

A response to pronouncements made by Pacific Hydro at the meeting held on 16 February 2015, where Acoustician Steven Cooper of The Acoustic Group presented his report of his acoustical testing at the Cape Bridgewater Wind Turbine Energy Installation.

I start this response with a sentence uttered by Andrew Richards, Executive Manager, External Affairs, Pacific Hydro, on 3 April 2014, during Meeting No 7, with the Cape Bridgewater Community Consultative Committee. Mr Richards stated:

“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.”

This is an admission the encroachment of industrial sized Wind Turbines into the environment of community members at Cape Bridgewater has impacted on the quality of life of residents.

With this admission in mind the actions of Pacific Hydro on Monday 16 February 2015 is even more controversial.

The meeting commenced with a joint statement being read out from Pacific Hydro and Steven Cooper. This statement contained information of the Brief given to Mr Cooper by Pacific Hydro when he was commissioned to undertake acoustical testing at the Cape Bridgewater site.

This brief required Mr Cooper to ...'see whether any links could be established between certain wind conditions or sound levels at Cape Bridgewater and the disturbances being reported by these six local residents.' There was no mention of the strength of wind conditions or type of sound levels to be considered to cause disturbance. The study was **not** conducted as a scientific research project **nor** was it a health study **or** research project.

The resident's to participate were nominated by Pacific Hydro.

The statement made no mention of a requirement for Mr Cooper to investigate the acoustic permit compliance of the project, and he did not do so.

It stated the study was to be transparent, and cooperation between all parties – residents, Pacific Hydro and The Acoustic Group was considered to be paramount, in order to achieve a thorough result acceptable to all.

The statement also said that both Pacific Hydro and Mr Cooper agreed the study was a '...new approach to assessing the acoustic environment as it relates to wind turbines,...'

and

'...the report suggests a correlation of some parameters versus wind speed.'

and

'The study indicates residents' observations in relating to sensation followed a pattern related to certain operations of the wind farm that can be related to wind speed.'

and

'This limited data exhibits a trend line with concentration on sensation severity 5, adapted from the AECOM audible noise ranking system'.

and

'Mr Cooper has nominated such a level as a worst case scenario and has suggested a new weighting parameter dB(WTS) with an unacceptable level assigned to the data.'

From this statement and listening to Mr Cooper's presentation in which he detailed his acoustical findings and correlation with resident's diary notes would be enough evidence to establish a link between certain wind conditions or sound levels and disturbances reported

by the participating residents. Mr Cooper also found a 'vibration' occurred when turbines were switched off, this vibration was not therefore caused by the operation of the turbines but was found to be a result of wind gusts causing the towers and blades to vibrate which travelled through the ground.

Both this and the existence of infra-sound both inside and outside of homes of the 6 residents at levels they could sense and noted the changes in their diary's and were found to correlate with operation of turbines, is surely sufficient to prove the Wind Turbines appearing in the local environment was the cause of reported adverse effects on residents.

This finding certainly is evidence that Mr Cooper had achieved his brief, and in doing so had assisted the industry and others to understand more fully the ramifications of installing these turbines in ever increasing size and numbers close to human habitation.

What is also amazing is Mr Cooper on his own completed the second and third recommendations from the Shirley wind farm study by testing at Waterloo and Cape Bridgewater and this study is the one which identified a health hazard for those participating in the Shirley wind farm study.

Mr Coopers report provided a graph from the main report for Shirley wind farm which has been declared a Health Hazard by the Brown County Board. When looking at the Cape Bridgewater results it can be seen infra-sound levels in some houses are higher than those for the Shirley wind farm.

Unfortunately in Pacific Hydro's summary at the end of the meeting presented by the company's Executive Managing Director, Lane Crocket it was obvious they were in no mood to accept the findings of the report which they so gallantly funded, commissioned and helped formulate and agreed to the terms of.

He commenced by repeating that the study was limited to acoustic analysis conducted with a single "intension" to better understand acoustic conditions at the Wind Farm and whether a link could be established between any such conditions and residents' concerns.

While stating the importance of the work and the thoroughness they managed to infer a question hung over its findings.

They did say that Mr Cooper had found a unique sound signature in the infra-sound range, but qualified it by saying it was no surprise to them because mechanical machinery does emit unique signatures. He went on to state the obvious, that bands of infra-sound frequencies are below accepted audible threshold levels that such frequencies are unable to be heard by the human ear.

He went on, saying the report did find a trend, but selective samples of data were used to analyse this new signature and the severity of notations as 'sensations' in the residents Diary's was questionable. He did this by stating the concept of sensation had been used before but it was a relatively new one and had not undergone robust scientific measures and further study was required. He also commented that this term was one decided by the residents and Mr Cooper and was not a scientifically recognised term.

In making these comments Mr Crocket indicated the tack Pacific Hydro was taking in response to the study which they had commissioned and agreed to the terms off.

If anyone was in any doubt they were heading towards a negative finding the answer came next when he stated that in their view the results did not demonstrate **a strong enough**

correlation to support the conclusion of a causal link between infra-sound frequencies and the residents observations.

He emphasised that there was no justification to change regulations. This seemed a redundant comment as it was made clear at the beginning that this was not a process to question regulations. He also informed the meeting that Pacific Hydro was in the process of seeking Peer Reviews of the study, but failed to mention Mr Cooper had already received some from eminent acousticians who lauded his study.

In the final stages of the summary he went for the throat of the residents by stating that Pacific Hydro would now close all complaints that had led to the commissioning of the report.

Following that he stated they would not be modifying the Wind Farm operations at Cape Bridgewater and would be disbanding the Cape Bridgewater Community Consultative Committee.

Then with a great flare and dogmatic approach he said there was nothing in the report to justify any form of compensation Cape Bridgewater Wind Farm was a fully compliant Wind Farm.

However, this last statement was totally irrelevant as this study was NOT looking at its compliance which again was made clear at the beginning of the meeting.

What Pacific Hydro has done in this summary is to move from the study being one which was to focus solely on understanding the acoustic conditions at the site and whether there was a link between such conditions and residents' concerns, to making it appear it was one looking at the sites compliance under current guidelines.

The only reason for this twisting can be taken as they could not accept the findings that a correlation exists between the signature infra-sound recordings and the notes in residents diary's which included being able to 'sense' when the turbines were operational with these 'sensations' causing them severe discomfort even though they could not see or hear the turbines.

This description category which when examining Pacific Hydro's own data correlates to the actual operation of the turbines is indeed a link, and a significant one and that is what the study was designed to examine.

Pacific Hydro may not like this outcome but they cannot ignore it. Yes of course it needs more work, and yes there are acousticians already using the methodology which Steven Cooper successfully introduced and no doubt it will be repeated elsewhere. It's obvious the industry is desperate because they know the results noted by Steven Cooper WILL BE repeated.

Pacific Hydro instead of standing by their claims of wanting to work with the residents and community and wanting to ... **'improve your quality of life or at least restore it to what it was before the wind farm was there.'** have walked away from the commitment and community, even though they constantly reinforced their desire to get to the bottom of complaints in a transparent and meaningful way at Consultative Committee meetings.

It will be impossible for Pacific Hydro or Lane Crocket to ever claim the high moral ground again, or to gain the respect of communities where they already have suffering residents and where they hope to deceive those living in areas considered for future projects.

Well done Steven Cooper and the residents of Cape Bridgewater – Pacific Hydro may not accept what is there but you have shown it is.

JA Rovensky