

Speaking Notes for Ryan's Hill Planning Panel

Panel Chair, and Panel members,

My name is Jacinta Coffey, and I live, with my family, on a multigenerational farm that has been in my husband's family for over 160 years. Our home, which is also our workplace, is 4 km from the proposed wind farm.

I am very concerned about the implications the proposed amendments to the planning permit being considered by this hearing will have on our health if any of our family or workers are affected by wind turbine noise. We choose to live here because of the peace and tranquillity our area provides, visitors to our home always comment on how quiet and peaceful it is.

On the basis of the well documented individual experiences of other Australian farming families living out to 10km from existing wind farms with smaller less powerful wind turbines,^{1 2 3 4} I have good reason to believe this amenity, specifically our ability to obtain a good night's sleep will be more likely to be taken away from us if these amendments for larger more powerful wind turbines are approved.

Recent first hand reports from Finnish residents exposed to much larger wind turbines support my concerns.⁵ There are currently no wind turbines 180 metres tall in Australia. No studies, let alone long term studies have yet been done with turbines this size, so the distance of acoustic impact is currently unknown, but likely on the basis of current limited population noise impact evidence to be greater than 10km.

I am also concerned as to the detrimental effect the proposed turbines of 180m will have on our "worlds most liveable town" Port Fairy. Our beautiful town is commonly known as the "Jewel in the Crown of the South West" and attracts large

¹ Morris, M 2012 Waterloo Wind Farm Survey (included in the NHMRC 2014 Literature Review as one of only seven studies internationally, and the only Australian study to meet their very narrow criteria) <http://waubrafoundation.org.au/resources/waterloo-wind-farm-survey-2012/>

² Schafer, A 2013 Macarthur Wind Farm Preliminary Survey
<http://waubrafoundation.org.au/resources/macarthur-wind-energy-facility-preliminary-survey/>

³ Schneider, P 2012 Cullerin Range Wind Farm Survey
<http://waubrafoundation.org.au/resources/cullerin-range-wind-farm-survey-august-2012/>

⁴ Schneider, P 2013 Cullerin Range Wind Farm Survey Follow Up
<http://waubrafoundation.org.au/resources/schneider-p-cullerin-range-wind-farm-survey-follow-up-july-august-2013/>

⁵ Part of the publicly available information from Finnish residents is contained in this report which also contains acoustic data: <http://www.epaw.org/victims.php?lang=en&article=n424>, other reports from Finnish rural residents were systematically collected by Finnish Physiotherapist Virpi Polkolainen, and informed her letter to the World Health Organisation about wind turbine noise, reproduced here <http://en.friends-against-wind.org/testimonies/noise-produced-by-large-wind-turbines>

numbers of visitors year round who come here to enjoy the natural beauty and tranquillity of the area, and to escape the industrialisation and cacophony of the cities. We own and operate accommodation in Port Fairy, so I have direct first hand knowledge of the reasons why people visit our town.

My own observation when visiting the UK and Europe some years ago is that when driving in the countryside and spotting Wind Turbines in the distance we always headed in a different direction as we wanted to experience the quiet scenic beauty of the countryside, not the industrialisation of it. I have no doubt that in time, some visitors will take the same approach when seeing these monstrosities in the distance, which will be further damaged if noise pollution from larger wind turbines also affects Port Fairy ie the visitors will turn away and in turn destroy our town's main industry, and a significant local employer - being tourism.

For some years I have been following the growing scientific evidence about the adverse health effects from wind turbines, as well as the increasing number of people speaking out about the serious health problems they have endured, living near Australian Wind Farms. In particular the regular and worsening sleep disturbance, and the repeated physiological stress symptoms including repeated examples of the fight flight response, or startle reflex – eg the common description of “**repeatedly waking up at night in an anxious frightened panicked state**” are a concern. These sleep and stress problems are in addition to the symptoms of a seasickness like illness affecting balance in people who are prone to motion sickness, and worsening migraines in people who suffer that affliction. These problems and others were described by Dr Nina Pierpont in her study, published in 2009.⁶

I note that in 2008, staff from the National Institute of Environmental Health Sciences writing an editorial for the journal Perspectives in Environmental Health stated the following:

“Even seemingly clean sources of energy can have implications on human health. Wind energy will undoubtedly create noise, which increases stress, which in turn increases the risk of cardiovascular disease and cancer”⁷

I also note that Victorian GP, Dr David Iser, conducted his study at Toora in 2004, after the turbines had only been operating for a year, which illustrated that sleep disturbance and stress were the main problems for those people who reported

⁶ Dr Pierpont made her study identifying risk factors for developing Wind Turbine Syndrome available to the first Australian Federal senate inquiry into wind turbine noise and its effects: <http://waubrafoundation.org.au/resources/dr-nina-pierpont-submission-australian-senate-inquiry/>

. Dr Pierpont also gave evidence to the Stockyard Hill Planning Panel hearing.

⁷ Gohlke J, Krynkow S, and Portier C Editorial – “*Health, Economy and Environment: Sustainable Energy Choices for a Nation*”, in Environmental Health Perspectives, Volume 116, No 6, June 2008 (copies provided to the panel).

adverse effects. He tried to warn Victorian government authorities back in 2004, but was ignored.⁸

More recently Dr Wayne Spring, who was a sleep physician for over thirty years based in Ballarat, gave an interview to the Hamilton Spectator and was quoted on 29 April, 2017 as saying that *“as a sleep specialist he only saw patients who were referred to him by their GPs and therefore the actual number of patients who were suffering from wind turbine health impacts was probably far greater”*. Dr Spring noted that *“some affected people go to other locations to sleep in an effort to cope and some people have just sold up and moved away”*.⁹

I have also talked directly to residents who have been seriously adversely affected by the noise and vibrations – including people forced to leave their homes regularly, and sometimes permanently, because of that damage to their health. These people are now reporting that they become unwell when exposed to other noise sources – in other words they have now become noise sensitised.¹⁰ They are people just like me, and my family. I do not want this to happen to me, or to any member of my family, or indeed, any member of my community.

Sometimes animals, including working dogs, have also been affected,¹¹ and in some instances, including in Victoria, this has been confirmed by their veterinarians.¹²

This observational evidence from animals, backed up by scientific research in animals (badgers¹³ and geese¹⁴) that shows objective biological evidence of increased physiological stress in animals exposed to wind turbine noise puts a lie to

⁸ Dr David Iser’s 2004 study, associated letters to government Ministers and media reports can be downloaded here: <http://waubrafoundation.org.au/resources/dr-david-iser-2004-conducts-first-survey-patients-living-near-wind-project/>

⁹ Article in the Hamilton Spectator on 29 April 2017 quoting Dr Wayne Spring can be accessed here: <http://waubrafoundation.org.au/2017/wind-turbines-echo-seasickness-dr-wayne-spring/>

¹⁰ eg former Macarthur resident, and now local Port Fairy resident, Mrs Jan Hetherington whose circumstances and noise sensitivity was reported in the Australian newspaper recently. This link also includes a copy of one of her complaints to Macarthur owner AGL in which she provides further specifics about the way her noise sensitisation affects her, despite having moved away from her home 3km away from Macarthur wind farm. <http://en.friends-against-wind.org/testimonies/my-101st-formal-complaint-to-agl>

¹¹ the Hansard relating to Mr and Mrs Rogerson’s description of how their working dogs were affected by wind turbine noise to the third Australian Federal senate inquiry in 2015 is reproduced here: <https://stopthesethings.com/2015/04/15/senate-inquiry-hamish-cumming-ors-tip-a-bucket-on-the-great-wind-power-fraud/>

¹² Newspaper report from Saturday 23 June, 2012 quoting local Hamilton Veterinary specialist Dr Scott Shrive re observed and reported effects on a working dog at a Victorian Wind Farm: <https://www.wind-watch.org/news/2012/06/24/working-dogs-may-be-affected-by-wind-farms/>

¹³ Badgers observational study from the UK <https://stopthesethings.com/2016/06/06/wind-in-the-gallows-study-shows-badgers-suffer-merciless-stress-torment-from-wind-turbine-noise-vibration/>

¹⁴ Polish Geese study <http://waubrafoundation.org.au/resources/mikolajczak-j-et-al-preliminary-studies-growing-geese-proximity-wind-turbines/>

the excuse used by the wind industry and its lawyers and medical experts that the symptoms in humans are all due to a placebo effect.

The other excuse used is that the reported problems are all due to pre existing conditions, and “never” the noise. This atrocious lie is exposed when people describe what happens when the wind turbines are not operating – they sleep well, and do not have the distressing symptoms they experience when the turbines are operating. Community based researcher Mary Morris has formally documented this cross over comparison between “operating”, and “not operating” states in individuals at Waterloo, in South Australia.¹⁵

Recent field research conducted in Australia by Dr Bruce Rapley, Dr Huub Bakker, Ms Rachel Summers, reported by Steven Cooper in June 2017 at the International Conference into the Biological Effects of Noise in Zurich,¹⁶ and then in Boston at the American Acoustical Society meeting, has provided scientific evidence suggesting that **dynamically pulsed amplitude modulation** with a high peak to trough ratio (known as “strong AM) is triggering what is known to science as the “**startle reflex**”. This is an example of the direct causal relationship between an acoustic trigger, and the consequent physiological stress response.

The scientific data confirming the “**startle reflex**” event at the Taralga Wind Farm is consistent with the observed devastating and rapid effects of wind turbine noise on children with autism,¹⁷ and adults with post traumatic stress disorder.¹⁸ There is already scientific research showing that children with autism,¹⁹ and adults with PTSD have an enhanced startle reflex reaction to some sounds.²⁰ I, and so should you, be concerned for the more vulnerable members of our communities who have autism or PTSD and will no doubt have their quality of life affected by these massive wind turbines, because of their increased vulnerability via the startle reflex response to the physiological stress effects of the noise the wind turbines emit.

Previous Swedish research, reported in Buenos Aires last year, showed that “strong AM” caused sleep disturbance, even in young fit healthy people.²¹ This is yet more evidence of a direct causal relationship between an acoustic trigger from a wind turbine, and physiological effects, which if repeated and prolonged, will cause damage to health from sleep deprivation alone. Sufficient good quality sleep is well

¹⁵ <http://waubrafoundation.org.au/resources/morris-m-waterloo-case-series-preliminary-report/>

¹⁶ Cooper, S ICBCN Zurich June 2017 conference paper and powerpoint: <http://en.friends-against-wind.org/health/a-new-methodology-for-investigating-ilfn-complaints> .

¹⁷ <https://www.wind-watch.org/news/2013/04/02/autistic-children-cannot-live-near-wind-turbine-projects/>

¹⁸ Barry Funfar’s account of how his PTSD was rapidly exacerbated by exposure to wind turbine noise is documented here: <https://www.bostonglobe.com/lifestyle/2014/01/24/falmouth-veteran-battles-wind-turbines-and-health-woes/dVF6q3ur3o04706FRpKPLJ/story.html>

¹⁹ <https://molecularautism.biomedcentral.com/articles/10.1186/2040-2392-5-23>

²⁰ <https://www.ncbi.nlm.nih.gov/pubmed/8540594>

²¹ <http://waubrafoundation.org.au/resources/smith-m-g-et-al-physiological-effects-wind-turbine-noise-sleep/>

accepted by health authorities²² and the medical profession to be a biological necessity for everyone – that is why noise pollution regulations and standards exist. Rural residents living near wind turbines or any other industrial noise source should not have their sleep quality and health sacrificed.

Steven Cooper also demonstrated in Boston, using the actual acoustic recordings from his Pacific Hydro funded Cape Bridgewater study, that the precise times that were independently reported by the residents to be so bad that they had to leave their homes (called “sensation level 5”) showed this “strong” dynamically pulsed amplitude modulation. As the immediate past Director of Acoustic Standards of America Dr Paul Schomer told the June Boston meeting in his presentation, Cooper has demonstrated evidence of a direct causal relationship between symptoms and turbine operation.²³

So, in summary, the reported adverse health effects from operating wind turbines, including sleep disturbance and progressive noise sensitisation, are real and have been known to Victorian authorities for 13 years.

Independent scientific evidence is now confirming the longstanding reports of harm from residents and Victorian Medical Practitioners, and is identifying the acoustic triggers.

The physiological mechanism of the startle reflex is already well known to science, as is the fact that repeated activation of the startle reflex in mammals leads to sensitisation.²⁴

These adverse health effects are being increasingly recognised in courts internationally – with noise nuisance cases being run, and then settled with gag agreements, in jurisdictions such the High Courts in the United Kingdom,²⁵ and Ireland,²⁶ and in the United States of America.²⁷ In the most recent Irish High Court case, the developer admitted liability for noise nuisance prior to the cases brought by seven Irish families being settled, with gag agreements.

²² Eg CDC in America <https://www.cdc.gov/features/dssleep/index.html> , World Health Organisation Night Noise Guidelines for Europe document, 2009
<http://www.euro.who.int/en/health-topics/environment-and-health/noise/policy/who-night-noise-guidelines-for-europe>

²³ Personal communication between Sarah Laurie, CEO Waubra Foundation and Steven Cooper, shared with me directly by Sarah.

²⁴ <http://waubrafoundation.org.au/resources/bmc-neuroscience-repeated-elicitation-acoustic-startle-reflex/>

²⁵ Julian and Jane Davis, <http://windturbinepropertyloss.org/site/category/jane-jullian-davis/>

²⁶ <http://www.irishexaminer.com/ireland/wind-farm-being-sued-by-families-admits-its-liability-442172.html>

²⁷ Cary Shindelcker USA <https://stopthesethings.com/2015/02/06/us-wind-farm-operator-settles-to-shut-down-neighbours-dynamite-damages-case/>

I should add that these gag agreements, also known as “nondisclosure” clauses have also been used in Victoria since 2004 - to silence sick people forced out of their homes because of the effects of wind turbine noise - for example at Toora, (publicly confirmed by their law firm, Slater & Gordon) ²⁸ and at Waubra.²⁹ Increasingly these non disclosure clauses are also being used pre emptively by wind power operators in so called “community benefit agreements” or “good neighbour agreements” to silence people for the lifetime of the project, before they have any idea what the adverse impacts will be for themselves and their families.³⁰

So, what happens when wind turbine planning panels agree to change planning permits to increase the size and power generating capacity? Industry independent medical and acoustical experts at previous Victorian panel hearings ³¹ have advised previous panels that the known and admitted adverse health effects from wind turbine noise including sleep deprivation will worsen if these changes are made. This opinion is partly based on research by Danish expert Acousticians Professors Moller and Pedersen, published in 2011,³² that found that the low frequency noise will predictably increase as a proportion of the total sound emitted, and so too the already known adverse effects for neighbours – which acousticians call “annoyance”. This expert opinion is also based on the observed, reported, and partially documented effects on residents’ sleep of larger wind turbines at Waterloo, and Macarthur. ³³

So far, the decisions by other Victorian planning panels about upsizing existing permits have not protected the health and amenity of residents, ever. Unfortunately, I have no reason to think that this panel will behave any differently.

So, let me tell you all what I am going to do to protect my family from noise nuisance. I am going to do what other Australian residents are starting to do – which is to learn how to conduct environmental noise monitoring via registered training courses now available,³⁴ as well as to install good quality acoustic recording

²⁸ see third letter to the Australian, from James Higgins, Slater & Gordon

<http://www.theaustralian.com.au/opinion/letters/wind-power-a-blessing-or-a-scam/news-story/4df0cb54bed7b2db199257fe27f38aae>

²⁹ see Mrs Godfrey’s evidence to the third Federal Senate inquiry into Wind Turbine Noise – Hansard from Melbourne held on 9th June, 2015, p 15-16 which can be downloaded from here:

http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Wind_Turbines/Wind_Turbines/Public_Hearings

³⁰ an example of such an agreement is here: <http://waubrafoundation.org.au/resources/neighbour-deed-palmer-wind-farm-south-australia/>

³¹ eg evidence given by Mr Les Huson and Sarah Laurie, CEO Waubra Foundation to the Stockyard Hill Planning Panel for a similar proposal to increase the height and power generating capacity of individual wind turbines at the Stockyard Hill Wind Farm

³² <http://waubrafoundation.org.au/resources/moller-pedersen-low-frequency-noise-from-large-wind-turbines/>

³³ see footnotes 1 & 2

³⁴ Acoustar Environmental Noise Monitoring training course <http://www.acoustar.qld.edu.au/noise-measurement.html>

systems and sound level meters which will accurately collect full spectrum acoustic data inside and outside my home, and my family's workplace.³⁵ This will give us hard objective, legally admissible evidence of acoustic exposures, pre and post construction, and will also demonstrate just how quiet our existing background noise environment is. As we will collect WAV file recordings, they will be able to be played back in court.

When the wind turbines are built, and start operating, our full spectrum acoustic monitoring will continue.

We will also all be getting thorough health checks done, prior to construction, and we will be keeping detailed diaries, and collecting objective physiological data to supplement the diary evidence.

If my family is harmed by your decision, it is our intention to protect our common law legal rights, and that all those involved in causing and enabling that predictable harm from noise nuisance will be held legally liable.

Mrs Jacinta Coffey

Monday, 7th August, 2017

1. Article – Hamilton Spectator April 29, 2017
2. Article – National Institute of Environmental Health Sciences – North Carolina June 2008
3. Report – Waterloo Case – Mary Morris September 2013
4. Letter from Dr Sarah Laurie MBBS CEO Waubra Foundation

³⁵ One option is the combination of the recently developed SAM Scribe, Mk 2, and the recently certified and calibrated BSWA Type 1 Sound level meter. More information about what SAM Scribe does is available here: <http://en.friends-against-wind.org/health/sam-scribe-mk2>