 2

If we use coordinates based on the nearest point of curtilage to the center of the wind turbines, then 2 households (37 and 51) are below the minimum setback requirement for a Turbine tip height of the lowest proposed wind Turbine blade tip height of 179.5m x 4 = 718m. A further 4 households (4,14,36,52) are below the minimum setback requirement for a Turbine tip height of the tallest proposed wind turbine blade tip height of 185m x 4 = 740m. See Table 2 for reference.

		Corrected ITM Coordinates based on property curtilage		ITM coordinates for turbines				
House	Turbines	Easting	Northing	Easting	Northing	Distance to nearest turbine centre	House Coordinates	Turbine Coordinates
4	T01	600098	701634	599443	701335	718	53.065338, -7.998538	53.06264613,-8.00830997
5	T01	600219	701415	599443	701335	777	53.0633731,-7.996721944444444	53.06264613,-8.00830997
8	T04	599239	700512	598906	701230	778	53.0552493, -8.011391529722223	53.0617017,-8.016321194444444
14	T02	600132	701737	599431	701949	730	53.066262, -7.998030	53.0681644, -8.008490081944444
36	T04	598650	700553	598906	701230	722	53.055623, -8.020138	53.0617017, -8.016321194444444
37	T04	598588	700595	598906	701230	709	53.055993, -8.021056	53.0617017, -8.016321194444444
42	T01	600205	701369	599443	701335	761	53.062959, -7.996935	53.06264613, -8.00830997
44	T04	598741	700498	598906	701230	749	53.055124, -8.018785	53.0617016,-8.016321194444444
51	T05	597997	700815	598324	701442	706	53.057972, -8.029883	53.0636054, -8 025005053055557
52	T04	598511	700622	598906	701230	723	53.056244, -8.022207	53.0617016,-8.016321194444444
18	T04	598420	700636	598906	701230	765	53.056368, -8.023568	53.0617016,-8.016321194444444

Table 2

Secondly, the applicant has incorrectly calculated the horizontal distance required to meet the required set back distance of 4x times the Turbine blade tip height of the proposed wind Turbines. These being between 718m and 740m set back distance.
The Canadian Wind Energy association (2007,pg2) defines the point from where on the wind turbine setback measurement should be taken from. They define its as "the nearest part of the wind turbine structure". The wind turbine includes the tower, Nacelle, and Rotor.
The applicant themselves have applied this method when calculating other sensitive receptors by using the following receptor buffer calculation in determining the required buffer zone distance for Bats in "EIAR Appendix 6-2 Bat report" (Fig 3):

$$b = \sqrt{(50 + bl)^2 - (hh - fh)^2}$$

b =required distance from center of Tower
bl-Blade length
hh -Hub Height
fh= Feature height
50=example Buffer distance

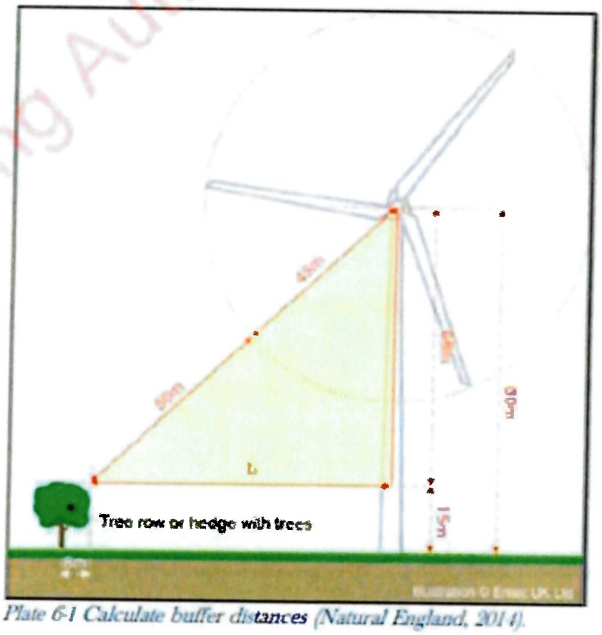

Plate 6-1 Calculate buffer distances (Natural England, 2014).

Fig.3

By applying the same method of calculation, we can then calculate the required horizontal distance required to maintain the required setback distance for other sensitive receptors (Households) to the nearest point of Curtilage of each household. For the calculation we will make one assumption that the curtilage feature has height of 1.5 meters (Typical hedge height).

Calculation for 718m setback:

Setback distance of 718m and using the taller hub height of 110.5m and smaller rotor diameter 149m (blade length is half rotor diameter) using the following equation:

718 = Required set back distance for Turbine tip height 179.5m
bl =74.5m (blade length is half rotor diameter)
hh=110.5
fh=1.5m
b= Horizontal distance required to meet setback requirements of 718m

$b=\sqrt{(718+74.5)^2-(110.5-1.5)^2}$
b= 784.968m
Based on the above calculation the minimum distance from the curtilage to the center of the turbine should be 785m to achieve a minimum setback distance of 718m

Calculation for 740m setback:

Setback distance of 740m using the smaller hub height of 103.5m and larger rotor diameter 163m (blade length is half rotor diameter)using the following equation:

$b=\sqrt{(740+81.5)^2-(103.5-1.5)^2}$

b= 815.143m

Based on the above calculation the minimum distance from the curtilage to the center of the turbine should be 815m to achieve a minimum setback distance of 740m.

There are 4 possible configurations (Hub height and rotor diameter) set out and using the above calculations the separation distance required from all 4 vary between **785m and 815m** depending on configuration.

Taking this into account and based on the nearest point of the turbine structure being the turbine blade, it can be calculated (see Table 3) that the following 11 households (4,5,8,14,36,37,42,44,51,52,18) falls below the minimum separation distance to achieve the setback requirement of 718m and 740m by a significant amount and household 35 falls below the minimum separation distance to achieve the setback requirement of 740m.

House	Turbines	Distance from nearest point of curtilage to turbine centre	Distance from turbine centre to curtilage required to meet setback distance of 740m	Distance from turbine centre to curtilage required to meet setback distanbce of 718m	Meets the required setback distance of 740m	Meets the required setback distance of 718m
4	T01	718	815	785	No	No
5	T01	777	815	785	No	No
8	T04	778	815	785	No	No
14	T02	730	815	785	No	No
36	T04	722	815	785	No	No
37	T04	709	815	785	No	No
42	T01	761	815	785	No	No
44	T04	749	815	785	No	No
51	T05	706	815	785	No	No
52	T04	721	815	785	No	No
35	T01	809	815	785	No	Yes
18	T04	765	815	785	No	No

Table 3

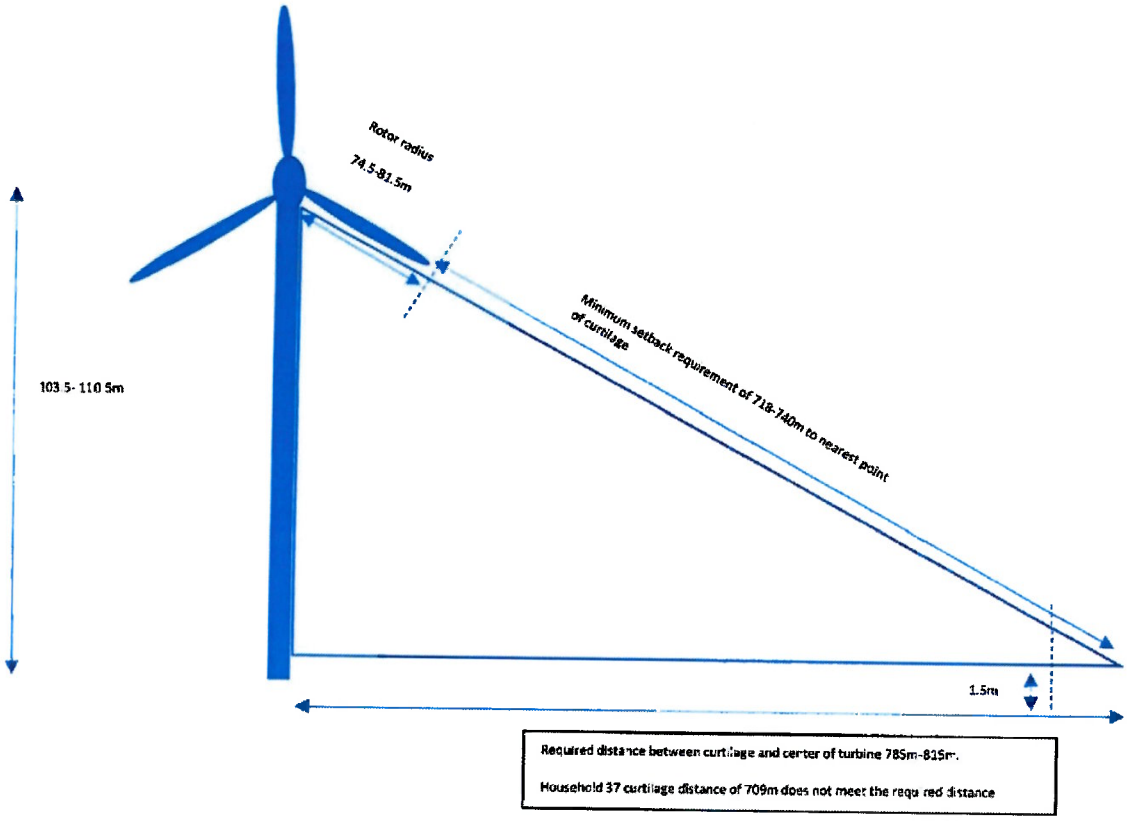

Fig 4 example of household 37 calculation

Conclusion:

In conclusion, the appellants statement regarding compliance to the draft wind energy guidelines 2019 is incorrect. The Appellant in their planning submission have made numerous errors in calculating the required separation distance to meet the minimum setback distance requirement set out by the" Draft Revised Wind Energy Development Guidelines December 2019", to satisfy the visual amenity requirement. They failed to take in to account the curtilage of each household and failed to apply their own calculation used for calculating buffers for other sensitive receptors (Bat Habitats) resulting in miscalculating the distances in their report. The corrected distances using their own calculation results in 4 Turbines T01,02,04 and 05 not meeting the required setback distances as per their proposed application.

They applicant has not produced any evidence to mitigate this, and they have not produced evidence of written waivers from households which fall inside the required minimum distances.

Therefore, this application does not comply with the Draft Wind Energy Guidelines 2019 in contrary to the appellants submission.

Note* There is precedence of use of these wind energy draft guidelines 2019 in numerous An Bord Pleanála judgements, and the applicant has used them in their application, although have not applied them correctly.

References:

Canadian Wind Energy Association Position on Setbacks for Large-Scale Wind Turbines in Rural Areas (MOE Class 3) in Ontario, 2007