



The Waubra Foundation.

14<sup>th</sup> March, 2016

Committee Secretary and Senator Lazarus  
Senate Select Committee Inquiry into Unconventional Gas Mining (the Bender Inquiry)  
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Parliament House  
Canberra ACT 2600  
Sent via email: [gasmining.sen@aph.gov.au](mailto:gasmining.sen@aph.gov.au)

Dear Committee Secretary and Senator Lazarus,

Thank you for the opportunity to contribute to this Senate Inquiry.

In my capacity as the CEO of the Waubra Foundation, I was contacted some years ago by a severely impacted Queensland resident who lived near the gas fields near Tara / Chinchilla. He requested help and information for himself, and on behalf of other residents.

The Foundation has since provided information, support over the telephone, and provided contact information of honest ethical acoustical consultants to a number of households. Unfortunately lack of financial resources, following the revocation of the Foundation as a Health Promotion Charity by the Australian Charities Commission (and currently being reviewed by the Administrative Appeals Tribunal) has prevented us from doing more to help these severely noise impacted residents.

Some independent noise monitoring by independent acoustics experts recommended by the Foundation has since taken place, and it is my understanding that excessive noise, and breaches of permit conditions have been demonstrated.

I have been further advised by the residents that no effective action has ever been taken by either the Queensland Noise Pollution regulatory authorities or the Queensland Health authorities to address and prevent subsequent incidents of breaches of permit conditions and noise nuisance to Queensland residents, despite senior members of both Departments, the Queensland Chief Health Officer and the Queensland Premier being personally aware of the severe adverse health impacts, which are *in part* due to the excessive noise, reports of which are now confirmed with independent acoustic evidence.

I have been advised by one family (who have dependent children who are clearly adversely impacted) that rather than address the serious pollution issues making life unsafe and unhealthy for this family, *which include noise pollution*, or making any attempt to prevent the pollution or even monitor it, that the Chief Health Officer instead provided details of Emergency Housing in Toowoomba, over 160km away.

The inference from provision of this information seems to be that the Queensland Government, including public servants such as the most senior Medical Practitioner, are quite happy for this family to be driven out of their home, because of nuisance caused by a gas field operation, which at times is breaching its permit conditions.

***This is effectively property theft by stealth, aided by government officials.***

It is also a fundamental abuse of a range of human rights, enshrined in the various UN instruments to which Australia is a signatory, including in particular the right to attain the best physical and mental health.<sup>1</sup>

People cannot attain the best physical and mental health if they cannot sleep, because of excessive noise.

This government sanctioned property theft is occurring to rural residents impacted by a range of low frequency noise emitting industrial developments, including those living near unconventional gas mining facilities, coal mines – both open cut and underground with extractor fans, coal fired power stations, gas fired power stations, and industrial wind power developments.

Some of these noise sources and the impacts were part of evidence submitted to the Senate Select Committee into Wind Turbine Regulation, which reported in August 2015 and was chaired by Senator John Madigan.<sup>2</sup> Oral evidence given in the Sydney hearing on 29<sup>th</sup> June 2015 by residents from Lithgow and the Hunter Valley clearly demonstrates that the problems from excessive industrial noise in Australia occur across different industries with connections to power generation.

Once people have become sensitized to pulsing infrasound and low frequency noise, their brains and bodies will react with a neurophysiological stress response at lower and lower thresholds, as they become increasingly sensitized to this sound energy. Their bodies and brains do not care what the source of the sound and vibration is – they will react, regardless. In the case of children, there is no evidence that these impacts are not permanent. This means if they are severely affected that it will restrict where they can sleep, live, and work, as well as detrimentally affect their health and educational achievements.

One severely gas mining noise affected Queensland resident has told me that she can now no longer even tolerate the noise from a domestic fan. This is precisely what happens to people, including children, when they become sensitized to pulsing infrasound and low frequency noise, regardless of the source of the noise, and it is why this is such a serious emerging public health problem, which will affect more and more people if this lower frequency noise pollution is not properly regulated in a way which prevents this known harm.

Sensitisation is not new, and has been known to the acoustics profession for at least thirty years. It is known in animal research – see for example the research into the behaviour of wild seals subjected to pulsing vs slow rising noise, which elicited the mammalian acoustic startle reflex, by Gotz and Janik in 2011.<sup>3</sup> Precisely the same effects are happening to humans exposed to pulsing industrial noise. Moving away from the noise source or turning off the noise are the only options for those who become affected, in order to prevent further damage.

Sensitisation was documented in the 1980's as part of the NASA body of research into the impacts of different sources of pulsing sound including gas turbines, wind turbines and military aircraft.<sup>4</sup> Dr Neil Kelley described it in his 1985 investigation into the causes of noise complaints at an experimental wind turbine – but used the word “conditioning” to refer to sensitization.<sup>5</sup> UK Low Frequency Noise expert Dr Geoffrey Leventhall also referred to sensitization in his report to the UK Government on the adverse health effects of low frequency noise.<sup>6</sup>

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<sup>1</sup> <https://www.humanrights.gov.au/chart-related-rights-and-articles-human-rights-instruments-human-rights-your-fingertips-human-rights>

<sup>2</sup> [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Wind\\_Turbines/Wind\\_Turbines](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Wind_Turbines/Wind_Turbines)

<sup>3</sup> <http://waubrafoundation.org.au/resources/bmc-neuroscience-repeated-elicitation-acoustic-startle-reflex/>

<sup>4</sup> <http://cdn.knightlab.com/libs/timeline/latest/embed/index.html?source=0Ak2bgr7C0nhPdGR3S1IEekU3T3p4ZDhUNDdR V2Y2ZkE&font=Bevan-PotanoSans&maptype=toner&lang=en&height=650>

<sup>5</sup> see page 199 <http://waubrafoundation.org.au/resources/kelley-et-al-1985-acoustic-noise-associated-with-mod-1-wind-turbine/>

<sup>6</sup> <http://waubrafoundation.org.au/resources/review-published-research-low-frequency-noise-leventhall/>

Whilst there were a range of serious adverse health impacts described, for this particular Queensland gas mining noise affected family and for others, the excessive intrusive pulsing industrial noise and vibration, including inaudible sound which was inaudible, were clearly one of the environmental pollutants which were directly causing serious harm to health, ***particularly via sleep disturbance, cumulative sleep deprivation, and repeated neurophysiological stress.***

Both sleep deprivation and chronic stress are well known to be severely damaging to health, regardless of the cause of the stress or sleep disturbance. There is a wealth of research and accepted knowledge about the serious adverse health effects of noise, in both the World Health Organisation's major literature reviews in this area, and also documents issued by the Australian Government.<sup>7</sup>

### **Some related questions for this Senate Inquiry**

Why, when the research evidence of the importance of sleep to general health and well being is increasing exponentially, and the Centre for Disease Control has declared sleep deprivation to be a public health problem,<sup>8</sup> is sleep deprivation from excessive industrial noise so ignored by the relevant state and federal government bodies and elected officials in Australia?

Why do Federal and State Environment Ministers continue to fail to ensure the proper regulation of industrial and environmental noise in Australia, to properly protect residents? This is not a new problem.

Why does the En Health Committee currently not include any reference to environmental noise pollution, despite its growing importance within the WHO, and despite the comprehensive literature review issued in 2004 by the Federal Health Department and the En Health Committee on *The Health Effects of Environmental Noise - other than hearing loss*,<sup>9</sup> which included sleep deprivation, neurophysiological stress, mental health problems, cardiovascular disease, annoyance, and effect on children?

What happened to that Review? Why was it buried and never acted upon, by any government, Coalition or Labor? Why has none of the research that review recommended been conducted?

Who decides what issues the En Health Committee members look at?

Why is there ongoing disinterest and avoidance of responsibility for the consequences of the failure to properly regulate Environmental and Industrial Noise Pollution from Federal and State Health Departments and Health Ministers? Why are Federal and State Governments allowing this known harm to occur?

### **The Consequences of Continuing to Ignore this Issue**

Ignoring the plight of people who are currently suffering severely will, and clearly has, pushed some people to breaking point – to the point that they take their own lives. Any suicide is a tragedy, and the numbers of suicides documented by Dr GERALYN McCARRON in the vicinity of the gas field areas are indeed a tragedy multiplied many times over.

The other thing which can happen when people are pushed beyond breaking point, and feel powerless and victimized as well as angry, is that they will take out their frustrations violently on others, as happened in the case of the Moree farmer.<sup>10</sup> This is also a tragedy for all involved. I hope it is not an isolated occurrence, but knowing of the desperation of increasing numbers of rural residents, I fear it will not be the only such incident.

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<sup>7</sup> see for example the literature reviews listed here: <http://waubrafoundation.org.au/information/acousticians-noise-regulators/literature-reviews/>

<sup>8</sup> <http://www.cdc.gov/features/dssleep/>

<sup>9</sup> <http://waubrafoundation.org.au/resources/health-effects-environmental-noise-other-than-hearing-loss/>

<sup>10</sup> <http://www.abc.net.au/news/2014-10-02/moree-farmer-who-shot-environment-officer-glenn-turner-cracked/5784724>

City based “elites” including politicians, public servants, compliant professionals who sleep well in their own beds at night free from excessive noise, (with the police to call on if there is excessive noise at a neighbour’s home); and those who do the bidding of large and powerful industry bodies and corporations at the expense of a “fair go” and basic human rights of rural residents are, or should be on notice.

People whose legal and human rights are so badly infringed, who do not have the financial resources to take legal cases on in the courts, and who are not otherwise being heard, will resort to a range of other means to get their voices heard. Former CIA analyst Robert Steele has talked about this issue in the context of the USA and the UK.<sup>11</sup> Australia would do well to heed his advice with respect to ignoring citizens concerns.

The current regulatory framework with respect to excessive industrial noise pollution and noise nuisance, especially in otherwise quiet rural areas, must be properly and independently enforced, free from any industry influence, and with transparency of government authorities. Permanent real time noise monitoring systems, full spectrum (ie including infrasound and low frequency noise as well as the higher frequencies), transmitted to the internet in real time like the WEBTRAK system for airport noise, would remove some of the opportunities for criminal fraud to occur by fudging noise pollution monitoring results – for example for ensuring that the industrial operations are not operating at full strength when the noise monitoring is occurring. It would also mean that government health, planning and noise pollution authorities can no longer pretend that such acoustic evidence does not exist, or cannot be obtained.

Transparency, accuracy and independence of such noise monitoring is essential, and without it there is no point in doing it because it will be subject to the same sorts of abuses as are either known, or suspected, to be currently occurring.

I would like to finish with the following quote from the Australian Public Service Code of Conduct, concerning Integrity, the contents of which are particularly relevant to this senate inquiry.<sup>12</sup> It would be foolish and short sighted to be focusing on the behaviour of the gas industry alone, although the companies involved have clearly behaved badly, particularly towards local residents.

***The principles of good public administration, embodied in the APS Values and Employment Principles, lie at the heart of the democratic process and the confidence the public has in the way public servants exercise authority when meeting government objectives. Good public administration is a protection not only against inefficiency and poor performance, but also against fraud, corruption, inequity, inability to conduct business confidently and infringement of human rights.***

It is my opinion that there is so much endemic corruption within the power industry, and at every level of government with respect to noise pollution alone, that a Royal Commission is warranted into the power industry. Terms of Reference should include scrutiny of the gas, coal and wind industries – looking at both extraction and power generation components of these industries, and also the behaviour of the professional health and acoustics advisers who advise government, industry, and if thought necessary, those who advise the residents, with particular reference to professional codes of conduct and ethics, and the statutory duty of care which government employees have towards the Australian people, who ultimately employ them.

Failing a Royal Commission, an Independent Industrial / Environmental Noise Pollution Policing Unit, with strong investigatory powers, established under the Federal Health Department (similar to that which existed in New Zealand some time ago) might help to refocus everyone’s attention on the reasons for State Noise Pollution Regulations – ***which are the protection of the public’s health, including particularly their sleep.***

Sarah Laurie  
Waubra Foundation CEO

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<sup>11</sup> <http://www.theguardian.com/environment/earth-insight/2014/jun/19/open-source-revolution-conquer-one-percent-cia-spy>

<sup>12</sup> <http://www.apsc.gov.au/working-in-the-aps/your-rights-and-responsibilities-as-an-aps-employee>