

Nichola Culleton

Rathbeg

Sharavogue

Birr

Co. Offaly

An Coimisiún Pleanála

64 Marlborough Street

Dublin 1, D01 V902

25th June 2026

Re: Objection, Planning Application PAX 92.324279, Ballincor Wind Farm, Co. Tipperary / Co. Offaly

To whom it concerns,

My name is Nichola Culleton. I live with my husband Adrian and our three children at Rathbeg, on the edge of the bog, in one of the most beautiful places I know in the midlands. Adrian is a dairy farmer here. His father farmed this land before him and his grand-uncles before that. I teach at St. Brendan's Community School in Birr. We built our house on this site ten years ago for the view. The house faces south-west, with a big glass window in the living room put there for one reason, to look straight out across the bog.

All eleven of the proposed turbines will be visible from those windows, from the kitchen, from our bedroom, and from the back bedroom where our ten-year-old son Dylan sleeps, facing out across the bog. The applicant has us down as noise sensitive location H288 and shadow flicker receptor 288. We are 1,630 metres from the nearest turbine, T08, right on the very edge of the applicant's own assessment boundary, at 62.9 metres above sea level. The turbine bases sit lower than our house. We look down into the basin where these machines would go.

A separate group objection sets out the technical and ecological grounds in detail and I stand over those in full. I am a member of the Greater Birr Wind Action Group and have been closely involved in the technical review of this application, which is why I am able to point to chapter and appendix detail in places. But this letter is not the group's case. It is about what this development does to my family and my home. I am leading with health, because it frightens me more than anything else here and is the main reason I originally got involved in the group in the first place. What I have realised since is that on every single level; hydrology, biodiversity, transport, ornithology, noise, shadow flicker and of course health, this project would be severely damaging to our flora and fauna, our river, our neighbours and to my family.

One thing first, because it sits under everything else. This area is zoned "Not Suitable" for wind energy in the Offaly County Development Plan, marked red on the Wind Energy Strategy map. That is not an accident or an oversight. It is a deliberate decision by the elected members of the county, and after the Coolglass case in 2026 it carries real weight. The burden is on the developer to justify building here anyway, and that burden has not been met. The application is in direct conflict with the County Development Plan, and that conflict runs the whole way through it.

The applicant says this development will have no significant effect on human health. I went looking for where that conclusion actually comes from, and it comes from nowhere. It goes in a circle. The health chapter doesn't assess health. It sends you to the noise and shadow flicker chapters. Those don't assess health either.

They check whether the numbers stay under a set of limits. And some of the limits were never health limits to begin with. The 30 hours a year and 30 minutes a day for shadow flicker have no medical basis behind them at all. The one health document the applicant relied on, the HSE's 2017 paper, has been withdrawn. So the health chapter says we're safe because we comply, the compliance chapters say we comply with the limits, and at no point does anyone stop and ask what eleven turbines will do to the health of the people living under them. The answer was assumed at the start and then propped up by pointing at documents that had also already assumed it.

That is not a complaint about weight. The EIA Directive requires that the significant effects of a development on human health be **identified, described and assessed**. That is a specific legal obligation, and a different one from showing compliance with a noise or shadow limit. The applicant has done the second and presented it as the first. On the actual obligation, assessing the effect on health, the chapter is not weak, it is empty. It is the exact kind of gap the *Holohan* judgment says cannot be left in an assessment and cannot be cured later by a condition. There is nothing here for the Board to weigh, because the Health assessment was never actually carried out.

And the applicant's whole defence, that the limits are met, so health is protected, has already been tested and rejected by the Irish High Court. In *Webster and Rollo v. Meenacloghspar (Wind) Ltd*, the Ballyduff case [2024] IEHC 136, the court found that a wind farm operating **fully inside its planning conditions** still caused an actionable nuisance, and awarded over three hundred thousand euro in damages. The court held that staying within dB(A) planning limits is no defence. So the one thing this application offers in place of a health assessment which says "we comply with the limits" is precisely the thing a court has already found is not enough. I will come back to Ballyduff later, because it bears directly on infrasound too. But it belongs here first, because it knocks the floor out from under the entire health chapter at the start.

This is not a technicality and I am not raising it to be clever. It means that everything I am about to tell you about my son, my daughters, myself and my husband was never weighed by anybody, because there was nothing in this application capable of weighing it. There is no assessment of my family for it to be wrong. There is no health assessment here at all. The blank space in the shadow flicker table where my house should be is not an oversight in an otherwise complete piece of work.

And that blank cell itself is a defect in the Board's own terms. The applicant designated my home as a sensitive shadow flicker receptor, number 288, and then they did not assess it at all. An environmental impact assessment that identifies a receptor as sensitive and then produces no finding for it is not "complete and definitive," which is the standard the courts require before the Board can lawfully conclude there is no significant effect. The Board cannot find no significant effect on a receptor that was never assessed. There is no applicant finding for my house to weigh against. There is only a gap where the finding should be, for the house I know best.

That omission is not an abstraction to us. It is the house we live in, and these are the people the assessment left out of it. Dylan is ten and he has photosensitive migraine, and so do I. Photosensitive migraine is a recognised neurological condition where flickering, strobing or rapidly changing light is a direct trigger for an attack. It is not the same thing as an ordinary migraine. Our triggers are flickering light, strobe effects, and sunlight at certain angles. I wear tinted glasses outdoors every day to manage it. Not on bad days but every day.

When a migraine takes hold of Dylan the first thing I see is the pain on his face coming up over his eye, and with it a look of disappointment and fear, because he is ten and he already knows exactly what is coming. He tries to get upstairs and asleep as fast as he can, because we have both learned that if he can get to sleep

before it takes hold he can sleep through the worst of it. That window is everything. It is the difference between a bad hour and a lost day.

If he doesn't make it to sleep in time he lies in a dark room in pain. He is usually a very independent child, but not then. He wants me there and he doesn't want me there. He calls me up, asks me to sit with him, gets cross with me because he is in pain, sends me away, and calls me back. I bring cold facecloths and keep them cool in a basin of water beside the bed, and he wants them on his forehead until he is suddenly too cold and gives out to me about it. He wants to be held and then pushes me off. He tries to make himself sick, because he has worked out, young as he is, that once he can vomit the worst is usually over. He therefore asks for Nurofen and Calpol, not really for the pain but in the hope they will turn his stomach. This goes on for hours. There is a particular agitation that comes with a bad one that I can only describe as a child wanting to climb out of his own body. It is a very difficult thing to witness.

His bedroom faces west, straight at the bog, straight at where these turbines would stand. This development would work against Dylan in two ways at once during an at. Noise works against the sleep window that is his only way of getting ahead of an attack. And if shadow flicker reaches his room before he gets to sleep, it wouldn't just delay him, it will accelerate the very thing he is racing to beat. Dylan is mad about the farm. He is out on that land with his father every day after school and right through the summer, and for a child with photosensitive migraine a flickering shadow sweeping across an open field would be the exact same trigger as flickering light through a window. Dylan is not a visitor to this land. He intends to farm it, the way his father does and his grandfather did, and a farmer cannot pull a curtain across a field. The turbines would turn for thirty-five years and he would work this ground far longer than that. But for every shadow season of his working life the fields that are meant to be his future would also be the thing most likely to make him ill, in the one place he can never step out of. And there was no assessment of any of it. None.

And here the problem with the limits becomes most obvious. The applicant's limits assume shadow flicker harm builds up gradually, like a dose, measured against a yearly allowance. For photosensitive migraine that is simply wrong. The unit of harm is the single event. One burst of flicker on one morning can set off an attack. The research says the same thing: Voicescu and colleagues (2016) found the maximum *daily* duration of shadow flicker predicted harm better than the annual total. A house sitting well inside its yearly "allowance" can still deliver, on any given morning, the exposure that ends my son's day before it has started. The point here is that an assessment built around an annual figure is answering a question that has nothing to do with my child. I'll return to the technical side of the shadow flicker assessment later on.

These shadow events, every single one of them, have the potential to cause myself and my son to have a migraine. From my own perspective, and from over 30 years of experience, 60 seconds of shadow flicker would be enough to trigger an event for me at this stage. There is absolutely no safe amount of shadow flicker for me. Sometimes, if flashing lights from children's funfair toys hit my eyes, even once or twice, that is enough. So the idea that 30 minutes a day is a safe limit is, for this household, a complete and utter lie, and to add insult to injury, as already stated, we have not even been modelled. This means no shut-off system at this house so even that totally inadequate safety net will not apply here. The commencement of shadow flicker, however little, will in effect totally ruin the quality of life of both myself and my son, and I do not feel that is acceptable for a commercial enterprise anywhere.

My daughters Lelia and Amy are nine and seven. They have not had a photosensitive migraine yet, and I hope to God they never do. But the research is clear that boys usually get their first migraine at seven and girls around ten. I got mine at ten and Dylan got his first one at seven. The research also says that where one parent is a sufferer, each child has roughly a fifty per cent chance of developing it. I am a confirmed sufferer. That risk sits over each of my daughters. If this development goes ahead and the girls do develop migraine,

they will be growing up in a house with unassessed shadow flicker and therefore no mitigation in a landscape that has been changed for good. We could, within a few years, have four people in this one house living with migraine, three of them children. I am asking the Board to take that seriously, and to notice that there is nothing in this application that has even considered this effect or in fact any health effect on any family in this entire community. This is the result of the applicant's absolute failure to discharge its duty to produce an actual health assessment.

I also have SVT, supraventricular tachycardia, a diagnosed heart arrhythmia that throws my heart into sudden bouts of very fast, irregular beating. Stress and broken sleep are known triggers. The noise chapter admits there is amplitude modulation, the throbbing, pulsing quality of turbine noise that is at its worst at night, and then sets no enforceable limit for it. Chapter 11 simply hands the whole question off to a monitoring protocol to be agreed after the wind farm is built and running. So the one feature of the noise most likely to wreck sleep is parked until the machines are already turning. For someone with a diagnosed heart condition that is not a reassurance. It is the same evasion that runs through the rest of the application, pointed straight at my heart.

And it is not only me. My husband Adrian had a heart attack three years ago and lives with a stent in a coronary artery. So, this house has two diagnosed cardiac patients, not one. The peer-reviewed literature is clear that people with pre-existing cardiovascular issues do not habituate to chronic environmental noise and are among those most vulnerable to it.

Six months ago, I could not have told you what allostatic load was. I know now because this application forced me to learn, and I have spent that time reading the peer-reviewed health literature on wind turbines until I understood it. Allostatic load is the medical term, first set out by McEwen, for the cumulative wear the body takes when it is under several chronic stressors at once. They do not simply add together. They compound, because they fall on the same systems, sleep, the stress response and the regulation of the heart. And that is exactly what this application would do to my family. Take just my son. Noise attacks his sleep and a child who has lost sleep is a child more likely to have a migraine. Put shadow flicker on the same morning, a separate and direct trigger, and the two do not sit side by side. They stack on the one child at the one time, each making the other more dangerous. That is what compounding means, and how it would apply to a ten-year-old in his own bedroom. And Dylan is only one of us. The same convergence lands on my heart, on Adrian's, on the two girls coming into the age of possible onset, on the same handful of bodies in the same house, every day, for thirty-five years.

And here is the part that follows from everything I have said. The application cannot see this, because it was never built to. It assesses noise in one chapter, shadow flicker in another, infrasound in none, and at no point does anyone sit and add them all up. There is no chapter for the receptor, only chapters for the sources. The one thing that actually determines whether my family is harmed, the whole cumulative effect, is the exact thing nobody assessed.

Chapter 19 is the cumulative effects chapter, the part of this application whose entire purpose is to assess effects in combination. This is what it has to say about shadow flicker and the health of the people it falls on:

"Shadow flicker could potentially be a nuisance for local residential properties."

That is the sentence. A possible nuisance. Not a trigger for a neurological condition, not the cause of a migraine that can lay a child out in pain for hours, on the days it strikes. No, they call it a nuisance, like a dripping tap. It never once mentions migraine, or any health condition at all, and it disposes of noise the

same way, by repeating that the limits are met. The chapter built to see things in combination never looked at a single family carrying all of it at once or at how all these impacts together on the individual person.

The whole assessment treats everyone near Ballincor as one statistical average. Dylan is not a statistical average, and neither is his mother in tinted glasses managing a neurological condition. Two girls, 7 and 9, walking into the age of possible onset are not a statistical average, nor are two adults living with diagnosed cardiac conditions. We are not, as a family, a statistical average, and an assessment that can only see us as one has not seen us at all.

The applicant quotes the WHO 2018 Environmental Noise Guidelines in its own assessment. Those guidelines require that vulnerable subgroups, including children, people with pre-existing conditions, and anyone whose sleep is affected, be considered as such, not folded into an average. The applicant adopted that guidance and then did not apply the part of it that protects my family. It is the applicant's own chosen standard, applied selectively, in the one direction that made the development easier to approve. The precautionary principle exists for exactly the people the averaging erased, and I am asking the Board to apply it.

The applicant set the shadow flicker boundary at 1630m. That distance was their own choice. Nothing in Irish regulation required it. My house at Receptor 288 sits exactly on that line, 1630m from T08, and the result is that the shadow flicker table has figures for the houses all around me and nothing for mine. No annual figure. No shadow days. No daily maximum. They listed my home as a sensitive receptor and then produced no result for it. They cannot tell this Board what the shadow flicker at my house will be, and neither can I, because the assessment that should hold that answer does not.

Lets have a look at what they did work out around me. Receptor 143 is 140 metres from my house, and their own model gives it 7 hours 43 minutes of worst-case annual shadow flicker across 39 shadow days a year. Receptor 173, about 200 metres away, gets 7 hours 30 minutes across 37 shadow days. They ran their boundary straight through a cluster of homes, did some, and left the rest, including ours, with nothing.

That 1,630 metre line itself cannot be defended on the physics of this site. The shadow from a 180 metre turbine at three degrees of sun elevation, the model's own lowest cutoff, reaches 3,435 metres. On winter mornings and evenings, when the sun is lowest and our south and south-west windows are pointed straight into it, shadow from these turbines will reach our house whether or not the applicant chose to stop looking at 1,630 metres.

The sunshine data used to show the development stays within the 30-hour limit is contested, the wrong weather station and decades out of date. I will leave the detail of that to the group submission. But if the inputs are wrong, the compliance figure built on them cannot be relied on, and on a question that affects my son, that is not a small thing. The model also does each turbine on its own and never models two or more turbines throwing shadow through the same windows at once, even though several will be visible together from my house. Compound flicker is not just more of the same, it is faster, more irregular and less predictable, which the photosensitivity research (Harding et al., 2008) identifies as the most dangerous kind of all, and it is the case they modelled least.

Let me put plainly what approval would mean in our kitchen. On the mornings when shadow flicker reaches the house, and from the layout of the site and the turbine positions I am as certain that it will. Dylan and I will have to get out of whatever rooms it reaches. We will have to leave the kitchen, the dining room, the living room and the bedrooms. We will have to either eat at the front of the house in the sitting room, or pull every curtain in the place and hope it is enough to stop an attack. How many school days does Dylan lose to that? How many days do I ring in sick? And because we are not in the model, there is no shutdown protection

built in for us, no matter how bad it gets. What is our mitigation meant to be? Move out of the lane Adrian's family has lived in for generations? The applicant listed my house as a sensitive receptor and then never modelled it, and a development that cannot say what it will do to the family living close to it is not one the Board can lawfully approve.

Infrasound is the clearest example of the problem I have just described, and it is serious enough that it needs its own ground. Infrasound is sound below about 20 Hz, below the pitch we can consciously hear. Big modern turbines are one of the largest man-made sources of it. And the assessment in this application physically cannot detect it.

Every acoustic assessment here is built on A-weighted decibels, dB(A). A-weighting is a filter that strips out low frequencies and removes everything below 20 Hz from the result completely. A peer-reviewed study in *Energies* (Szymanski et al., 2021), which measured working turbines with several methods side by side, found that A-weighting cuts off the low-frequency and infrasound range and understates the real impact of turbine noise. So the dB(A) figure handed to this Board does not contain, and cannot contain, a single measurement of infrasound. It is silent on one of the main outputs of machines this size

This is not a fringe position. Professor Ken Mattsson of Uppsala University, whose modelling has been independently checked against real measurements at operating wind farms, published work in *Applied Acoustics* (2025) showing that modern large turbines produce far more infrasound than older ones, and that the prediction models in common use badly underestimate it. The 2006 Wind Energy Guidelines, by contrast, simply declare that modern upwind turbines produce no significant infrasound. That was wrong when it was written and it is more obviously wrong now.

An Irish court has already seen this harm without anyone putting the word infrasound on it. In *Webster and Rollo v. Meenacloghspar (Wind) Ltd*, the Ballyduff case in Wexford, the High Court found in 2024 that a wind farm operating fully inside its planning conditions still caused an actionable nuisance. The court held that staying within dB(A) planning limits is no defence to a nuisance claim. The harms the court accepted as real, chronic sleep loss, anxiety, being unable to live properly in your own home, vibration felt through the building, are exactly the harms independent research ties to long-term infrasound exposure. Ballyduff never assessed infrasound, because the framework does not make anyone assess it. Two modest turbines on flat ground were enough to do that damage. This application is for eleven turbines at 180 metres, judged on the very same dB(A)-only framework that the High Court already found wanting.

And there is a second, separate problem on top of that. Even the standard way of predicting how such sound would travel does not work for ground like ours. Those propagation models assume flat, open ground with the turbines and the houses at roughly the same level. We are the opposite of that. The turbines would sit at about 50 metres above sea level on the bog floor and we sit higher, looking down. Because the turbine bases are below us, the strongest source of infrasound is almost at direct line of sight to our windows, with none of the ground screening those flat-ground models assume. It is also worst at night, so the hours of strongest infrasound and the hours when my family is asleep and most exposed are the same hours. None of this topography was modelled. There is no infrasound assessment of this site at all.

And it lands directly on the two conditions in my house. The independent literature names photosensitive migraine and cardiac palpitations, my condition's and Dylan's, as conditions that make a person more vulnerable to infrasound, through mechanisms that are well understood and not really in dispute. The migraine brain, attack or no attack, over-responds to outside stimuli including low-frequency input. NIH-funded research by Salt and Hullar (*Hearing Research*, 2010) showed that the outer hair cells of the inner ear

physically respond to infrasound below the level we consciously hear, and send signals to the brain along the vestibular pathways. The inner ear registers turbine infrasound even when you hear nothing. For a migraine sufferer whose system is already sensitised, that is a constant, involuntary stressor you cannot get away from without leaving the house or in fact leaving the area. Salt's own warning was blunt: as turbines get bigger the low-frequency noise gets higher, and more people have trouble with them.

Cardiac palpitations are also named in the independent literature as an effect of long-term infrasound exposure: research (Lehmann et al., Applied Sciences, 2026) links it to measurable disturbance of heart rate and blood pressure. I have a diagnosed arrhythmia. This is not an abstract worry for me. It is a named, independently evidenced risk of making my condition worse, at the distances proposed, in the house I am sitting in writing this letter.

Let me be careful about what I am and am not claiming on infrasound, because I know it is contested ground. I am not asking the Board to accept that infrasound will certainly harm my family. I am saying something simpler and harder to answer. The method used in this application cannot detect it, so the Board has been given no evidence either way. As I set out above, the dB(A) measurement filters out exactly the frequencies these machines produce most, so an assessment built on it cannot measure the development's main low-frequency output. The Board is not being asked to weigh good evidence against bad. It is being asked to grant a thirty-five year permission on a question that was never measured.

That is what the precautionary principle is written for. Under Article 191(2) TFEU and the EIA Directive, where there is real scientific uncertainty about harm to human health, the burden is not on residents to prove harm. It is on the developer to prove safety. The developer cannot prove safety on infrasound, because no proper infrasound assessment was done.

And the legal picture is sharper here than it might first appear, because of a choice the applicant has made. The applicant has waived both the Article 6(4) IROPI route and the Article 4.7 Water Framework Directive derogation. Those are the fallback mechanisms that would let the Board grant permission despite an adverse effect that cannot be excluded. The applicant has given them up so there is no balancing exercise left and no fallback. Full compliance must be shown on the application as filed, and any effect that cannot be excluded is enough on its own to require refusal. A health effect that cannot be ruled out is not something the Board can park, discount, or condition its way around, because the applicant has removed every route that would have allowed it to. On infrasound, the effect has not been excluded, it has not even been measured.

I do not accept that a thirty-five year permission for eleven of the largest turbines in the country should be granted on a framework that cannot measure one of their main outputs. A proper assessment would have meant G-weighted and linear measurement across the 0.1 to 20 Hz range at the sensitive receptors, 3D propagation modelling that uses the inverted shape of this site, and a pre-construction baseline survey. None of that was done. The developer cannot show, to any reasonable scientific standard, that infrasound will not harm the vulnerable receptors here, and my family is one of them. On the application as it stands, permission should be refused.

In terms of noise, we are noise receptor H288, category NML3, at 1,630 metres from T08, and the assessment as submitted does not show a confirmed exceedance at our house. I accept that as far as it goes. But the method behind it is wrong in two specific ways.

It does not apply the JOULE valley correction required under Section 4.3.9 of the Institute of Acoustics Good Practice Guide. Ours is a valley site. That correction exists for precisely this situation. Apply it using the developer's own figures and eleven confirmed exceedances appear across the site. And the assessment is

never tested against the WHO 2018 Environmental Noise Guidelines, which Offaly County Development Plan policy DMS-109 treats as mandatory. The WHO set their 45 dB Lden figure precisely because that is the level where health harm and serious annoyance start to climb, which makes it a health standard, not just an acoustic one. The applicant quotes WHO 2018 and then never applies its health logic to our home, and our home is in one of the areas where it would hit hardest because our night-time background is exceptionally quiet. A quiet rural baseline does not make turbine noise easier to live with. It makes it stand out more, with nothing to cover it.

The WiTNES sleep study used polysomnography, the clinical gold standard, in a controlled reproduction of turbine noise, and found it was the amplitude-modulated, low-frequency character of the noise, not its overall decibel level, that measurably delayed and cut REM sleep. That is the very feature, amplitude modulation, that Chapter 11 refuses to set a limit for and hands off to a protocol after construction. The science that should have answered the question was sitting there and was not used. If the method is wrong, the finding of compliance is worth nothing, and the Board should not be asked to approve this on the back of it.



Photo 1: Panoramic View Photo taken at the back of our home facing onto Sharavogue bog

When we built our house, we placed it and angled it for one reason: the view out the back over Sharavogue Bog. It is the reason the windows are where they are. It is the first thing we see in the morning and the last thing in the evening, a beautiful display of nature at its best. It's peaceful and quiet, apart from the constant chitter of the birds that call this their home too.

All eleven turbines will be plainly visible from Rathbeg. The big south and south-west windows of our house, the main living spaces, the patio doors, the rooms where we actually spend our time, look straight onto the open bog where these turbines would stand. There is no screening of any kind between those windows and the turbines. We chose this site and built this house ten years ago for that exact view, and the early mornings, when the mist sits on the bog floor under a clear sky, are to us one of the genuine wonders of the place. I know that on its own is not a legal argument. The legal argument is what the applicant did with their own visual assessment.



Photo 2: Bog-mist photo taken from the back of our home early morning on 27th April 2026

The first relevant Rathbeg Photo (Photo 3 below) in the application was taken from behind a high ditch and shows the tip of a single turbine. The other turbines shown in the distance are of an existing windfarm.



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Photo 4: Viewpoint Ref VP23a from Photomontage Application



Photo 5: GBWAG Photomontage Taken a few metres away from Viewpoint 23a

And the applicant still rates VP23 as Moderate and Negative, with a visual impact magnitude of High-medium, their second-highest category. They admitted in their own words that six turbines will "rise at a prominent scale" and that there will be a "considerable increase in the scale and intensity of kinetic built development" in the view. That rating depends, on their own account, on those trees that has since been removed, as Photo 5 above shows. With that screening gone, our photomontage from practically the same spot shows seven of the turbines in clear view, one more than the applicant's own frame, and it shows them standing over the homes their frame left out.

And here is the part that should give the Board pause. Having rated the visual impact on my home's area as Moderate, Negative, and High-medium in magnitude, among the highest in their entire study, the applicant then records the significance of that impact, in the final column of their own table, as "Not Significant." They do the same for every viewpoint closest to the turbines. Doughkill is rated High. Sharavogue, Ballinamoe and our own Rathbeg are rated High-medium. All four are Negative. Every one of them is signed off as Not

Significant. The families who will see this development most are assessed, by the applicant's own method, as seeing nothing that matters. That is not a conclusion drawn from the evidence. It's the same pattern that runs through this whole application, where the impact is described honestly and then made to disappear at the moment of judgement.

The applicant rates residential receptors here as medium-low visual sensitivity, on the basis that these are everyday views in an ordinary rural scene. The GLVIA3 guidance the applicant itself relies on says the opposite: that people in their own homes are among the most sensitive visual receptors there are. A family looking out its windows at eleven 180-metre turbines for thirty-five years is not medium-low sensitivity.

We live on the very edge of Sharavogue Bog. Our land runs right down to the near side of it. The bog itself, around 137 hectares of uncut raised bog within a 223-hectare protected site, a Priority Habitat under Annex I of the Habitats Directive and an active State restoration site, stretches out in front of us. Our house sits roughly 300 metres from the bog. On the far side of it runs the Little Brosna River, and the applicant has drawn its site boundary at that river, perhaps 1.5 kilometres from us across the bog. So this protected habitat sits directly between my home and this development, and everything the turbines do to the water, the ground and the wildlife of that bog reaches us through it.

I can tell you what lives on it, because I watch it. The amount of life on and around this bog is extraordinary; otters, frogs, hares, buzzards, cuckoos, barn owls, badgers, kestrels and of course Curlew. The curlew is critically endangered in Ireland, a ground-nesting bird that depends on exactly this kind of open bog, and there is strong evidence from other Irish sites that curlew pushed out during construction do not come back. Barn owls hunt at dusk and dawn, the very times turning blade tips are deadliest to birds in flight. But the surest sign of what this place still holds is the white-tailed eagle, which we have seen over this ground, and which only stays where the feeding is rich and secure. The presence of that bird here is a testament to what Sharavogue bog and its environs still holds, and it is what this application proposes to build beside.

The eagle is what I can see. There is something else here the law itself singles out, that most people would walk past. Slender cottongrass, *Eriophorum gracile*, a species protected under the Flora (Protection) Order, grows in the lagg at the edge of this bog, at the band where the bog meets the land, which the National Parks and Wildlife Service describes as one of the best-developed examples in the country and unique among Irish raised bogs. It survives only where a particular base-rich flow of groundwater is kept up, and that flow depends on the very water pathway the applicant's own assessment identified and then never followed to where it goes. So the eagle overhead and the cottongrass underfoot depend on the same thing, on the water moving through this bog and that is the one thing the assessment traced partway and then let drop.

Living on its edge is also why I do not trust what the application says about that habitat, and why the legal picture worries me. The developer has waived both the Article 6(4) IROPI route and the Article 4.7 Water Framework Directive derogation, which means the strict test under Article 6(3) applies in full: the Appropriate Assessment has to establish beyond reasonable scientific doubt that there will be no adverse effect on the integrity of the SAC. A raised bog under active restoration is not a thing you can be casually certain about. Any real disruption to drainage, any peat disturbance, any change to the water table during construction or operation can directly harm a habitat that decades of public money have only started to bring back, and I do not see how the required level of certainty can honestly be reached on what has been put in. The water baseline makes it worse. The developer assessed the Little Brosna, the river it has chosen as its own boundary, as "Moderate" status under the Water Framework Directive. The real baseline is "Poor". Under

the Weser judgment a project that worsens status, or stops WFD objectives being met, cannot be permitted, so if the baseline is wrong, the assessment built on it is wrong.

We farm here, so we know exactly how seriously nitrogen is taken. We have no watercourse on our own ground, and still the rules reach us, because nitrogen does not stay where you put it. We are limited by how much storage we are legally required to have. We are told when we may spread and when we may not. We spread protected urea so the nitrogen does not leach into the water table or lift off into the air. We spread low-emission slurry with a dribble bar, which meant buying a different spreader at a cost of over twenty thousand euro. All of it is to keep nitrogen out of the ground and the water, and to protect what lives downstream of us. That is the whole point of it.

And then here is a developer proposing to build above Sharavogue Bog, where the nitrogen settling on the habitat is already around 163% above the level set to protect it, and the application did not model what these works would add at all. Not measured. Not estimated. Nothing, even though the Habitats Directive required an appropriate assessment of exactly this kind of effect before any permission could be granted.

And all of that, all the rules and the cost, exists to protect one thing: the life in the water. The Little Brosna holds the Croneen, a distinct local strain of brown trout that Inland Fisheries Ireland's own documentation identifies, and the word "Croneen" appears nowhere in this application. No survey for it, no assessment, no mitigation. We spend over twenty thousand euro and account for every kilo so that a fish like that survives in a river we can see from the bog. The applicant proposed to build over its catchment with the nitrogen loading unassessed, the river's status wrong, its main pollutant unreported, and that fish never once named.

And the survey-work behind the conclusions has real holes. A confirmed breeding merlin, protected under the Wildlife Acts and the Birds Directive, was found 2.8 kilometres from the site in 2025, and it was not found through any method the developer used, because no nocturnal surveys and no acoustic monitoring were done. The marsh fritillary butterfly also deserves a hard look, because the applicant's own assessment uses the word "extinct" and then proposes to move the population to ground that, on their own expert's account, has no food source to keep it alive, a mitigation their own expert accepts cannot work. I raise these because I live beside the habitat concerned, and because this tells me the assessment of this bog cannot be relied on.

There is a direct farming consequence the assessment ignores completely. Adrian runs a dairy herd here. Bovine TB is a serious ongoing problem in this area, and the Department of Agriculture runs an active badger management programme precisely because badgers are the main wildlife reservoir for TB in cattle. That programme works by knowing where particular badger social groups are. The applicant's Chapter 20 measures deal with badgers only as a protected species during construction, by excluding them from the works, which pushes settled social groups off the site and out into the surrounding farmland. For a dairy farmer on the next land, that is exactly where the trouble starts, because the groups the Department has been tracking are no longer where they were, and its ability to manage TB here is undermined. And the stakes for a working dairy farm are not small. A TB breakdown can lock a herd up for months and halt the movement and sale of animals. It can cost a family farm many thousands of euro in lost income and culled stock, on top of the strain of repeated testing and the long, uncertain road back to clear status. Disturbing the badger population of this site during years of construction raises that risk for every farm around it, and once a herd is set back it can take a very long time to recover. The ecological assessment says nothing about any of this at all.

Our lane meets the public road N62 at a junction that is already dangerous and difficult to cross but it is where our children have to cross for the school bus every morning. Coming from Birr, this stretch is effectively the first straight where cars can overtake after a long run of road, and the impatience that builds up behind slower traffic regularly turns into dangerous overtaking right at that spot. The applicant confirms a construction phase of about 24 months, with thousands of HGV loads of fill, concrete, turbine parts and cable. I am not raising this as a maybe. I drive it every day. I know where the pressure points are and I know where my children stand waiting for their bus.

This application runs to thousands of pages. It models sound to the decibel and shadow to the minute. It can tell you the wind speed at hub height and the depth of every turbine base. But the people who will live underneath these machines for the next thirty-five years are reduced to a uniform statistical population and in the one chapter meant to weigh effects in combination, the thing that puts my son in a darkened room is called a nuisance. That is the hardest part to accept. Not that the development is difficult, or that there are competing interests to weigh, but that an application of this size and expense could treat the health of the families living closest to it as the one thing not worth assessing. I do not think that is an oversight. I think it is a choice about what mattered to the people who wrote it, and it is the choice I find most offensive in the entire application.

I am being honest when I say I am frightened, and not in a vague way. I know exactly what a photosensitive migraine does to my son. I know what flickering light does to both of us. I know what broken sleep does to my heart. And nothing I have read in this application has settled any of it, because what I have learned is that nobody ever actually assessed it. The health chapter points at the compliance chapters. The compliance chapters point at limits that were never health limits. The one supporting health paper has been withdrawn. The output most likely to harm my family, infrasound, cannot even be measured by the method they used. And the shadow flicker figure for my own house is simply blank, while the house 140 metres away has 39 shadow days a year on the record. I do not think that is acceptable, and I do not believe any inspector reading it honestly thinks it is either.

I want to be clear that none of this is opposition to renewable energy, and I would not want it read that way. What troubles me is that this particular development, on this particular site, works against the very things it is meant to serve. On the applicant's own documents it would strip out tens of thousands of cubic metres of carbon-storing peat, press down on an active floodplain at the very moment that capacity should be protected. It would set back a State-funded bog restoration that public money has only begun to bring back, and add construction pressure to a river already at Poor status. That is not climate action. It is environmental harm done in the name of environmental good. And it is not even harm in exchange for some benefit that could only be had here. Offaly already produces roughly 11% of the country's renewable electricity from about 2% of its land, far beyond what is asked of it, and this site sits outside the areas designated for it. The clean energy this would generate can be had elsewhere at a fraction of the cost to peat, water and wildlife. So the one argument that is supposed to outweigh everything I have set out, that we simply need this, does not hold here. The need is already being met, and met without doing extreme harm.

I am asking An Coimisiún Pleanála to refuse permission for this development. The grounds are set out in full above, but in summary they are these:

- the complete absence of any real health assessment, a health chapter that assesses nothing and defers to compliance limits that were never health standards;
- the failure to assess the cumulative effect on the people here, with noise, shadow flicker and infrasound each judged in isolation and never once added together on the family they fall on;
- the County Development Plan zoning, and the weight it carries after Coolglass;
- the protected Sharavogue Bog lying directly between my home and this development, and the Article 6(3) test that triggers;
- the wrong water-quality baseline, and the unassessed nitrogen loading on the bog;
- the Croneen trout and the river life left unassessed;
- the gaps in the bird surveys, and a marsh fritillary mitigation the applicant's own expert accepts cannot work;
- the badger displacement and what it does to TB control on the farms around this site;
- the absence of an assessment of shadow flicker for my house which sits on their 1630m boundary;
- the noise method that drops the health standard;
- the infrasound that was never measured;
- the visual impact on a home built for this exact landscape;
- and the road safety danger at our junction during construction.

Every one of these, on its own, is a reason for refusal. Taken together they are something harder to put into words. This is not a difficult site being made to work. It is a living raised bog, a protected river, and the families who farm and live around them, asked to carry thirty-five years of harm that was never properly assessed, for a benefit this county is already delivering many times over.

And I am asking, as strongly as I can, for a site visit before any decision is made. The relationship between our house, the bog, our height above the turbine bases and the turbine positions does not come through on a map. You have to stand at this house and look out to understand what is at stake. We have built our lives here. Adrian's family have farmed this land for generations. We were entitled to have this application assessed properly, honestly and in full, and it was not. I am not asking the Board to make this development acceptable with conditions, because the failures I have set out cannot be fixed with conditions. I am asking the Board to refuse it.

Yours faithfully,

Nichola Culleton