

THE HIGH COURT

[2024] IEHC 136

[2018 8457 P]

BETWEEN:

MARGARET WEBSTER AND KEITH ROLLO

PLAINTIFFS

AND

MEENACLOGHSPAR (WIND) LIMITED

DEFENDANT

AND

[2018 8458 P]

BETWEEN:

ROSS SHORTEN AND JOAN CARTY

PLAINTIFFS

AND

MEENACLOGHSPAR (WIND) LIMITED

DEFENDANT

JUDGMENT of Ms. Justice Emily Egan delivered on the 8th day of March 2024

This case is about the impacts of 2 turbines only.

Introduction

1. The plaintiffs are two couples¹ 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.

Low-frequency sound from wind turbines is now recognised under tort law.

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.

The wind turbine noise (WTN) must be assessed both quantitatively and qualitatively.

Plaintiffs' case

15. In brief, the plaintiffs' case is that whilst the assessment of WTN nuisance is an objective and not a subjective exercise, it is not determined by decibel level alone but by reference to all of the characteristics of the WTN. The assessment is not purely quantitative but also qualitative. Close attention must therefore be paid to all the characteristics of the WTN such as its decibel level, whether there is swish or thump AM, its AM values, the erraticism, impulsivity or variability of its AM and the duration, frequency and timing of the intrusion occasioned thereby.

16. The plaintiffs maintain that even if a windfarm benefits from planning permission, the noise conditions in the permission cannot provide the litmus test for determining whether the WTN constitutes an unreasonable interference with amenity.

17. To demonstrate the features of the WTN complained of in this case, the plaintiffs' experts carried out noise monitoring over extensive periods both externally and internally at HH and NF. The plaintiffs present the results of this noise monitoring in audio recordings and in graphical format. They maintain that, when assessed against relevant quantitative and qualitative criteria, this data supports the contention that the WTN poses a substantial nuisance.

Planning conditions do **NOT** determine if wind turbine noise is unreasonable or a nuisance.

Issues to be tried and summary of the court's findings

27. I set out below the issues for determination together with an overview of my conclusions in relation to each issue. It should be emphasised that this is only a very brief summary of my reasons for those conclusions and that the real analysis thereof is set out in the body of the judgment.

Issue 1: Is the court bound by the noise condition in the planning permission in assessing what is objectively reasonable for the purposes of determining a claim for nuisance? Is the noise condition in the planning permission a wholly reliable indicator of what WTN is reasonable?

No.

In a nuisance case, the onus of proof of noise compliance is on the wind farm.

Issue 2: Is compliance with the planning permission demonstrated?

2 (a): For the purposes of the nuisance case, which party bears the onus of demonstrating compliance or non-compliance (as the case may be) with the noise condition set out in the planning permission?

In the nuisance action, the defendant bears the onus of proving the defence advanced; namely that the WTN complies with the noise condition in the Ballyduff permission when correctly interpreted.

Audio recordings are tenable at court.

Issue 5: Does the court accept that the criticisms advanced by the defendant undermine the reliability of the plaintiffs' acoustic experts' evidence and the data on which same is based?

In general, no.

In so far as concerns the 2017 external NF data, the 2017 internal HH data and the 2021 internal NF and HH data, the court is satisfied that the audio recordings and associated time domain graphs presented by the plaintiffs' experts, MAS Environmental Ltd ("MAS"), reliably present the general noise character at the plaintiffs' homes.

The WTN (wind turbine noise) from two turbines amounts to a substantial interference with the plaintiffs' use and enjoyment of their land.

Issue 6: Does an analysis under the Defra criteria support the argument that the characteristics of the WTN amount to a substantial interference with the plaintiffs' use and enjoyment of their land?

Yes, for the reasons which follow:

Level of the noise/ loudness

The noise levels presenting, when combined with other features, give rise to significant potential for dominance and unacceptable intrusiveness.

Lower frequency noise is considered as part of the nuisance.

Aggravating features - Spectral content of the noise

Whilst lower frequency noise is not the dominant characteristic of this WTN, there is a significant element of audible lower frequency noise which manifests as thump AM.

The wind farm regularly disturbs sleep.

The impact of the noise on basic needs such as sleep

The World Health Organisation Night Noise Guidelines, 2009 and its Environmental Noise Guidelines for the European Region, 2018 are not of particular assistance in deciding whether this WTN is such as to unreasonably impact upon sleep. I find that the WTN displays characteristics of high AM values and thump AM which have a very high potential to disturb sleep. I find as a fact that, particularly when turning at moderate to higher speeds of rotation, the turbine regularly disturbs the plaintiffs' sleep.

Plaintiffs can't easily avoid the nuisance.

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.

The unreasonable noise must occur on a sustained basis

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 9: Does the court accept the plaintiffs' evidence as to the characteristics of the noise and that such characteristics occur commonly and on a sustained basis?

Yes, for the reasons set out above.

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?

Yes, for the reasons set out above. Two particular features of the WTN render the noise an unreasonable interference. First, there are frequent and sustained periods of WTN with AM values widely acknowledged to be associated with high levels of annoyance. Second, the WTN exhibits thump AM which is a characteristic known to lead to adverse reaction in the community.

I accept that the noise impact demonstrated on the audio recordings (and associated graphs) occurs commonly and for sustained periods. WTN which exhibits these characteristics on a regular and sustained basis is unreasonable and exceptional.

I find that the plaintiffs' complaints are objectively justified in that the WTN interferes with the ordinary comfort and enjoyment of their homes. When it occurs, this interference is a substantial interference.

While the WTN is liable to annoy during the working day, higher prevailing background noise levels and the fact that the occupants are not trying to relax, or sleep means that, objectively speaking it does not in general substantially interfere with the plaintiffs' enjoyment of their property.

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.

The plaintiffs are entitled to damages for unreasonable interference with the enjoyment of their property. The measure of such damages is for module 2. The issue of whether an injunction ought to be granted and if so the terms of such injunction is also for module 2. Likewise, the issue of whether the plaintiffs ought to be confined to damages in lieu of an injunction is for module 2.

To claim nuisance against a wind farm, the plaintiff must

- Show interference with the enjoyment and comfort of their land.
- This interference must be substantial over a period of time.

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..."

NO objectively identified wind turbine noise level that gives rise to nuisance.

Issue 4: What criteria ought the court consider in the assessment of nuisance?

Defendant's argument-the line in the sand

361. The defendant correctly submits that the question of whether the WTN is an objectively unreasonable interference with the plaintiffs' amenity cannot be determined by reference to the plaintiffs' subjective evidence. It further argues that the plaintiffs have made no attempt to establish what their requirements are or, how they can be regarded as objectively reasonable.

362. Thus, the plaintiffs have failed to:

- identify by way of the ETSU methodology the decibel level beyond which noise becomes objectively unreasonable and poses a nuisance or;
- identify, in a manner analogous to the draft WEDG 2019 methodology, the precise parameters pursuant to which noise of a particular decibel level combined with a particular level of AM becomes objectively unreasonable and poses a nuisance.

363. In short, the plaintiffs have not identified a line in the sand, a line of acceptability. Unless and until such a line is identified and applied, it is said that the court cannot assess the matter. Irrespective of how the WTN is experienced by the plaintiffs, this line must determine

NO objectively identified wind turbine noise level that **does not give rise to nuisance.**

364. The primary "line" identified by the defendant and its experts is of course the planning permission. For all the reasons explained above, I find that the line cannot be supplied by condition 15 (with which in any event compliance has not been demonstrated) as it does not regulate what is said to be the most intrusive aspects of the Ballyduff WTN, namely AM, particularly thump AM.

365. Nor, for the same reason, can the line be supplied by WEDG 2006 (with which, for the sake of argument, I accept the WTN complies). WEDG 2006 does not provide the court with any yardstick - objective or otherwise - against which to assess what AM values or what degree of thump AM is objectively reasonable.

No line has been drawn as to what constitutes unacceptable windfarm noise.

377. Yet, there is currently a government policy in evolution in relation to the wind energy development which one would expect to consider at least some of the crucial components of this line in the sand. WEDG 2006 is in the course of review. It would in my view represent a wholly unwarranted intrusion on the executive function for the court to attempt to draw the line of acceptability for windfarm noise. Not only does the court have no jurisdiction to do this, but it also lacks the expertise to even attempt this task.

378. In short, neither the parties' experts nor the court can or should attempt to set a line of acceptability for the community as to what constitutes unacceptable windfarm noise. That is not the purpose of this litigation.

The qualitative assessment of listening to and analysing sound recordings provides information to identify and assess the impact of the special audible characteristic of wind turbine noise.

366. Similarly, although the defendant places huge reliance on IOA RM, that methodology is not intended to capture the subjective annoyance response and does not purport to be a yardstick for nuisance. The IOA RM cannot tell one what the noise sounds like. Crucially, the defendant's experts do not contend that the IOA RM differentiates between swish and thump AM. Despite Mr Carr's very heavy reliance upon it, the IOA RM is not a "recognised standard" capable of assessing the impact of AM, and thump AM in particular. The only yardstick of which I have been informed for identifying and assessing the impact of thump AM is the qualitative yardstick advanced by the plaintiffs' expert; to record, listen and analyse the WTN and to correlate same with spectral frequencies by means of a spectrogram.

An L90 statistical calculation does not identify fluctuations in noise levels such as amplitude modulation (AM).

393. Mr. Stigwood used a barking dog analogy to illustrate the drawbacks of relying solely upon average decibel levels to assess nuisance. The leq 10 of a barking dog over a ten-minute period tells one nothing about the character or intermittency of the barking. One loud bark might produce the same average decibel level average as ten lower barks. Yet, a single bark might disturb for ten seconds whereas ten lower barks would pose considerably greater disturbance. Further, as L90 considers only the level exceeded 90% of the time, neither the single loud bark nor the ten lower barks would alter the L90 decibel level.

394. I accept that both the L90, and to a lesser extent the 10 or 15 minute leq averages, are relatively insensitive to rapid fluctuations in noise level such as AM. A complaint centred on the changing character and nature of AM cannot be analysed by average decibel level alone pursuant to either the L90 or leq metric. Moreover, WTN can present at higher or lower frequencies giving rise to swish and thump AM respectively. Yet, these cannot be distinguished using either L90 or leq.

Two wind turbines are deemed a nuisance.

Issue 10: Does the court accept the plaintiffs' evidence that the characteristics of the noise amounts to an unreasonable interference with the plaintiffs' enjoyment of their property? Is liability in nuisance established?

588. As will be apparent from all of the forgoing, the answer to this question is a resounding affirmative.

Formal background testing is required to demonstrate compliance.

589. The Ballyduff planning permission does not delineate the parameters of noise nuisance in this case principally because it does not assess or regulate the aspect of the WTN complained of, which is AM. Even if the planning permission did delineate the parameters of noise nuisance, total operational noise at both NF and HH is above the applicable 40 dBA leq limit for windspeeds above 7 and 6ms/ respectively. Although, the absence of a formal background noise assessment means that planning non-compliance has not been demonstrated on the balance of probabilities, nor can the defendant make out the defence advanced.

Amplitude modulation and associated vibration are intrusive and make it impossible for reasonable people to habituate their homes.

590. I find that two features in particular of the WTN AM render the WTN an unreasonable interference. First, there are frequent and sustained periods during which the AM manifests typical AM values at a level widely acknowledged to be associated with high levels of annoyance. Second, this WTN displays periods of thump AM. The oral evidence of all four plaintiffs and the Webster-Rollo diary entries all suggest that thump AM, together with its association vibration, is the most intrusive quality of the WTN. This thump AM vastly adds to the nuisance posed by the wind farm. In combination, I find that this is WTN which reasonable people would find it impossible to habituate to.

Special audible characteristics of whooping or thumping are likely to cause adverse reactions in the community.

591. Regular and sustained AM values of this order and thump AM combine to produce WTN which is a world away from the usual noise that one would associate with wind turbines – viz. reasonably regular and monotonous swish AM. Mr. Lawlor, the defendant’s planner, stated that the understanding of planners is that blade swish is “*normal AM*”. He stated that whoomphing or thumping AM is called “*adverse AM*” or “*other AM*”. As the ETSU Review notes it is also commonly described as “*abnormal AM*” or “*enhanced*” AM. Mr. Lawlor acknowledged that whoomphing or thumping AM, “*is likely to cause adverse reaction in the community*”. Although he stated that this form of AM is thought to occur only for short durations of time at very specific meteorological conditions, I am satisfied that the evidence establishes that it is a common and sustained feature of the Ballyduff WTN, particularly at night, in the early morning and in the evening.

People hear and feel wind turbine noise both inside and outside the house with the windows open or closed. This is not a reasonable impact for a wind farm located in a quiet rural environment.

592. I am satisfied that these two features combine to render the WTN the dominant noise in the plaintiffs’ sound environment. These are the features of WTN that one hears and feels both outside and inside HH and NF with the windows open and closed. Such an intrusion of noise and vibration into the plaintiffs’ homes could not be an objectively reasonable impact of a windfarm located in a quiet rural environment such as this, albeit one which includes permission for a windfarm.

The nature of the amplitude modulation of the wind turbine noise causing nuisance is infrequent and irregular

593. I accept the evidence of the plaintiffs' and their expert witnesses that the noise impact demonstrated on the audio recordings and graphs occurs commonly and for sustained periods. To expand on this somewhat, I do not find that high AM values and thump AM occur constantly in the Ballyduff WTN. Their level and presence fluctuates. However, I accept that these features occur commonly albeit at irregular intervals. These irregular intervals are frequent and can occur on repeated occasions in a 24 hour period. Sometimes these intervals are sufficiently frequent and sustained in duration as to define the relevant day or night from the perspective of those experiencing it. On such occasions, the overriding impression will be of adverse impact punctuated by periods of more acceptable WTN; e.g. when it is more steady and monotonous with AM of the swish variety. On other occasions the opposite might be the case and the adverse intervals will be infrequent or of short duration meaning that the overriding impression will be of acceptable WTN punctuated by periods of adverse impact.

Audio recordings and graphs of intermittent irregular wind turbine noise, in harmony with oral evidence and diary which record the plaintiff's inability to have a restful night's sleep and the exhaustion which follows demonstrate, on the balance of probabilities, that a nuisance exists.

68. The Webster Rollo noise diary records intrusive, unpredictable WTN varying in intensity. In harmony with their oral evidence, the diary describes, whoomping, 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 records the couple's inability to have a restful night's sleep and the exhaustion which follows.

595. For all the reasons set out above, the plaintiffs' complaints of nuisance are objectively justified. The WTN interferes to a substantial extent with the ordinary comfort and enjoyment of their homes. I am satisfied and find, on the balance of probabilities, that nuisance is established.

Noise from turbines poses a nuisance in the evenings and weekends (during quiet waking hours) when one could enjoy the recreation and peace in one's dwelling.

598. On the other hand, I find that the noise from the turbine poses a nuisance to the plaintiffs in the evenings and indeed at weekends (in other words during quiet waking hours) when one could expect to be enjoying recreation in the garden and/or peace in one's dwelling. Although one is more likely to be spending time outside during the summer months, one should also be able to do so during the winter months.

A quiet environment is at a premium at night.

It is unreasonable to expect occupants of a house to keep the windows shut in an attempt to mitigate unreasonable wind turbine noise.

599. Equally, I have no hesitation whatsoever in finding that the WTN poses a nuisance at night (in other words during night hours) when a quiet environment is at a premium. Although it is more likely that windows will be closed in winter one should, if one chooses to be, able to open windows for ventilation at night. It is unreasonable to expect occupants of a house to have to sleep with windows shut in an attempt to mitigate unreasonable WTN. In any event, as a result of its characteristics, the WTN-and associated vibrations-is an unreasonable inference even when the windows are shut.

Shadow flicker from the 2 turbines was in and of itself insufficient grounds to claim a nuisance.

600. I also find that in spring and autumn the shadow flicker caused by the turbines is intrusive and unpleasant. Whilst this is not in and of itself sufficient to constitute nuisance, this shadow flicker is wholly avoidable with inexpensive mitigation measures. Such mitigation should long since have been put in place and ought now to be actioned.

Bald Hills gets a mention as the first wind turbine nuisance precedent – albeit with a few spelling errors

6. It was expected that module 1 would run for five weeks. However, it is clear that the parties' estimate of the time required to try the numerous factual, technical and legal issues in dispute was utterly unrealistic. 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.

There is not a binary choice to be made b/w the generation of renewable energy and a good night's sleep for its neighbours – my fav judge's line.

626. The defendant cannot rest its laurels on the proposition that the generation of renewable energy is a socially valuable activity which it is in the public interest to continue. There is not a binary choice to be made here between the generation of clean energy by the wind farm, and a good night's sleep for its neighbours. It should be possible to achieve both.