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Joanne Kermond

This is my submission:

In 2008 the wind farm at Cape Bridgewater was complete and commissioned. Our life as a family of four was quite normal for a rural setting. My husband, I and our two sons all enjoying the coastal, isolated location and freedom of life on the land.

We were keen to spend our spare time at home enjoying the space, peace and natural setting of our home of seventeen years. Our two sons at secondary school, ages fourteen and sixteen, enjoying friends, family, soccer, surfing, bike riding, camping and any outdoor activity. We were keen to share this lifestyle choice with as many friends and family who would visit.

We had developed a hobby farm with various animals including goats, cats, dogs and fowl.

We spent many hours working the land and garden, building and maintaining our renovated home.

It had been my family home for five generations being built in the mid 1800's.

We had put our savings into our home to build a future for ourselves and our sons to have security.

My husband worked long hours on our home and I also committed many hours into restoring and maintaining our dream.

In 2008/2009 I had enrolled in courses at a local agency to expand my employment potentials. This should have been a simple task but I found it challenging to complete my study at home and was becoming fatigued through lack of sleep for no apparent reason.

Our family dog, an English/Australian terrier was four years of age and began to change his behaviour including scratching at the house windows/doors, anxious behaviour, loss of muscle in skull and jaw followed by all body muscle deterioration. He was developing a mass of fluid behind his ears, and was scratching at his ears and body. He suffered hair loss, became depressed looking, and lacked energy to greet us when we returned home from outings. His health continued to deteriorate over the next few months despite regular communication and visits to the local veterinary clinic. We were eventually referred to a senior veterinarian at the Werribee Melbourne University Veterinary Centre who performed more extensive tests and concluded that our dog "Skruffy" was enduring a severe form of environmental stress and there was no physiological diagnosis to determine a condition or other results. He died several weeks after to our extreme distress in late 2009. To this day we are so upset we did not know to remove him from the toxic and painful emissions of the nearby wind facility. Ironically he did appear to be relieved or happy when we took him on outings to the local beach etc. not realising it was the distancing between him and

the wind facility that was the main solution. He also developed travel sickness and was unstable on his feet in the latter months.

Our boys were suffering varied symptoms which affected their daily lifestyle and activities, they lost energy and enthusiasm for life as did my husband and I. We found ourselves struggling to get to school and work or leisure/social engagements. After numerous health complaints and visits to doctors and specialists we were informed of some information from doctors and citizens throughout Australia and the world correlating wind turbines and similar machines to the very symptoms we were suffering on a daily basis whilst residing near the wind facility. These symptoms included headaches, nausea, fatigue, sleep deprivation, dizziness, loss of concentration and cognitive skills, heart palpitations, fluctuations in blood pressure with no correlation, depression, head and ear pressure increasing to an unbearable level ,cramping pain in limbs, vision impairment, and nerve complaints. These symptoms would all decrease after we had left the wind farm zone for a period of time. This was more confirmation of the mounting evidence that it was the wind facility causing our health issues. There were more health complications which led us to attend specialists, one of which mentioned he had knowledge of the type of adverse effects from industry we were experiencing. He advised we leave until this issue is resolved. We had a trip to Sydney for two weeks and returned in better condition even though it had been busy and otherwise tiring. Almost instantly we were feeling the cluster of symptoms we had left home with. We spent the next year packing an overnight bag and escaping to stay with friends and family every other day. This was humiliating and frustrating for us all, as we were in shock as to leaving our home and security. It was also difficult and disruptive to our boys schooling being in their final VCE years in their initial years of being homeless. They have not been able to return to a family home to this day despite our best efforts and intention. As a mother this has and still does give me great pain to recall their suffering and sacrifice. Also as a wife, daughter, sister, aunt, cousin and friend I have struggled to meet my commitments and relations to these important others. Many still do not understand the complexity of our suffering and sense of our helpless situation. It feels like our identity has been stolen as well.

We have endured the constant exposure to the environment of the wind facility whilst under the denial of the wind facility operator, Pacific Hydro, and now struggle to return for any time without severe consequences to our health. We have a heightened sensitivity to the area around the wind facility and any others in the local area, and we feel strongly that we cannot co-exist in the district of Portland and Cape Bridgewater without further health consequences.

Since 2009 we have been communicating with local council, The Glenelg Shire, and the wind company, Pacific Hydro. In council we are well known to the councillors, planning and environmental health. All sectors have denied any responsibility, stating it is the state government who issued the permit and both state and federal governments are a law unto themselves. We do believe the local council are equally responsible for the location, planning and design of the wind farms and the lack of duty of care to their ratepayers who only lose from their rezoning, property devaluation, and loss of quality of life.

The wind company had a standard response to all our complaints: "We are compliant to the standards" and when asked why they have not tested on our property after several reports of issues they duly replied "we do not legally have to".

In May 2014, after a year of negotiating with Pacific Hydro, testing by Acoustician Steven Cooper began at our vacated home at Cape Bridgewater. We would visit daily when possible over the next eight weeks to record our experiences of noise, vibration, sensation and other problems or experiences. This was an extremely difficult time for us as we had not endured the close proximity to the wind facility for this amount of time since leaving years earlier. We needed to stay in the general area as it was a strain to travel far after the impacts of the wind facility each visit. We were advised to minimise our time at the wind farm zones, but felt strongly we needed to commit to reveal this tragic health hazard to the world. I felt many adverse symptoms during this exposure and was fatigued on a constant basis.

In the last few weeks of the testing period I began to notice more constant fluctuations in my blood pressure. I would wake each morning feeling exhausted. On 4<sup>th</sup> July I awoke at a house 2 kilometres from the wind facility and walked a short distance before I experienced numbness in my left side and loss of vision in my left eye. Upon nearing my husband I attempted to speak, but could only say a few words. My husband took me in to Portland Hospital and my medical clinic where I was diagnosed as having a mini-stroke. I left the Portland district a few days after for an eight week period. In this time I returned to Cape Bridgewater only by necessity every two weeks and experienced eye migraines and elevated blood pressure problems again. I have since been diagnosed with heart issues which may correlate with the Vibro-acoustic disease and studies identified by physicians such as Maria Al Peres in Portugal, and in relation to the studies done by NASA in the 1980's. When I leave the district of the Portland Wind Project I feel a lift of pressure and my heart even settles. We sleep well and can function more productively in our lives. It is like a cloud is lifted and the symptoms only return if we are exposed to any of the emissions which are similar to the wind farm power plant. This isolates us from the society which requires our interaction with these noises, electrical fields, radiation and the like.

We remain in a refugee status moving from one shelter to the next and our only option was to stay in a bus or caravan most of the previous twelve months. We found a suitable place of convenience in Portland in December 2014 but now the last stage of the Portland Wind Project is now complete we will be forced to relocate yet again as there are nine turbines due south of our existing temporary home. I have been referred to several psychologists and social workers in this period of wind turbine trauma. I have reported to doctors and all professionals of the unusual nature of our lives as Australian citizens.

The Environmental Protection Agency has not responded to our complaints. We have exhausted every avenue possible to resolve this issue. Every Member of Parliament or government agency/department we have access to, have been notified of our unjust situation with little or no response. State and Federal politicians Denis Napthine and Dan Tehan are two we have visited several times to help us. This also included the department of planning and community development for Victoria, who visited our home and were duly concerned. He was moved to another role after reporting his findings to his supervisors we believe. Our basic human rights as stated by the World Health Organisation have been violated. Yet we still suffer and do not have another option at this point whilst our home is vacant, deteriorating, and we are being forced to pay rates and other expenses for the privilege of owning a piece of untenable property in an industrial area.

Many others have left or relocated without declaring publicly their issues and others were and are simply not aware why they have had symptoms of ill health. As the only practical mode of selling and relocating is to remain silent about the adverse effects of the neighbouring power plant, this has become and is still the trend. Our home is our greatest asset and if we lose money on this we struggle as a society. I believe many properties around the wind turbine zone have become unsaleable as this would not be a desired lifestyle choice for the purchaser as we have argued to local council and contracted land valuers. There just doesn't seem to be anyone listening.

Pacific Hydro's Sustainable Communities Fund provides financial support to community groups and organisations – as long as these groups agree to Pacific Hydro's specific terms and conditions, including: ***J: The Recipient shall not do or say anything or cause anyone to do or say anything that may prejudice or cause damage to the name and reputation of Pacific Hydro or its affiliated companies.***

It is isolating to voice our concerns about the wind farm and speak our truth in our local town which is not only beholden to Pacific Hydro's 'condition j' but also has such a large investment and interest in the wind farm company and the industrial and engineering companies as major employers. These same companies have contracts with the wind industry.

### **Interactions with Council**

We recently met with the Glenelg Shire Council CEO, Greg Burgoyne as we had with the previous council CEO, Sharon Kelsey. Ms Kelsey had even attended the previous senate enquiry with the head of Planning, Syd Deam and publicly declared there were no complainants that they were aware of, after our submissions to council and their departments. My husband attended and later spoke to correct the misrepresentation as they walked out of the Inquiry.

It is our understanding that the Glenelg Shire Council assisted with the planning and implementation of each of the four stages of the wind farm project since the original concept was introduced to this unique and significant area.

We appreciate that the development of the Portland Wind Energy Project has been attractive to council in terms of its economic benefits and local employment opportunities; however, we are concerned that such strong support for the project may have prevented Council from properly considering any reported adverse impacts that have arisen as a result of the project.

For example, there have been a number of local decision makers of influence, past and present, with strong links to the operator and the project.

- A previous CEO of the Glenelg Shire council has been working for the local wind company since pre-construction.
- One councillor works directly for an engineering company contracting for the building of the wind farms.
- Another has a close relation working for the same company, and another had signed a preliminary agreement with Pacific Hydro to host turbines.

- Another councillor failed to publicly state prior to election her involvement in the Portland development committee which had the Portland Wind Energy Project high on its agenda.

We wrote to the councillors in 2010 and asked that they please note and address our concerns about the wind farm but there was little response.

My husband and I have made many attempts to meet with and inform council of the many and varied issues which affect us and many other ratepayers, to which we believed they had a duty of care. Council has declared that it is not their responsibility or within their capacity to become involved as they do not accept responsibility for noise enforcement of the wind farm.

### **Noise compliance and the Victorian Planning and Environment Act, 1987: which Authority is responsible?**

Condition 13 of the Portland Wind Energy Project states:

***The operation of the wind energy facility must comply with the New Zealand Standard "Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators" ("NZS 6808:1998) The ("New Zealand Standard"), in relation to any dwelling existing or approved (by way of a planning permit or a building permit) at the date of approval of this document, to the satisfaction of the Minister for Planning.***

Some seven years after the commissioning of the Cape Bridgewater Wind Farm, neither the council (which incorporated the Portland Wind Energy Project into its planning scheme in 2004) nor the Minister (who issued the permit against the recommendations of the VCAT panel and a government appointed panel) are prepared to formally accept the responsibility for the enforcement of noise conditions attached to Portland Wind Energy Project's planning consent.

The Victorian Minister for Planning has never formally determined that he is satisfied that the Cape Bridgewater Wind Farm has met compliance with condition 13 and so Pacific Hydro still has the unmet obligation to demonstrate that the power station is compliant with the noise conditions set out in its conditionally issued planning consent.

It is my understanding that no authority has determined Cape Bridgewater Wind Farm's compliance, no authority is prepared to take responsibility for the enforcement of noise conditions attached to the Portland Project's planning permission, and no authority has made itself available to seriously address our concerns. We are simply told to direct our complaints to the wind farm company.

An example of how this works is when an unpleasant 'screech' from the wind farm annoyed and nuisanced the Cape Bridgewater community for a period of approximately twelve months.

On 6 August 2013 the operator put out a media release: ***Pacific Hydro apologises to residents, fixes noise at Cape Bridgewater***

***We are very relieved to have finally been able to find the noise, identify its cause and solve this issue", said Pacific Hydro general manager for Australia, Mr Lane Crockett. "Clearly the noise has***

*been distressing for some neighbours and we feel awful to have been causing this issue for them”, said Mr. Crockett. “We apologise to these neighbours.”*

*“We are embarrassed it took us so long to find the noise and identify its cause. While we had been investigating complaints when they were made, the specific wind conditions that the noise was audible in was not happening regularly. It seems that the noise was audible for between 30 and 60 seconds during very low wind conditions when some of the turbines were just starting up and the nacelle at the top of the tower was turning to face into the wind.”*

*The noise, in the higher frequency sound spectrum, was audible at up to an estimated 500m or so from some turbines during low wind conditions. The sound has been described as a screech, or a squeal by some neighbours and while not of a high volume, was at a higher pitch that was clearly out of place in the environment.*

*As it was an unusual and infrequent noise that is not normally made by the turbines’ operation and it has been fixed, this issue has not impacted the project’s compliance.*

It is only Lane Crockett’s opinion that the “*screech*” did not impact the project’s compliance. If the Cape Bridgewater Wind Farm had a responsible authority regulating noise they would have enforced condition 13 and applied a 5dBA penalty for noise with a Special Audible Characteristic and a further 5 dBA penalty for noise that was emitted at intermit intervals. Pacific Hydro’s own reports prove that an additional 10dBA of wind turbine noise would put Pacific Hydro in clear breach of its compliance obligations –which would have been obvious to any external authority that wasn’t the wind farm owner.

The 2004 EES Panel for the Bald Hills Wind Farm had evidence brought before it regarding the smaller Toora, South Gippsland wind energy development. The Panel noted:

*It is most unfortunate that Toora has no independent monitor in relation to its planning permit noise condition. It is most unfortunate that we cannot even discern whether for example any or all of the turbines at Toora have been noise optimised, or are still operating in power optimised mode, regardless of spreading discontent on the ground beneath. It is equivalently most unfortunate that South Gippsland Shire Council has hitherto not undertaken an investigation.*

*The Panel accepts that from the perspective of a rural shire, the possible expenditure of many tens of thousands of dollars on a single planning investigation may appear as bad value for money. However, if the Shire and indeed the State is to maintain its core value of fairness in the administration of its planning schemes and public confidence in approvals processes for major developments, potential noise complainants in good faith must be given the assurance that somebody is looking after their reasonable interests.*

There certainly doesn’t appear to be anybody looking after ours.

Also in 2004, Mr Ian Tuck described the application of the New Zealand Standard in his submission to the Bald Hills Panel Hearing.

*'At a meeting at Foster in February, Meridian Energy's Wind Project Manager when discussing the noise from wind turbines said that 'the NZ standards, flawed as they are, are the ones the State government has adopted and we have to use them'. It is refreshing to have a developer's representative being honest about the NZ standard, and Meridian are a NZ company so they ought to know! However on social and humanitarian grounds it is totally unacceptable that a flawed standard would be used, a standard whose inadequacies are causing people living near other wind power stations distress and suffering. That stance cannot be justified by anyone or on any grounds – in my view it would be immoral.*

*It is not good enough to say that Wind Power will provide tape recorders to residents in 'the noise zone' so that they can record uncomfortable or stressful noise. What will be done about it? Will it be guaranteed that action taken will remove the discomfort and stress? Who will be entrusted to enforce it? What sanctions will apply if agreed procedures are not followed (as they haven't been at Toora) and who will ensure that the sanctions are actually applied. Such an approach by Wind Power would effectively be using the residents as subjects in an experiment. I submit in the strongest terms that it must not be contemplated. If noise is such an unknown, the project should not proceed.'* (Ian Tuck)

Interestingly, on 26 March 2009, Pacific Hydro wrote to Dr Matthew Butlin (Chair) of the Victorian Competition & Efficiency Commission, submitting:

*Pacific Hydro has a track record of leadership in the wind industry. In 1998 we were a founding member of the Australian Wind Energy Association (now the Clean Energy Council). We were participants in developing wind industry best practice guidelines in the early years of MRET and had a formative role in developing Victorian environmental planning practice through EES assessment of our Portland Wind Farm. In 2001 we built Australia's first commercial wind farm at Codrington and shortly after the first project-financed wind farm at Chalicum Hills.*

*The wind industry and Pacific Hydro worked collaboratively with SEAV when the Victorian Policy and Planning Guidelines (PPG) were first published in 2003.*

Without any authority representing the impacted community, it would seem that more than a decade later, Mr Tuck's concerns were proven to be warranted. Pacific Hydro is still regulating itself to its own satisfaction; operating the Cape Bridgewater Wind Farm by its own flawed guidelines under a noise standard that it hasn't met that can't protect the community against low frequency noise impacts.

It would seem from the terms of Pacific Hydro's lease agreement that they are well aware that the wind farm guidelines and noise standard that they helped draft and implement are insufficient and provide inadequate protection against nuisance.

#### **5.12 New Zealand Standard**

- (a) The Landlord acknowledges that:
  - (1) Generators may generate noise on and over the Land which may exceed the New Zealand Standard;
  - (2) in particular, the operation of the Wind Farm may affect the use, amenity and development of the Land or the Property for residential or habitable use;

(d) The Landlord on behalf of itself and its successors and assigns releases to the full extent permitted by law the Tenant and its contractors, employees and agents from all claims and demands of every kind resulting from:

- (1) noise produced by Generators in the immediate vicinity of the Property or the Land which affects the use or development of the Property, including any noise which may exceed the New Zealand Standard;
- (2) any purported nuisance caused by the Generators in the immediate vicinity of the Property or the Land.

(e) The Landlord on behalf of itself and its successors and assigns indemnifies the Tenant and its officers, directors, employees, agents, representatives and mortgagees against all liability arising from, and expenses incurred in connection with:

- (1) any breach by Landlord of its obligations under this clause 1;
- (2) noise produced by Generators in the immediate vicinity of the Property or the Land which affects the use of the Land, including any noise which may exceed the New Zealand Standard;
- (3) any purported nuisance caused by the Wind Farm in the immediate vicinity of the Property or the Land;
- (4) any claim action or proceeding by a third party against the Tenant in respect of the matters contained in this Lease and indemnity, including any claim or complaint by any tenant, occupier, licensee or invitee on the Land.

The agreements were required to be signed despite the fact that Pacific Hydro:

- a) told the hosts, stakeholders, shareholders and the community that there would be minimal noise impacts;
- b) recommended the introduction of a NZ noise standard that doesn't consider or measure low frequency noise and vibration impacts;
- c) helped write the Victorian wind farm guidelines in 2002/2003;
- d) and submitted to the senate inquiry into the Social and Economic Impacts of Rural Wind Farms:

***"Achievement of compliance with the existing standard NZS6808:1998 provides protection against "sleep disturbance", "noise levels" and "health and amenity"***

and ***"We contend that well designed wind energy facilities have a very low impact on the immediate environment."***

concluding, ***"We submit that the health impacts associated directly with wind farms are tenuous and existing guidelines provide sufficient balance for both developers and communities."***

- e) And commissioned a study to try to identify what circumstances gave rise to complaints relating to adverse health effects and sleep deprivation only to disregard their own report's findings when they identified them!

Given that Pacific Hydro acknowledges that Cape Bridgewater residents in the immediate environment of the wind farm suffer negative impacts- including impaired quality of life and sleep deprivation - Cape Bridgewater must be what Pacific Hydro considers to be a poorly designed wind farm and due to its accepted failure to protect against sleep disturbance, noise levels and health and amenity, in Pacific Hydro's view, Cape Bridgewater Wind Farm must not comply with the 1998 New Zealand Standard.

Hopefully, Steven Cooper's study now proves that the health impacts complained about and associated directly with the Cape Bridgewater Wind Farm aren't quite so 'tenuous.'

### **Nuisance**

A 2007 Victorian legal decision describes similar harms/nuisances reported as a consequence to low frequency noise and vibration impacts arising from the operation of a Melbourne gas fired power station: <http://www.austlii.edu.au/cgi-bin/sinodisp/au/cases/vic/VCAT/2007/748.html?stem=0&synonyms=0&query=Metroll>

In 2007, the VCAT panel found that adverse health effects experienced by up to 70 Metroll staff, (including head ache, earaches, nausea, dizziness heart palpitations and difficulty concentrating) were the result of their exposure to vibration and low frequency noise impacts – which only occurred at times when the gas fired peaking plant was operating across the road. The panel member accepted that the power station was causing employees adverse health effects. An interim order was issued for the power station to be closed during Metroll's work hours – until such time that the operator could demonstrate that the power station could be operated without causing harm and nuisance. The Age's summary is here: <http://www.theage.com.au/news/national/relief-for-headache-of-power-plant-vibration/2007/05/10/1178390469746.html>

(Note: current Victorian Labor MLC, Cesar Melhem, supported the Metroll workers in 2007 during his time at the Australian Worker's Union working with, and then superseding, current Opposition leader, Bill Shorten).

After unsuccessfully trying to reduce the nuisance and adverse impacts associated with the Laverton power station's operation, Snowy Hydro 'elected' to 'buy out' Metroll .

### **The emissions from the Cape Bridgewater power station cause us nuisance.**

When comparing the severity of the nuisances and our experience with that of Metroll's, Metroll staff were only ever impacted by the nuisance during their hours of employment. And, as it was only a peaking plant, employees' exposure was limited and corresponded with the infrequent operation of the peaking plant. In contrast, we are exposed to relatively constant doses of infrasound, low frequency noise and vibration impacts, up to 24 hours of every day in both our farm/workplace and home.

When Metroll workers made complaints they were fortunate to be covered by the protections of an industrial standard (with a metric that could measure low frequency noise and vibration impacts), regulation by the EPA and the support of the Australian Worker's Union. But we at Cape Bridgewater are told we must complain to the power station operator, neither the council nor the Minister wants responsibility for regulation – and Union super funds own the wind farm!!!

### **Does Steve Cooper's study prove that nuisance exists?**

***The Results of an acoustic testing program – Cape Bridgewater Wind Farm.*** Mr Steven Cooper's study has been hailed by his acoustic peers around the world as a 'benchmark study' which has been called 'remarkable,' 'ground breaking research' and 'a unique contribution to science.' Importantly, Pacific Hydro commissioned Mr Cooper to undertake the study in response to continuing complaints

of noise nuisance and vibration impacts that have been reported since this wind farm commenced operations six years ago. Mr Cooper's brief was to *'Take measurements to determine whether certain wind conditions or certain sound levels give rise to disturbance experienced by specific local residents at Cape Bridgewater.'*

Accordingly, Mr Cooper and his team of acousticians tested how the wind turbines operated under different wind directions and speed, and also when the power was off. At the same time, residents were asked to keep an hourly diary noting noise, vibrations and the sensations they felt, such as pressure in the head, ears, throat or chest, headaches or pulsing of the ears etc.

By looking at high sensation and narrow band Mr Cooper developed a methodology to undertake assessments using narrow band infrasound. During the course of the eight week testing period, a unique pattern of frequencies in a special signature was identified that exists only when the Cape Bridgewater turbines are operating. Consisting of the nominal blade pass frequency and first 5 or 6 harmonics, Mr Cooper calls this discovery the 'Wind Turbine Signature' or 'WTS.' The study also found that we reported high severity sensations and offending sound pressure at four distinct phases of turbine operation when WTS was present: starting, maximum power and changing load by more than 20 per cent either up or down. Critically, the report identified a trend between the occurrence of WTS infrasound/ low frequencies and higher severity levels of 'sensation' recorded by each resident in their observation diaries. These Level 5 'Sensations,' include severe head ache, ear ache, nausea, chest pain – all symptoms that I have described and symptoms recognised to be compatible with ILFN exposure.

"Compliance" with wind farm noise standards or conditions of permit are not defences to nuisance and especially not when the untestable NZ noise standard used in Victoria expressly avoids all consideration of vibration impacts and infrasound and low frequency noise exposures.

The New Zealand standard – and therefore the Portland project's planning permission - can't be taken as an appropriate instrument to protect against the actual nuisances causing offence at Cape Bridgewater.

Completely irrespective of the status of compliance with its undetermined planning permission under the Planning and Environment Act, 1987, we still suffer adverse sensations and ill health effects as the direct consequence of severe nuisance caused by our exposure to the infrasound and low frequency noise emissions from this industrial wind energy power station.

When nuisance is considered under the Public Health and Wellbeing Act 2008 (Vic), s58 stipulates that regard is not to be had to the number of people affected but to the severity of the nuisance itself. Section 60 obligates the Council to remedy it. They haven't.

Prominent psycho-acoustician, Dr Robert Thorne is aware exactly how severe the nuisance is at Cape Bridgewater. Dr Thorne published a report in June last year which featured the Waubra and Cape Bridgewater Wind Farms. Dr Thorne noted that there are 'measurable noise problems at both Waubra and Cape Bridgewater' and concluded: **'findings suggest that the individuals living near the wind farms of this study have a degraded Health related Quality of life through annoyance and sleep disruption and that their health is significantly and seriously affected (harmed) by noise.'** Dr

Thorne is qualified to assess health impacts associated with exposure to acoustic emissions, including those at Cape Bridgewater.

Neither the Waubra nor the Cape Bridgewater Wind Farm is fully compliant with the terms of conditionally issued planning permissions. The Minister has never formally determined that he is satisfied that either power station complies. Indeed, the Minister and his department do not wish to be associated with the Cape Bridgewater development at all.

Dr Thorne said Steven Cooper's research at Cape Bridgewater provides 'food for thought' and begs the obvious question: **Can the operation of the wind farm be modified to reduce or mitigate the disturbances experienced by the residents?**

Paul D. Schomer, Ph.D., P.E.; Schomer and Associates, Inc.; Standards Director, Acoustical Society of America and George Hessler, Hessler Associates, Inc also praised the recent Cape Bridgewater report:

**This study finds that these 6 people sense the operation of the turbine(s) via other pathways than hearing or seeing, and that the adverse reactions to the operations of the wind turbine(s) correlates directly with the power output of the wind turbine{s} and fairly large changes in power output.**

**Attempts may be made to obviate these simple points with such arguments as it cannot be proved that infra-sound is the cause of the discomfort. But that again is a specious argument. The important point here is that something is coming from the wind turbines to affect these people and that something increases or decreases as the power output of the turbine increases or decreases. Denying infra-sound as the agent accomplishes nothing.**

and

**Some may ask, this is only 6 people, why is it so important? The answer is that up until now windfarm operators have said there are no known cause and effect relations between windfarm emissions and the response of people living in the vicinity of the windfarm other than those related to visual and/or audible stimuli, and these lead to some flicker which is treated, and "some annoyance with noise." This study proves that there are other pathways that affect some people, at least 6. The windfarm operator simply cannot say there are no known effects and no known people affected. One person affected is a lot more than none; the existence of just one cause-and-effect pathway is a lot more than none. It only takes one example to prove that a broad assertion is not true, and that is the case here. Windfarms will be in the position where they must say: "We may affect some people." And regulators charged with protecting the health and welfare of the people will not be able to say they know of no adverse effects. Rather, if they choose to support the windfarm, they will do so knowing that they may not be protecting the health and welfare of all the citizens.**

At Pacific Hydro's April 3 Cape Bridgewater Community Consultative meeting, some residents described adverse health impacts and sleep deprivation. Andrew Richards said: ***"it is our goal to improve your quality of life or at least restore it to what it was before the wind farm was there."***

After repeatedly acknowledging the negative impact the operation of the Cape Bridgewater wind farm was having on both the quality of life and chronic sleep disturbances, when asked to consider turning the turbines off at night, Andrew responded ***'turbines will not be turned off at night.'***

Minutes of the 28 April meeting record:

***Attendee made the point that he and his family cannot sleep, they are woken up and their health suffers. Attendee continued that they are severely impacted by the wind farm and that attendee has been saying this for ages.....***

***It was acknowledged that attendee has been heard that he and his family are not sleeping.***

***...Lane apologised that we are not able to do anything for them right now. He said he didn't know where this was going to go, but we won't be shutting down the wind farm."***

Pacific Hydro recognised and has known for some time that the operation of the Cape Bridgewater Wind farm causes some residents to suffer disrupted sleep and a reduced quality of life. These are adverse impacts arising as a consequence of the wind farm's operation that are also regarded as 'nuisances.'

Under the Public Health and Wellbeing Act, 2008, Council has a duty to remedy all nuisances that exist in the municipal district. The nuisance that the Cape Bridgewater wind farm has caused our family is not limited to audible noise exposures that are covered by the New Zealand Standard. Therefore, as the nuisance relates to low frequency noise and vibration impacts, council retains the obligation to remedy the significant nuisance of the wind farm.

We hope and pray that after seven years of loss and trauma due to the neighbouring wind facility, the authorities and responsible government departments will end this suffering. We ask that all issues be investigated and dealt with in the highest respect and with objectivity. This is our reality as we have lived it, and somehow survived this far. However we carry the scars and are traumatised by the nightmare that we cannot wake from. This echoes the encroaching monsters as in the science fiction novel "War of the Worlds" by H.G.Wells.

It is extremely difficult to continue my ongoing quest, to expose and have resolved this gross injustice. However, I am inspired by humanitarians like Mother Teresa, Mahatma Ghandi, and Nelson Mandela to persevere.

Yours sincerely,

Joanne Kermond ,