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28.08.2024

Application Reference: Bord Pleanála Case reference: PL01.320354
Planning Application **Ref: 2460122**

Re: Planning Application to Carlow County Council for a Wind Farm Development and all associated works in the townlands of Ridge, Agharue, Coolnakisha, and Seskinrea, Co. Carlow

Proposal Detail: 7 no. Wind Turbines, 38KV onsite Substation, Battery energy storage system and associated works and infrastructure in the townlands of Seskinrea and adjacent townlands, in Co. Carlow

The concerns related in the following submission are our community issues that need to be considered by An Bord Pleanála, all members of the Rural Residents Wind Aware and Environmental Group, are in agreement with concerns raised in these observations, as all of the issues are very relevant due to shared locations of the community. We now feel, that our community observations and submissions have to be extensively reviewed.

Yours sincerely

Adrian O'Neill Fiona Donnelly Delaney

Grosvenor Consultancy
Seskin Planning Application Reference 2460122.

Annex 2.

Response to Applicant's

Appendix 12.2 Operational Wind Turbine Noise Report - Para 3.3.13.

Extracts Justice Emily Egan High Court Judgement. Delivered on 8 March 2024.

Extracts from the recent High Court case in Ireland, between MARGARET WEBSTER AND KEITH ROLLO & ROSS SHORTEN AND JOAN CARTY as Co PLAINTIFFS and MEENACLOGHSPAR (WIND) LIMITED as DEFENDANTS. The JUDGMENT of Ms. Justice Emily Egan delivered on the 8th day of March 2024, found in favour of the Plaintiffs. (This Judgement is provided by email.)

Note: Extract of Para 6 states;

*6. ..... It should be noted that this is the first private nuisance claim in relation to WTN that has run to judgment in this jurisdiction, or it appears in the United Kingdom. The only comparable authority cited to me by the parties is a judgment of the Supreme Court of Victoria of New Zealand of 12th March, 2022, Noel Uren v *Bland Hills Wind Farm Pty Ltd [2022] VSC 145.*

This Judgement known as Bald Hills for reference as the above spelling of *Bland Hills is incorrect.

Para 9 of the Judgement is significantly relevant when considering the nature of wind turbine noise victim's consistent complaints; Ms Justice Emily Egan reports:

9. Wind turbine aerodynamic noise is typically broadband in nature in the sense that it is evenly distributed across the frequency spectrum; but it can exhibit lower frequency content. Sound with significant lower frequency content is both more intrusive and less effectively attenuated by barriers such as windows, walls and insulation.

Relevant extracts from the Judgement are provided below:

Introduction 1.

The plaintiffs are two couples[1] who claim <u>they have been interfered with, over a substantial period of time, in the use and enjoyment of their homes,</u> at Ballyduff, Enniscorthy County Wexford. The claim is for private nuisance in the form of noise and vibration generated by two nearby wind turbines, owned and operated by the defendant. The plaintiffs also complain of shadow flicker.

2. Ms. Webster and Mr. Rollo [redacted] until recently Ms. Carty and Mr. Shorten ("the Carty Shortens") owned [redacted] The nearer of the two turbines, Turbine 2, ("T2") is located some 359 m from th[redacted] some 369 m from the [redacted] house and the further turbine, Turbine 1, ("T1") is some 652 m from the [redacted] e and some 655 m from the [redacted]. Each of the turbines are 74.5 m in hub height and as they are located on a

height, the height difference between the plaintiffs' houses and T1 and T2 respectively is 169 m and 152 m. The relative locations of the turbines and the plaintiffs' houses means that the prevailing south westerly winds blow from the direction of the turbines towards the plaintiffs' houses. It is also common case that because the plaintiffs' houses are located in the [redacted] they are sheltered from the prevailing wind and are in a "wind shadow" (which I understand to mean a location that is generally calm and sheltered).

It is clear, that the plaintiff's continued exposure to the wind turbines audible Amplitude Modulation characteristic was the main focus and cause of their nuisance case, along with exposure to Low Frequency WTN - sound pressure waves.

Informative extracts (in full) from the Judgement are copied below, in respect of comparisons between this case in terms of the plaintiffs' recorded adverse impacts and those consistently reported by residents who complain of wind turbine noise and any lack of mitigation of those impacts, particularly in regards the quiet enjoyment of their homes and sleep disturbance.

'How easily the noise can be avoided/ Measures to reduce or modify the noise The plaintiffs' ability to avoid the WTN externally is extremely limited. Internally, shutting the windows and attempting to mask the noise may assist. However, such measures will often be ineffective to mitigate sleep impacts in particular.

How often the noise occurs and the time of day or night when the noise occurs

I accept the evidence of the plaintiffs' experts and the plaintiffs themselves that the conditions so demonstrated occur commonly and on a sustained basis. I also accept that these unreasonably intrusive conditions are particularly prevalent during the most sensitive times of the day; in the early morning and at night and in the evenings.

Issue 10: Does the court find that the WTN is a substantial interference with the plaintiffs' use and enjoyment of their land? Is liability in nuisance established?

On the other hand, I find that the WTN poses a nuisance to the plaintiffs in the evenings and at weekends when one could reasonably expect to be enjoying recreation in the garden and/or peace in one's dwelling. Demonstrably the WTN also poses a nuisance at night and in the early morning when a quiet environment is at a premium'.

Extracts from the plaintiffs evidence of the adverse impacts they experienced, given the comparative relevance to other WTN victims complaints in Scotland and worldwide are extracted in full below:

51. Ms. Webster's evidence is that the WTN is annoying and ever changing. The noise varies with wind direction and windspeed which dictate blade orientation and speed of rotation respectively. Windspeed is of more obvious influence than wind direction; in general, the faster the rotors turn, the worse the noise. In addition, time of day and weather impact on the intensity of the WTN. The noise is considerably louder at night and in winter. It also varies according to whether there is rain, cloud cover or clear skies. Taking into account atmospheric conditions, the effect of the WTN is more often than not "very intense". Ms. Webster recounts that when the noise and vibrations from the turbine are intense [redacted]

52. Ms. Webster's evidence was that, when turning quickly, T2 emits a range of distinctive sounds. In addition to a swishing sound, it emits whoomph and whump sounds and intermittent louder thumping or whacking noises. These sounds are often accompanied by disturbing vibration, meaning that she could regularly "feel" as well as hear the noise. This is perceived as pressure coming from the air as the blades rotate, which feels like [redacted] All of this, Ms. Webster states, is a frequent characteristic of the WTN, particularly at night.

55. The turbine is audible both outside and inside the house at all times of the day including at night with the windows closed. It is audible in all rooms of the house even in the sitting room which was the furthest room away from the turbine. When the turbine is rotating quickly, the WTN is not merely audible but dominant both inside and outside the house, with the windows open and closed. The sounds of daily activities such as boiling a kettle, using the washing machine or watching television generally mask the WTN. However, without such masking noise, one can hear the WTN in all areas of the house, The WTN frequently intrudes to the extent that Ms. Webster finds it difficult to concentrate or relax. At its worst, and particularly at night, Ms. Webster described a sensation of being able to hear and feel every rotation of the turbine. Ms. Webster accepted that other sounds - such as passing cars or farm machinery might also occasionally be heard in her bedroom with the window closed. However, such noise ceases at a certain point in the day. By contrast, when it is turning rapidly, the noise and vibrations of the turbine intrude into Ms. Webster's bedroom, even when the window is closed, on a "24/7" basis.

56. The HH master bedroom is at the front of the house, but its gable wall faces broadly (if obliquely) towards T2. It was put to Ms. Webster that the defendant's experts would say that it was "beyond the realm of physics" that the WTN could be heard in the master bedroom at the front of HH, but the defendant's experts did not give such evidence. Although Mr. Carr did not hear WTN in the master bedroom of HH at the time of his site visit, he only spent between five and ten minutes in the bedroom on this occasion.

57. ***Ms. Webster's evidence was that the WTN and vibrations pass through the gable wall into the master bedroom. She stated that, in her experience, the WTN was much louder, more annoying and more easily audible than it appeared on the internal audio recordings taken by her experts in HH in 2017 and 2020/2021.***

58. Prior to the erection of the turbine, Ms. Webster had slept well. Her evidence is that the WTN causes three different kinds of sleep disturbance. The first is difficulty in falling asleep. Ms. Webster states that there have been countless nights when she can hear the WTN in her bedroom and needs to use music or other background sound to distract attention from this unpleasant sound and aid sleep. This occurs at least ten times a month. Second, when the WTN is at its worst, it can completely wake her up "bolt upright". What wakens her is not so much the absolute level of the noise but a change in its character which has a jarring effect, particularly if she is in a light sleep. These sudden awakenings occur ten to fifteen times a year. Third, even when the WTN is lower, there is a general detrimental impact on sleep quality; although she would sleep through the night, Ms. Webster nonetheless wakes exhausted. To mitigate the noise from the turbines, Ms. Webster tried to sleep with the windows closed as often as possible, which particularly, in the summer months can be quite uncomfortable.

Interactions with Mr. Brazil

60. In July 2017, the Webster Rollos alerted the director of the defendant company, Mr. Brazil to their experience of the noise. Initially, Mr. Brazil suggested improving their windows and insulation towards which he would contribute €4,000. The Webster Rollos felt that insulation was a large financial undertaking which would not in any event be effective as against low frequency WTN.

62. *The plaintiffs asked Mr. Brazil if the turbines could be turned off or turned down at night or at weekends. This request was not acceded to.*

Impact on the Webster Rollo relationship

[redacted]

Noise diaries

69. ***An intermittent but consistent feature of the diary is that it records the Webster Rollo's relief and gratitude when the turbines are quiescent marred by trepidation of the inevitable recommencement of the noise. The strong impression is of being unable to control one's own private environment which is dominated by the turbine. Ms. Webster encapsulated this in stating that she and Mr. Rollo felt *"at the mercy of whatever way the turbine was going to be acting on a particular day to ensure that it produced a maximum output of energy."***

75. *Ms. Webster also emphasised that in addition to windspeed and speed of rotation , wind direction and weather conditions have a huge impact on how noise and vibration would be experienced. The latter two of these factors are not captured by the SCADA data. She further emphasised that one should not interpret a particular diary entry in isolation. Rather, entries have to be placed in the context of the days that surround them. Several days of lack of sleep tend to wear one down, reduce tolerance and increase frustration levels which might naturally influence diary entries later in the relevant sequence.*

76. *This in my view is the case for Ms. Webster's diary entry of 3rd December, 2021 which records: "Turbine very loud all day and night. Turing very fast and "aggressive" almost when outside feels like I'm being pummelled by force from turbine if I stand in back yard near driveway". Counsel pressed Ms. Webster on a 10 minute segment of SCADA data captured at 2pm on 3rd December. Such an exercise entirely glosses over the fact that the preceding night's SCADA data - again only put to Ms. Webster in re-examination - shows that windspeed and speed of rotation were indeed high. This dovetails with Ms. Webster's diary entry for 2nd December which records "very loud" noise that night. A different picture however emerges during the day of 3rd December. Although I accept that Ms. Webster's experience of being "pummelled" occurred when she went outside late in the evening (at which stage the wind had picked up), it is fair to say that the SCADA data suggests that during much of the day windspeed and speed of rotation were not high when compared to conditions at the time of the court's visit (indeed they are generally lower). The point, however, is that this entry followed what could fairly be described as a bad week. Ms. Webster describes the WTN during the preceding week as "very noisy", as making"whooshing and clapping" sounds at night and "very distracting". As stated, it is also recorded as "very loud" overnight on 2nd/3rd December. Ms. Webster was not challenged on any of these entries, whether by reference to the SCADA data or otherwise. Ms. Webster also records an earache for the whole of the preceding week which of course will accentuate the impact of WTN (and, I assume of all noise). In reality, the entry for 3rd December, 2021 is probably more consistent with Ms. Webster's experience of the week as a whole than with the specific day it records* [redacted]

[redacted] *Overall, I find that the entry for 3rd December, 2021 represents a rare and uncharacteristic occasion on which Ms. Webster allowed her more generalised frustration – most likely accentuated by physical discomfort resulting from persistent earaches - to bleed into a specific diary entry. Whilst I accept Prof.* [redacted] *ew that such increasing sensitivity is not unusual, I have nonetheless* been cognisant of it.

The observation by Ms. Justice Emily Egan at Para 76 is particularly significant, in that;

'it is fair to say that the SCADA data suggests that during much of the day windspeed and speed of rotation were not high when compared to conditions at the time of the court's visit (indeed they are generally lower). The point, however, is that this entry followed what could fairly be described as a bad week.

Furthermore, Ms Justice Emily Eagan states at Para 77 & 78:

77. In my view, the themes pursued in this part of the cross examination ought to have been put to the plaintiffs' experts-which did not occur. This is because, whilst it is clear that windspeed and speed of rotation heavily influence the level and characteristics of WTN, a range of other factors are also highly relevant. Such factors include relatively small changes in wind direction and blade pitch and, as Ms. Webster states, prevailing meteorological conditions. These factor all influence thump AM, which is described as the most intrusive aspect of the WTN at Ballyduff. Demonstrably, Ms. Webster, as a lay witness, is unqualified to explain such matters. Rather, she stated that the diary is intended to be experiential and deferred to experts to explain what factors might influence or explain the characteristics of the WTN which she records in her diary entries.

*78. **Overall, I find that Ms. Webster's diary entries, like her oral evidence, presented a balanced and truthful account of her experience of the WTN. I make a similar finding in relation Mr Rollo's diary entries up until mid to late 2020[13].** From over three years of diary entries, the defendant pointed to only a handful of diary entries which it contends are inconsistent with the SCADA data. Of these, I find that only one – that of 3rd December, 2021 – can fairly be characterised as inconsistent with the SCADA data for the day on question. Further, this inconsistency pertains to only part of the relevant 24 hour SCADA data and further arises only if one considers the diary entry in isolation from the week of which it forms part. As Ms. Webster states: **"We are people living in our home; it is not a scientific experiment, it's our home and we are experiencing this on a continuous basis".** Bearing in mind the quality of other evidence supporting Ms. Webster's account of the overall characteristics of the WTN, I attach very little weight to a frailty in a single diary entry.*

Mr Rollo's evidence:

*80. **The impact of the noise affected Mr. Rollo most profoundly through his sleep.** At night, the turbine frequently makes a thumping, whacking and slapping noise; like the side of the house was being hit by something. When it was suggested to him that shutting the windows would diminish the sound, Mr. Rollo accepted that the turbine is less noisy with the windows closed. However, although on windy winter nights he would sleep with the windows closed, Mr. Rollo's general preference is to sleep with the windows slightly open. In any event, **Mr. Rollo stated that, even with the windows closed, and despite wearing professional noise cancelling headphones, the noise and vibrations caused by the turbine still disturbed his sleep. Like Ms. Webster, Mr. Rollo's sense is that the noise and vibrations come though the walls of the house. At***

times, the whole house vibrates with the noise. As a result, all attempts to mask the WTN using both professional noise cancelling headphones and industrial earplugs (which he had obtained from work) were unsuccessful because, he could still feel the noise "through my bones". Emphasis added .

81. *When unable to sleep, Mr. Rollo moved to the sitting room because it was at the front of the house and did not have a gable wall facing the turbine. Although the noise intruded, as it did in every room of the house, he would try to sleep with the television on to mask it.* ***However, Mr. Rollo's sleep pattern remained extremely disrupted, and on many nights, he would get no more than two hours sleep*** [redacted]

83. *In early 2021, Mr. Rollo accepted that because of the dark thoughts he was having, he had to leave the house urgently. He moved out in March 2021, initially staying with family friends. Mr. Rollo's current residence is about half an hour from HH in an estate in Wexford town.*

[redacted]

Evidence of Ms. Joan Carty and Mr. Ross Shorten

85. *Ms. Carty and Mr. Shorten owned NF until comparatively recently and sold it to Ms. Maura McGinn in August 2021 (as to which see further below). Ms. Carty described the range of sounds emanating from the turbine, the most difficult and intrusive of which is a loud whomping or thumping sound with associated reverberation and vibration. This loud whomping and thumping noise is very hard to listen to for any period of time and is audible from every room in the house. Mr. Shorten's evidence was to a similar effect; he recounted that the noise, the vibration and the sense of pressure in the air are overpowering and upsetting.* Emphasis added.

86. *The couple's evidence was that as a result of the WTN, and its associated vibrations, it was impossible to sleep in the master bedroom, even with the window closed. The noise intrusion forced them to vacate the master bedroom which is a dormer and move to a somewhat quieter bedroom downstairs. However, the WTN still disturbed their sleep.*

87. *Because of the WTN, Ms. Carty and Mr. Shorten no longer enjoyed visiting* [redacted] *They found the WTN to be extremely intrusive during a 5 day period they spent working on the patio outside their house in August 2017. Even with a music speaker outside to try and mask the WTN (albeit at a volume at which they could still converse), they were disturbed by the whomp whomp sound as the blades cut through the air. Ms. Carty said that after the turbine started turning, she never again sat on the patio to read. In addition, they stopped having guests to the house* [redacted]

88. *When the couple raised these difficulties with [redacted] he indicated that he might, in due course, be prepared to buy NF as he had known that it had was previously on the market. He also arranged for monitoring equipment to be installed at NF on the understanding that the results would be furnished to the Carty Shortens. Although Mr. Shorten requested this data both verbally and in writing, it was never furnished.*

89. *The couple's evidence was that the house was placed on the market in September 2018 and was ultimately sold at a price significantly below its full value, to Ms. McGinn.*

90. *Two additional witnesses as to fact were called by the plaintiffs*

Evidence of Ms. Maura McGinn

91. *The plaintiffs called Ms. Maura McGinn, the current occupant of NF. She purchased NF from the Carty Shortens on 12th April, 2021. Ms. McGinn stated that the WTN was pretty obvious when she viewed the house. She knew that she could not have afforded to buy the house were it not for the presence of the turbines.*

92. *On her first night in the house, Ms. McGinn was shocked by the WTN which was exceedingly loud and kept her awake. Ms. McGinn was concerned that she made a mistake in purchasing the house and worried that she would be unable to sleep in the master bedroom upstairs. However, Ms. McGinn "persevered" and continues to sleep upstairs.*

93. *Ms. McGinn does not generally spend the whole week in the house as she works in Dublin a few days a week. When she is going to bed at night, the rhythmic nature of the noise can "get in on" her and it canbe hard to fall asleep. Alternatively, she might wake to the WTN and then find it more difficult to get back to sleep. As she points out, when you hear the turbine, it is very difficult to un-hear it. Overall, although the turbine can interrupt her sleep, Ms. McGinn stated she was a good sleeper.*

94. *The turbine generally makes noise all the time, apart from on very still days. The noise outside is louder and stronger. Inside the noise is much quieter downstairs, but it can definitely be heard upstairs. Ms. McGinn describes the noise as a "whoomph, whoomph, whoomph kind of noise".*

95. *In general, Ms. McGinn is careful not to focus on the noise and tries not to let it bother her. She would be afraid that if she did focus on the WTN for too long, it would start to get in on her.*

96. *Ms. McGinn is from a large family and lots of people come to visit. She finds herself being quite defensive of the turbine and therefore warns her family about the turbine before they visit. Whenever workmen come to the property, they refer to the turbine and to the noise. Her surveyor recommended that she put in additional insulation for the house. Although she followed this advice, this made no real difference in the noise levels.*

97. *Under cross-examination, Ms. McGinn confirmed that she did not regret buying the property. Her first night in the property had been a particularly noisy night and her general approach is to try not to pay too much attention to the turbine. She has managed to get used to the noise or has learnt to ignore it such that she conceded[14] that "it doesn't seem... to be creating a terribly great problem for[her]in [her]enjoyment of the property".*

Evidence of Ms. Ashley Doran

98. *Ms. Ashley Doran lives at Ballyduff. Ms. Doran's house is located 313 metres from the Webster Rollo's house. There is a distance of 601 metres between T2 and Ms. Doran's house and a distance of 808 metres between T1 and Ms. Doran's house.*

99. *Ms. Doran stated that the turbines make a deep, heavy reverberating noise which she describes as groaning and whomping sounds. Reverberations are experienced both inside and outside the house. The WTN is disturbing and disorientating making it hard to focus or concentrate. On occasion the intensity of the sound and vibration makes her dizzy and queasy. At times, the sound of the turbines hurts her ears. It is difficult to cope with the inconsistency of the WTN which varies from "quiet" to "thunderous" depending on the meteorological conditions. The WTN disturbs her sleep and Ms. Doran has started sleeping in the room furthest from the turbine. Both she and her husband sleep with earphones which they use to mask the sound of the turbines. Overall, although Ms. Doran's husband, finds the turbine "a bit annoying" he manages to put it out of his head and get on with things.*

There is consistency between the personal evidence in these witness statements and the adverse impacts consistently reported by residents in Scotland and elsewhere.

Of particular significance, is the witnesses evidence in respect of the impact of low frequency WTN which confirm the extent these adverse impacts have had on these witnesses.

For ease of reference, samples of these impacts are provided below:

Ms. Webster recounts that when the noise and vibrations from the turbine are intense [redacted]

These sounds are often accompanied by disturbing vibration, meaning that she could regularly "feel" as well as hear the noise. This is perceived as pressure coming from the air as the blades rotate, which feels like "a pummelling inside [her] body". All of this, Ms. Webster states, is a frequent characteristic of the WTN, particularly at night.

However, without such masking noise, one can hear the WTN in all areas of the house, The WTN frequently intrudes to the extent that Ms. Webster finds it difficult to concentrate or relax. At its worst, and particularly at night, Ms. Webster described a sensation of being able to hear and feel every rotation of the turbine,...

Ms. Webster's evidence was that the WTN and vibrations pass through the gable wall into the master bedroom.

.....were unsuccessful because, he could still feel the noise "through my bones".

.....remained extremely disrupted, and on many nights, he would get no more than two hours sleep

Although the noise intruded, as it did in every room of the house,.....

The couple's evidence was that as a result of the WTN, and its associated vibrations, it was impossible to sleep in the master bedroom, even with the window closed.....

..... he recounted that the noise, the vibration and the sense of pressure in the air are overpowering and upsetting,.....

Reverberations are experienced both inside and outside the house.....

Introduction

1. The plaintiffs are two couples[1] who claim they have been interfered with, over a substantial period of time, in the use and enjoyment of their homes, at Ballyduff, Enniscorthy County Wexford. The claim is for private nuisance in the form of noise and vibration generated by two nearby wind turbines, owned and operated by the defendant. The plaintiffs also complain of shadow flicker.

2. Ms. Webster and Mr. Rollo ("the Webster Rollos"), own Hill House (HH), and until recently Ms. Carty and Mr. Shorten ("the Carty Shortens") owned Nettlefield (NF). The nearer of the two turbines, Turbine 2, ("T2") is located some 359 m from the Carty Shorten house and some 369 m from the Webster Rollo house and the further turbine, Turbine 1, ("T1") is some 652 m from the Carty Shorten house and some 655 m from the Webster Rollo house. Each of the turbines are 74.5 m in hub height and as they are located on a height, the height difference between the plaintiffs' houses and T1 and T2 respectively is 169 m and 152 m. The relative locations of the turbines and the plaintiffs' houses means that the prevailing south westerly winds blow from the direction of the turbines towards the plaintiffs' houses. It is also common case that because the plaintiffs' houses are located in the lee of a hill (on which the turbines are placed), they are sheltered from the prevailing wind and are in a "wind shadow" (which I understand to mean a location that is generally calm and sheltered).

3. The windfarm was built on foot of a grant of planning permission dated 16th April, 2004. Condition 15 states that noise levels from the turbines when measured at the nearest inhabited house shall not exceed 40dBA (15 minute leq[2]) at a windspeed of 5 m/s and 45dBA (15 minute leq) at a windspeed in excess of 10 m/s. Due to grid connection difficulties, there was a delay in the implementation of this planning permission and the two turbines did not become operational until February 2017.

[redacted]

[2] In this judgment, I will in general refer to this as "leq" regardless of the time interval involved. This is primarily to distinguish this measurement from L90.

No.

I reject the defendant's submission that the claim to personal injuries must be struck out as being in breach of s. 12 of the Personal Injuries Assessment Board Act 2003. However, I take the view that reasonable foreseeability of pure psychological injury is a precondition to the award of damages for such an injury. In my view, the defendant could not reasonably have foreseen [redacted] recognisable [redacted] a consequence of the noise emitted by the turbines. Mr. Rollo may not therefore recover damages [redacted] though same was caused by the WTN and its consequences.

Issue 13: Is the defendant guilty of negligence?

No. The parameters of the contended for duty of care and the specifics of any breach of such duty have not been identified with sufficient particularity to establish liability in negligence. In my view, therefore, the plaintiffs cannot succeed in a claim for negligence.

Issue 14: Have the plaintiffs made out a case for relief under s. 160?

Although for reasons already explored, I am not satisfied that the defendant has demonstrated that the WTN complies with the noise condition in the planning permission, this issue was not part of the pleaded case. I am not satisfied that the plaintiffs have made out a case of breach of planning permission on any of the grounds pleaded. As such, the present application pursuant to s.160 must fail.

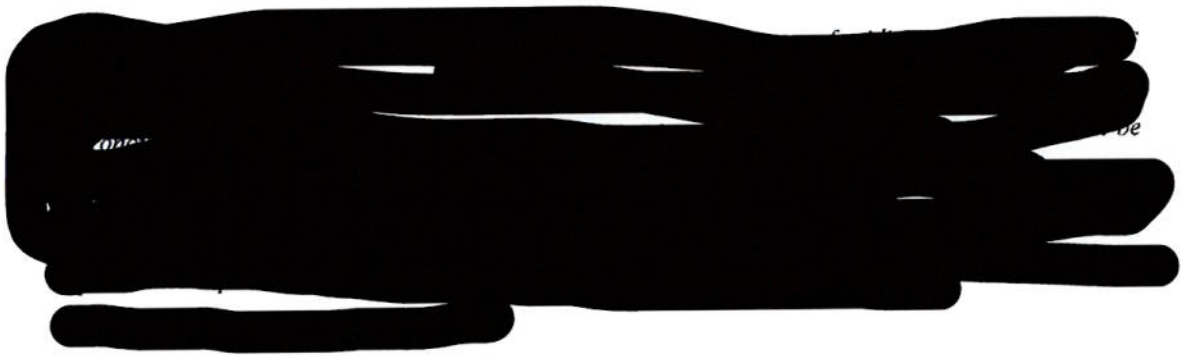
The legal test for the tort of nuisance

28. As observed by Laffoy J. in *Smyth v RPA*, the definitive statement of what is required to establish the tort of private nuisance is to be found in the judgment of the Supreme Court in

Hanrahan. Henchy J. identified the legal basis of the tort in nuisance as follows:-

> *"To provide a basis for the award of damages for the private nuisance relied on, the plaintiffs have to show that they have been interfered with, over a substantial period of time, in the use and enjoyment of their farm, as a result of the way the defendants conducted their operations in the factory..."*

29. Later in the judgment Henchy J. confirmed that:



30. Thus, to succeed in a claim for nuisance, the plaintiff must show interference with the ordinary use, enjoyment and comfort of their property. As I will come to at para 346 below, nuisance is always assessed by reference to the character of the particular locality.

31. The interference with the ordinary use, enjoyment and comfort of the property must be substantial in the sense that it is pronounced and prolonged or repeated. The intrusion must be "*pervasive, persistent, frequent and intolerable*", per Charleton J. describing noise nuisance in *Lanigan & ors v. Barry & ors* [2008] IEHC 29.

32. In *Lanigan v. Barry,* Charleton J. observed that "*There must be a real and definitive infringement on the comfort and convenience of the persons occupying or using the premises or land in order to establish as actionable wrong*". Furthermore, the temporal quality of the alleged problem is of relevance. Close attention must be paid to the timing, duration and impact of the occurrence complained of.

33. Likewise, the frequency of occurrence must be considered. Occasional, temporary or fleeting events cannot in general give rise to a nuisance However, depending upon the nature of the particular interference in issue, there may be no requirement that the nuisance is continuous and unremitting 24 hours a day. Provided the impact occurs with sufficient regularity and frequency, nuisance may be established even though the relevant interference waxes and wanes somewhat. Further, the same level or character of noise that may not be a nuisance during the day can be a nuisance in the evenings if it regularly disturbs rest and relaxation, or at night if it regularly disturbs sleep.

34. In *Hanrahan,* Henchy J. stated:

not *"very intense"*. Ms. Webster recounts that when the noise and vibrations from the turbine are intense, she experienc[redacted]

52. Ms. Webster's evidence was that, when turning quickly, T2 emits a range of distinctive sounds. In addition to a swishing sound, it emits *whoomph* and *whump* sounds and intermittent louder *thumping* or *whacking* noises. These sounds are often accompanied by disturbing vibration, meaning that she could regularly *"feel"* as well as hear the noise. This is perceived as pressure coming from the air as the blades rotate, which feels like *"a pummelling inside* [her] *body"*. All of this, Ms. Webster states, is a frequent characteristic of the WTN, particularly at night.

53. The noise is highly variable and unpredictable in loudness, intensity and character. It can change from a *thump thump* or a *whump whump* to a kind of *whack whack* noise within minutes or even seconds. The noise can dissipate overnight and then pick up in the morning or the opposite can happen.

54. In cross-examination, Ms. Webster fully accepted that there are periods, perhaps for several days at a time, when the noise is not intrusive. When turning slowly, T2 makes a light whooshing sound which is quite consistent. At times, particularly during the summer, this sound might be barely audible inside the house. However, she stated that, for the most part, particularly in the wintertime, the noise is more rather than less intrusive. As a very broad guess, Ms. Webster estimated that the noise is intrusive 80% of the time.

55. The turbine is audible both outside and inside the house at all times of the day including at night with the windows closed. It is audible in all rooms of the house even in the sitting room which was the furthest room away from the turbine. When the turbine is rotating quickly, the WTN is not merely audible but dominant both inside and outside the house, with the windows open and closed. The sounds of daily activities such as boiling a kettle, using the washing machine or watching television generally mask the WTN. However, without such masking noise, one can hear the WTN in all areas of the house, The WTN frequently intrudes to the extent that Ms. Webster finds it difficult to concentrate or relax. At its worst, and particularly at night, Ms. Webster described a

64. A few days after the August 2017 meeting, Mr. Rollo telephoned Mr. Brazil to reject the proposal of a noise acceptance agreement, and an initiating letter followed from the plaintiffs' solicitor. It was suggested to Ms. Webster in cross examination that this rejection had been premature a[redacted]

Impact on the Webster Rollo relationship

65. Ms. Webster's evidence was that after a few years of living with the turbine, her 16 year relationship with Mr. Rollo started to disintegrate. In Ms. Webster's view the pervasive noise and ongoing lack of sleep caused by the WTN was a significant factor in the destruction of the relationship. Her belief is that the WTN brought the couple to the stage where they were both so exhausted, discouraged and low that they could no longer fight for the relationship. Ms

Webster was worried for Mr. Rollo's safety and well-being, and she suffered episodes of panic and tearfulness.

66. By December 2020, it was obvious that Mr. Rollo needed to remove himself from the situation and wait out the legal process. In early 2021, the couple having made the decision to separate in any event, Mr. Rollo moved out of HH. This was clearly a very low point for both Ms. Webster and Mr. Rollo.

Noise diaries

67. Ms. Webster (and for the majority of this time, Mr. Rollo) kept a noise diary from August 2018 to October 2021. This diary chronicles their experience of the WTN, both day and night.

68. The Webster Rollo noise diary records intrusive, unpredictable WTN varying in intensity. In harmony with their oral evidence, the diary describes, whoomphing, thumping, banging, hacking, slapping and whacking sounds. It regularly records that the house vibrates and hums with these sounds which appear to hit the gable wall of the master bedroom and come through the walls and ceilings. The diary very regularly

81. When unable to sleep, Mr. Rollo moved to the sitting room because it was at the front of the house and did not have a gable wall facing the turbine. Although the noise intruded, as it did in every room of the house, he would try to sleep with the television on to mask it.

However, Mr. Rollo's sleep pattern remained extremely disrupted, and on many nights, he would get no more than two hours sleep. This meant that he frequently rose feeling exhausted and stressed. This exhaustion was hazardous as Mr. Rollo's job involves working at heights.

82. Mr. Rollo's evidence was that the constant noise and lack of sleep [redacted]

83. In early 2021, Mr. Rollo accepted that because of the dark thoughts he was having, he [redacted] moved out in March 2021, initially staying with family friends. Mr. Rollo's current residence is about half an hour from HH in an estate in Wexford town.

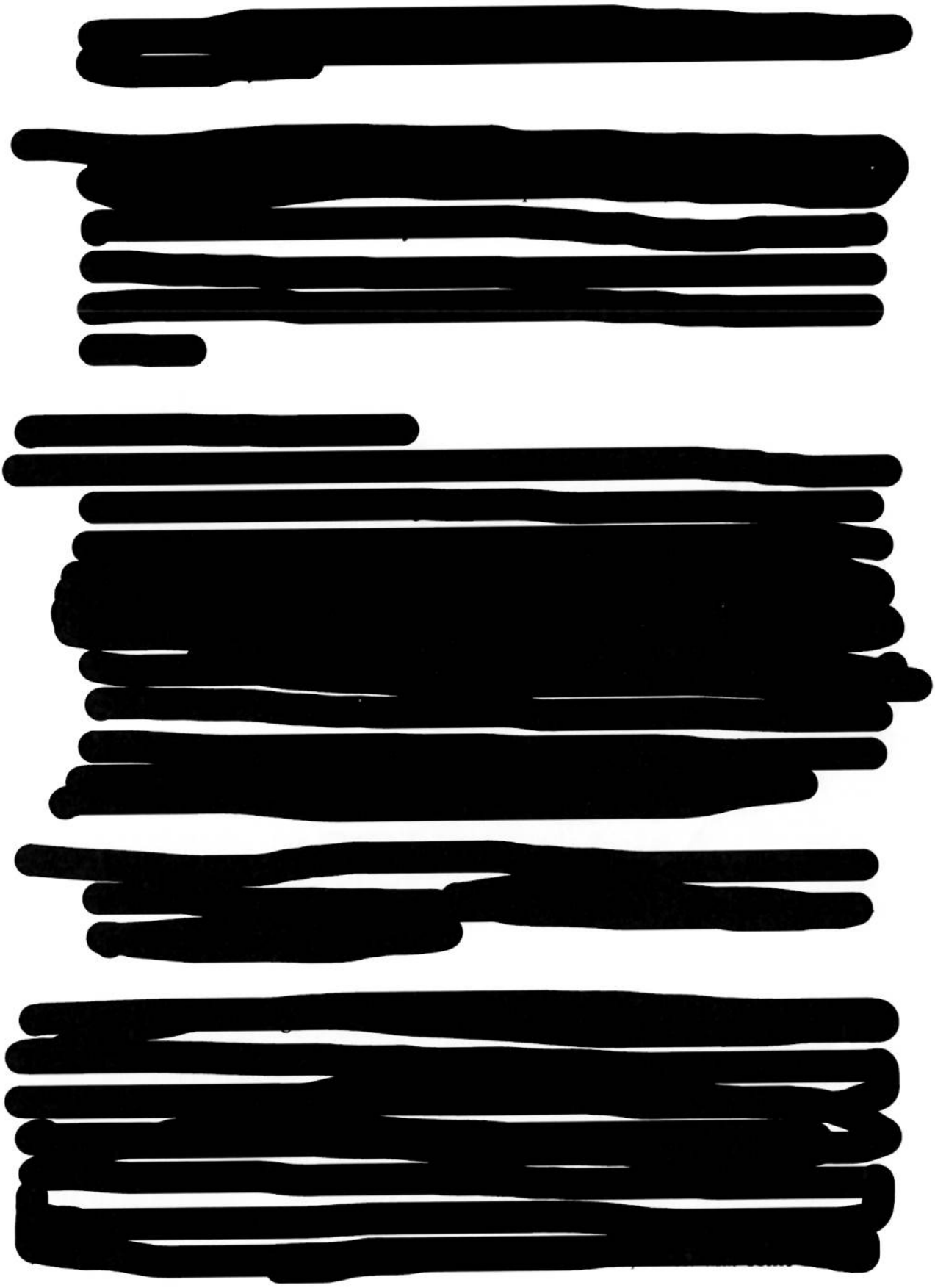
84. [redacted]

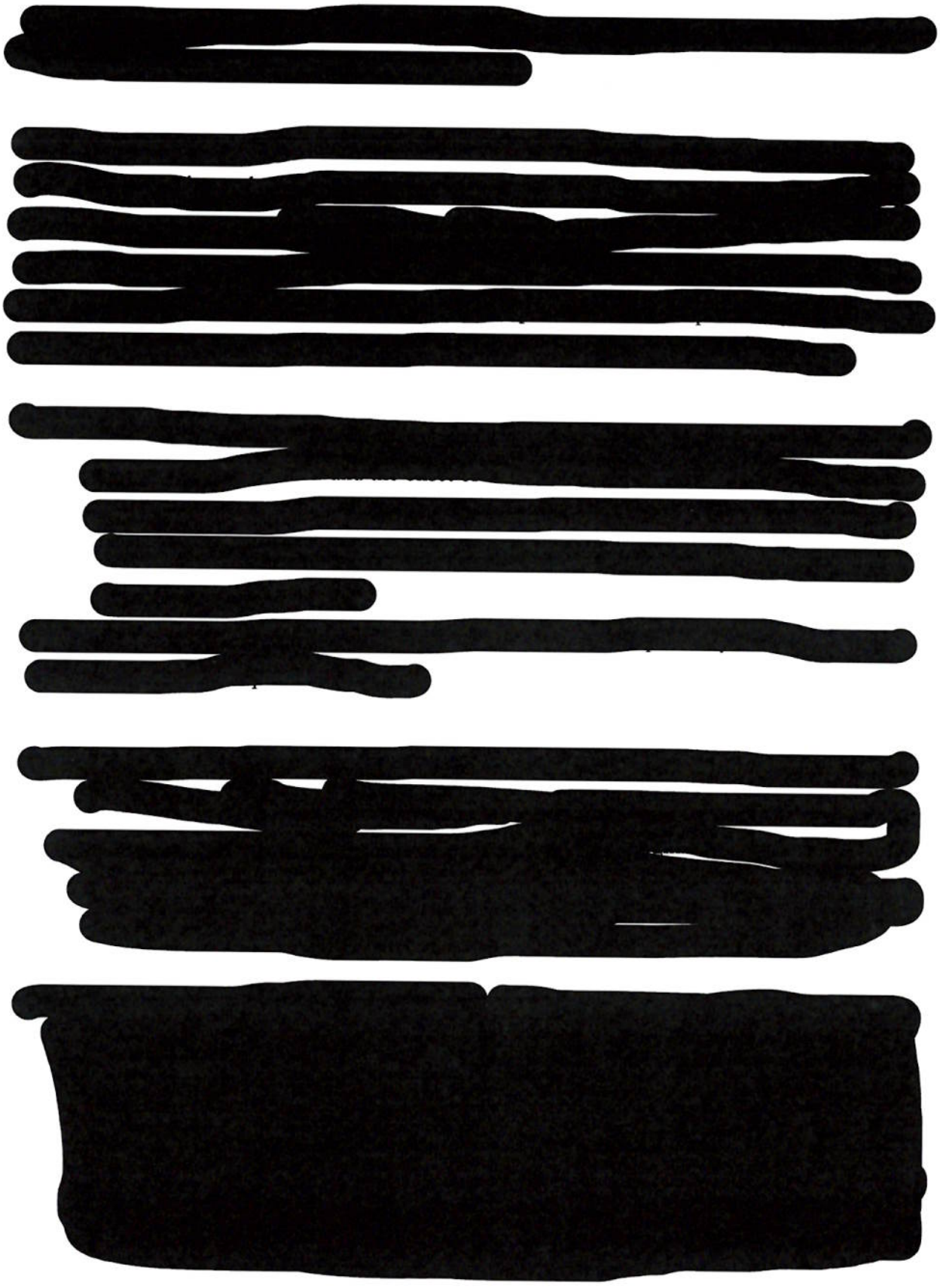
Evidence of Ms. Joan Carty and Mr. Ross Shorten

85. Ms. Carty and Mr. Shorten owned NF until comparatively recently and sold it to Ms. Maura McGinn in August 2021 (as to which see further below). Ms. Carty described the range of sounds emanating from the turbine, the most difficult and intrusive of which is a loud whomping or thumping sound with associated reverberation and vibration. This loud whomping and thumping noise is very hard to listen to for any period of time and is audible from every room in the house. Mr. Shorten's evidence was to a similar

162. The report concludes that the Ballyduff Windfarm has the potential to introduce shadow flicker impacts that may exceed this WEDG limit of 30 minutes per day when sunshine occurs. However, the predictions do not take into account weather conditions or the presence of natural features e.g., trees and hedges which will reduce sunlight. The report concludes that the impact of such factors renders it likely that the 30-hour guidance limit is satisfied in practice.

[redacted]





And I wish you all the luck in Scotland and I hope you win this fight as your health will be in danger if these people are not stopped .

Kind Regards [redacted]

[redacted]

6.4 Statement in respect of the Determination of SSE's Variation Application extending the operational consent of the 2 Hunterston Turbines for a further 2 years.

(1 Siemens @ 6MW & 1 Mitsubishi @ 7MW. Height 200M to blade tip)

Dated: 18/08/2017

Ref: PA-3102028

(Contact details redacted)[redacted]

Dear Sir or Madam,

I wish to object to SSE getting another two years of operation. I would prefer that operation stopped immediately as my life has been ruined since they started operating.

As far back as 2014, I complained to my GP about [redacted] *turbine. (The Mitsubishi was not operating then.)*

However, what was bad is much worse now that the Mitsubishi has started operating and when both rotate at the same time it is horrendous.

As I am aware that SSE`s submission is only up until 1st July 2017, I feel that I need to bring to your attention that there are more formal complaints that have not been included in their Summary of complaints document.

I have lodged formal complaints with NAC Environmental Health [redacted]

My first official complaint to SSE was made to an 0800 number, Sat 1st July, which I had managed to google online.

SSE returned my call nearly two weeks later. I spoke with [redacted]

On Monday 22nd May I made an [redacted] *May through to Monday 22nd May* [redacted]

On Wednesday 19th July, I called SSE at around 08:10 to make a formal complaint with regard to [redacted]

634. [redacted] defendant by letter dated 21st December, 2020 that they intended to include a claim for [redacted]e plaintiffs took no step to amend the pleadings until very shortly prior to the trial.

635. The plaintiffs' application to amend the proceedings was objected to by the defendant, *inter alia*, on the basis that it infringed s. 12 of the 2003 Act. On the authority of *Clarke v. O'Gorman* [2014] 3 IR 340, I determined that s. 12 of the 2003 Act did not operate as a jurisdictional bar to the initiation [redacted] The application of the 2003 Act was rather a matter for the defendant to plead in its defence. Accordingly, I allowed the amendments sought and the defendant duly delivered an amended defence pleading, *inter alia*, that, as the necessary PIAB authorisation had not been obtained, the claim ought to be struck out.

636. [redacted] 2003 Act does not refer only to the particular cause of action pursued. It is a description of the type of damage suffered as a result of the facts giving rise to the cause of action. Civil actions for personal injury are, therefore, not limited to those wrongs in which proof of personal injury is a necessary element of the cause of action. As such an action in nuisance is still capable of being a civil action within the meaning of the 2003 Act where the remedy sought includes damages for personal injuries. Therefore, a claim to nuisance which, *inter alia*, advances a claim to damages for personal injuries cannot proceed without the relevant authorisation.

637. In response, the plaintiffs invoke the *caveat* set out at s.4(b)(i) of the 2003 Act which exempts an action intended to be pursued in which, in addition to damages for personal injuries, it is *bona fide* intended and not for the purpose of circumventing the operation of the Act to claim damages or other relief in respect of any other cause of action. The plaintiffs argue that the proceedings are intended to claim relief in respect of another cause of action, namely both the underlying nuisance claim and the claim to injunctive relief pursuant to s. 160.

614. It is perfectly plausible that a reasonable person - in the lay sense of the term - would be prepared, for their own reasons, to put up with a particular noise even though it is objectively unreasonable. Indeed, I imagine that this occurs reasonably regularly. I find that, for her own reasons, Ms. McGinn is prepared to put up with noise that, objectively speaking, she should not have to put up with. I find that, although she is a reasonable person (in everyday parlance), in her reactions to the turbin[redacted] I hold that the reaction of such an objectively reasonable person would be akin to that of the plaintiffs.

615. The assessment of whether the noise is an unreasonable interference with amenity is not a numbers game; it is an exercise in judgment in which the court must consider the totality of the evidence. This includes that of Ms. McGinn, Mr. Brazil and the defendant's acoustic, medical and planning experts. It also includes that of the plaintiffs, Ms. Doran and the plaintiffs' acoustic[redacted]and planning experts. Further, the court must consider the audio recordings of the noise on site (and the associated graphs) and the evidence gained on its site visit. The court must also consider guidance concerning the appropriate noise measurement techniques and the features of WTN thought to contribute to the annoyance levels. Ms.
[redacted]he noise is undoubtedly of relevance to the issues in the case. But the court would be falling into error were it to conclude that the evidence that she is prepared to put up with from WTN outweighs the other evidence in the case which in my view established that, objectively speaking, the WTN is intolerable and unreasonable.

616. It is reasonable to expect people to be tolerant and to cope as best they can with the vicissitudes of living beside a turbine for which permission is granted. If, judged objectively, the noise can be ignored and effectively habituated to, then the noise in unlikely to be adjudged a nuisance. However, there will be circumstances in which, although some people will be prepared to deploy coping strategies to tolerate the noise, the fact remains that the character of noise is such that it is unrealistic to expect that such strategies will, in the main be effective or successful. Having regard to the totality of the evidence and to my above analysis of the WTN under the DEFRA criteria, I find that this point has been well passed in the present case. The WTN causes a serious adverse noise impact exceeding reasonable tolerability by a substantial margin.

proportionate and in no way hypersensitive. She has, as Dr. Murray said, coped with a difficult situation by managing her reaction to it and managing her emotions. In accordance with Prof. Gournay's view, I further find that, although Ms. Webster describes the WTN as getting worse - which objectively is unlikely to be the case – this perception can reasonably be attributed to its cumulative impact which is becoming more difficult for her to cope with.

461. In so far as concerns Mr. Rollo, the evidence [redacted] rom mid to late-2020, I find that the WTN brought about a [redacted] Even [redacted] s Charleton J. stated in *Lanigan v. Barry*, although a plaintiff cannot be a sensitive soul who complains unreasonably, the defendant cannot use this argument if his own conduct has resulted in the plaintiff being hypersensitive to the intrusion in question

(quoting from *Salmond on the Law of Torts* (London, Sweet & Maxwell, 1977).[51]

462. In short, all indications are therefore that the Webster-Rollos are reasonable, tolerant individuals. I have no reason to believe that the position is otherwise in relation to the [redacted]

463. I also accept the truthfulness of their evidence as to their experience of the WTN. In this, I am assisted to some extent by the clinical impression of both medical witnesses that [redacted] impression [redacted]

[51] As will become apparent, this observation may have a particular resonance with respect to Mr. Rollo.

457. I set out below my analysis of the Ballyduff WTN under what I call the "Defra criteria". In doing so, I primarily consider the relevant expert evidence advanced by both parties on each criterion. In this regard, whilst the plaintiffs' experts carried out an in-depth analysis of the

WTN by reference to the Defra criteria, the defendant's experts did not. However, in so far as the defendant's experts addressed the issues arising, I set out below the key aspects of their response to the evidence of the plaintiffs' experts in respect of each criterion. As will be apparent, although I do not accept all of the conclusions of the plaintiff experts, e.g., their calculation of background sound levels and their application of the 2009 WHO Lmax limit - I accept the substance of the other points made which together are more than sufficient to establish on the balance of probabilities that the impact of the WTN is objectively unreasonable.

Sensitivity of the complainant

458. In *Smyth v. RPA*, the uncontradicted evidence of the RPA's acoustic expert was that the Smyths were not among a group who could be classified as "ordinary". Rather they were highly sensitive and representative of only a very small proportion of the population - 2.5% - who would experience a high level of annoyance at the noise levels demonstrated. In the present case the defendant has tendered no evidence whatsoever that any of the plaintiffs are highly sensitive or hypersensitive to noise, or indeed otherwise.

459. [redacted]

460. [redacted]

59. Ms. Webster also described shadow flicker, which occurs in early spring and late summer, as follows; *"the light on a sunny day would change from the kind of dappling light that occurs when sunlight comes through trees to a full shadow falling suddenly followed by an instant return of light."* This would herald alternate periods of darkening and lightening occurring with great rapidity. Shadow flicker occurs in the valley in front of HH, in their garden and on the walls or floors of rooms in their house. It is very difficult to escape the flicker which is visible even with the curtains drawn. Although shadow flicker would only be inside the house a couple of weeks a year, it is present in the valley and garden for longer periods which is still disconcerting.

Interactions with Mr. Brazil

60. In July 2017, the Webster Rollos alerted the director of the defendant company, Mr. Brazil to their experience of the noise. Initially, Mr. Brazil suggested improving their windows and insulation towards which he would contribute [redacted] The Webster Rollos felt that insulation was a large financial undertaking which would not in any event be effective as against low frequency WTN.

61. On 14th August, 2017, Mr. Brazil and Mr. Conor Brennan attended HH for a meeting with the Webster Rollos and the Carty Shortens. As an alternative to contributing towards the cost of insulation, Mr. Brazil suggested that the plaintiffs sign a *"noise acceptance agreement"* pursuant to which they would receive an annual inflation linked payment of [redacted] per annum for the duration of the planning permission for the turbine. This agreement would be noted on the title deeds of HH (and NF) and would bind all purchasers thereof. A further requirement of the agreement was that Mr. Brazil would have a right of first refusal if their property was ever put on the market.

62. The plaintiffs asked Mr. Brazil if the turbines could be turned off or turned down at night or at weekends. This request was not acceded to.

63. Mr. Brazil also informed the plaintiffs that it would be possible to install a computer programme to turn off the turbines when there was a risk of shadow flicker. However, this proposal was not actioned by the defendant.

64. A few days after the August 2017 meeting, Mr. Rollo telephoned Mr. Brazil to reject the proposal of a noise acceptance agreement, and an initiating letter followed from the plaintiffs' solicitor. It was suggested to Ms. Webster in cross examination that this rejection had been premature as the proposal of [redacted] per annum was "*just opening negotiations*" which could have continued were it not for their solicitor's correspondence. Ms. Webster's response was that they wanted to enjoy living in their house and did not want to be paid to endure the noise.

Impact on the Webster Rollo relationship

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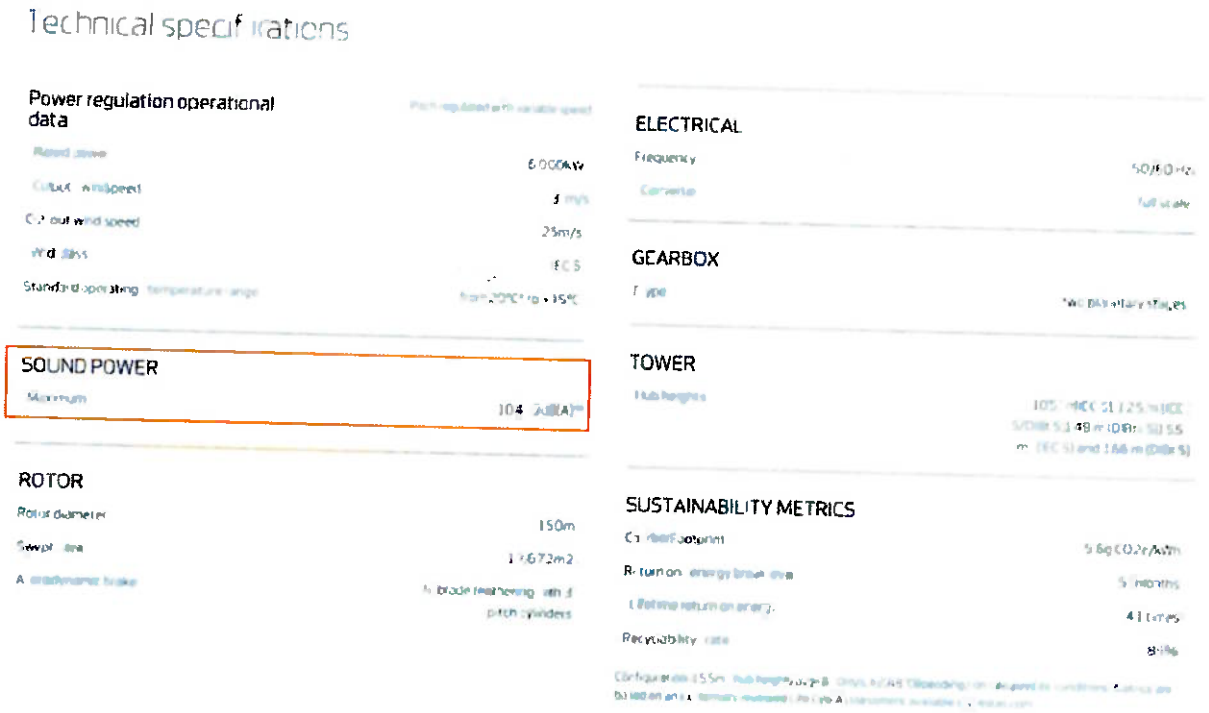
The four sizes and types of turbines and scale are represented in the above drawings. Seskin Wind Farm scale of turbine & power rotor diameter is un-precedented for onshore developments and especially in confined locations surrounded by homes. Please note there are approximately

The close proximity of the sweep area to ground level of each turbine for Whitehill and Seskin will mean huge impacts [redacted] The EIA impact statements do not take into account the low trajectory of the blade sweep areas. Carlow County Council cannot ignore such information in relation to the [redacted] that are within both the EIA statements submitted by EDF and previous developers, copies and reference in appendix A.

The identified wind turbine submitted by EDF states a hub height of 105m, higher ground clearance is generally a requirement to avoid bird and bats, but also to ensure less air turbulence for the turbine wake. As with previous wind farm developments, if planning is granted, developers have a history of applying for an increase in height, size and ratios, as per Boolyvannanan Bog and Red Bog (Bilboa) planning applications attached for reference in Appendix A.

The information issued by EDF in the initial consultation periods was for different sizes turbine power ratios and rotor blade diameter. Both developers of the wind farms deliberately changed the size ratios without increasing distances.

The below data used by EDF shows the actual technical information from Vestas. The sound power of this particular make is 104.9db, measured at a hub height of 155m and wind speed of 8.0m/s These sound power ratios are never considered and generally removed from any assessments, and concentrating only on tonal noise from blade sweep etc.



LAYOUT

The proposed development is in the direct vicinity to **The River Barrow** and **River Nore** Special Area of Conservation (site code 002162), which is designated for a range of riverine species and habitats such as Freshwater Pearl Mussel for which suitable water quality is required. This development **(Seskin)** has the potential to have a significant effects to riverine species and habitats.

Seskin is formed in a depression on a raised plateaux approx. 270m above sea level. The form is similar shape to a large saucer with higher surrounding ground surrounding the perimeter. Naturally falling away to North West into the SAC Nore SPA. Water form this area, not only finds its way to the Nore but also to the Barrow. Natural fissures in stone rocks show a lot of smaller streams running easterly into the Barrow SAC . On such a raised plateaux the Seskin and Ridge areas all have a major influence of water ground water corridors to surrounding towns and villages.

EDF have given little information on the habitats that surround this area, from [redacted]

Site Name	Site Code	Minimum Distance from Project Site (km)	Minimum Distance from nearest Turbine (km)
Natura 2000 Sites			
River Barrow & River Nore SAC	002162	0.0	1.7
River Nore SPA	004233	11.5	13.0
Lisbigney Bog SAC	000869	12.4	19.6

In combination with other plans and projects in this direct area such as **Bilboa Wind farm** (already granted PP) to be built on the Boolyvannanan Bog and Red Bog wetlands, **Seskin Wind Farm** adjacent to this development also within a wetland and forestry zone.