

## **SOCIAL IMPACTS OF THE PROPOSED VICKERY COAL MEGAMINE: INDUSTRIAL NOISE**

*"Noise-induced sleep disturbances are regarded as most deleterious as undisturbed sleep of sufficient length is undoubtedly essential for performance, for well-being and health." (World Health Organization 2009, 2011).*

Whitehaven Coal is a foreign-owned mining company chaired by a former Australian Deputy Prime Minister, Mark Vaile. The company, together with its Joint Venture partners the Japanese owned companies J-Power and Itochu plans to build a new open cut megamine, at Vickery, near Boggabri New South Wales.

At a proposed 10 Million Tonnes Per Annum, the Vickery coal mine in its present incarnation will be nearly as big as the notorious Maules Creek mine just 45 minutes drive to the North. An Environmental Impact Assessment has been released which includes a Social Impact Assessment. The Social Impact Assessment refers to jobs and cash donations to community groups but has a gaping hole.

One of the kinds of impact it should cover is health impacts. However, the Vickery Mine Social Impact Assessment is lacking consideration of the mental health and sleep disturbance impacts that come when heavy industry presumes to relocate to agricultural areas.

The landscape of the country's "green fields" rural areas are notable for the long distances between residences and towns, often with long, flat expanses in between. In rural NSW, low frequency noise can travel long distances, up to 20km from the source. The impact of open cut coal mines in these green fields areas can be alarming and severe due to the very low levels of background noise.

The NSW Government will ignore the special needs of these quiet Australian communities. In developing a new Industrial Noise Policy, they have decided to adopt a modified version of UK noise regulations, established by the Department of Environment, Food and Regional Affairs (DEFRA) which has not been developed with open cut megamines in mind. Not only is this system measured in completely different industrial and geographic scenarios, the DEFRA system is

based on the noise impacts inside affected homes, which the NSW Government refuses to .

The NSW Government has repeatedly approved open cut coal mines based on acoustic modelling that underestimates the maximum noise impacts that might afflict the region. Residents impacted by mine noise include the communities of Bulga, Wollar, Ulan, Camberwell, Maison Dieu, Wybong and Maules Creek. They experience sleep deprivation, anxiety and general ill health.

Closer to home in the Namoi Valley is the Maules Creek coal mine.

Located near Boggabri in North West NSW, Maules Creek coalmine is a large open-cut black coal mine. Operated by Whitehaven Coal (WHC) it has planning approval to extract up to 13 million tonnes of coal each year until 2034.

Critically, the mine has directly led to the destruction of parts of the Leard State Forest, as well as farmland and Gamilaray cultural sites. With an expectation that the mine will operate for over 30 years, the impact on the forest, farmland, cultural sites and general health and well being of the surrounding communities is dire.

Residents of Boggabri have major concerns and fears about their wellbeing if the Vickery mine proceeds. The best lesson they have as to what lies ahead if Vickery were approved is none other than Whitehaven's Maules Creek mine.

Last year, Whitehaven made an audacious attempt to remove some of its noise conditions, which included a condition to utilise Best Practice technology – something the cost-cutting company wants to shirk from. I took it upon myself to read some of the community's submissions against the Maules Creek noise modification, and learned that the noise impacts have been severe, leading a substantial percentage of Maules Creek and Boggabri residents to object.

In order to report actual real-time noise level exceedances, residents near the Maules Creek Mine have had to invest their own resources in acoustic monitoring equipment. (An entry level Class 1 acoustic monitor could cost between \$6-9, 000). This community monitoring found that the company's noise modelling was entirely flawed. What appeared on paper, which was a limited radius of affectation only 4km from the mine, turns out to be at least 3 times larger.

Early signs that Whitehaven's noise modelling was wildly in error were observed by one farmer living 12 km north of the mine. Frustrated and hopeless about the chances of holding Whitehaven Coal to account, he had to raise large funds to build a new large structure to his south, shielding his home to moderate the highly intrusive noise pollution that disturbed him throughout the night.

Spurred into action, the NSW EPA found 100 exceedances at one property alone. Demonstrating that the original assessment for the mine approval was incorrect, the NSW EPA ordered that a Mandatory Noise Audit be conducted. It was discovered that 10 properties were wrongly modelled by Whitehaven Coal - the original modelling provided to the NSW Government in the Environmental Assessment was dramatically underestimated. Maules Creek coal mine is just one example that demonstrates the necessity of independent research into noise impacts and management of large mining operations in rural NSW and open disclosure by the mines of their noise levels.

The use of real-time data is inconsistent across the industry. The monitoring of noise levels are being done by the mines themselves. This kind of self-regulation is totally inappropriate. There is too much evidence that mining needs more, not less, environmental regulation to safeguard communities.

The evidence is there for all to see who choose to read some of the Submissions Against the Maules Creek Modification 4. This is what one man said:

“Although Whitehaven Coal promised locals that we wouldn't even know they were there, unfortunately, that was a blatant falsehood. My home has a direct view of the mine. At night, the light pollution from the daymakers shines into bedrooms on the southern side of both houses, especially the north-easternmost 3 or 4 of them which last week were extremely intrusive.”

Claims of falsehood, deception, misleading noise modelling and bias in noise reporting are rife in the community, it appears from the evidence.

A Boggabri Health Service Manager wrote the Secretary of Planning, NSW Department of Planning and Environment, voicing her concerns regarding sound power level modifications of the Maules Creek coal mine approval.

She and her husband are residents of Maules Creek. Their property is 18km north of the mine at the foothills of Mt Kaputar. With a direct view of the mine from their home, they are also in direct path of the mine's noise pollution. Her husband has made many complaints to the EPA regarding both noise and air pollution.

"On the 6th July 2017 near our property, community members using a Class 1 acoustic metre measured an average of 34.87dB over 15 minutes, which required the addition of the 5dB low frequency noise penalty (under the Industrial Noise Policy) making this 39.87dB over 15 minutes, and well over the 35dB contour line (Harparary Rd) which was predicted as the worst-case envelope – and I am some 14km north of Harparary Rd."

She points out that the geography of the Maules Creek valley is without land mass or vegetation and as such there is an unobstructed tunnel for noise to travel to homes such as theirs. She stresses that any further growth by the Maules Creek will result in noise pollution well above an already untenable level.

She is desperate, arguing that the situation, if worsened by even greater noise pollution, will result in residents being forced to leave their homes creating "refugees in our own country".

Another resident from Tarriario, whose family live about 15km from the Maules Creek mine claims that the noise of machinery has been loud and continuous since the start of the Maules Creek mine construction. She points out that a noise audit has shown that the mine has already exceeded the original modelling the mining company submitted for their Mine Approval process.

With 5 children, whose family have lived in the valley for over 165 years, this Maules Creek resident has provided his own personal decibel meter recordings. He also argues Whitehaven Coal have not been able to achieve the noise levels as determined in their original approval. He reports to have recorded 76 decibels, 9km away from the Whitehaven Coal mine at 9.30pm. Although reports of intrusive mine noise are widespread throughout the Maules Creek valley, not all are reported to the NSW Environment Protection Authority, let alone the Company. Nevertheless, the NSW EPA have many reports. So much so, that they ordered a Mandatory Noise Audit, which is only ever imposed when the EPA has reason to believe that environmental pollution violations are taking place.

Mandatory Noise Audits are not taken lightly, they are one step short of prosecution.

This level of noise at night has caused serious interruption to sleep whereby they are “never really without the impact of noise disturbances”.

“The relentless noise coming from this mine is impacting our lives as it stands now. They have not been able or willing to comply with the regulations determined for their approval”.

The impact on a person’s health cannot be ignored...

For them leaving the area would be impossible, but he worries about the impact the mine will have on his family.

Roselyn Druce , of Teston Lane, Maules Creek, also highlights the lack of trust that the local community feels toward Whitehaven Coal, who she argues, simply cannot comply with sound power levels emitted from their equipment on the mine site. Roselyn claims that the community is suffering from excessive noise and that locals have spent vast amounts of time reporting adverse conditions to the compliance bodies.

She too stresses the debilitating affects that noise can have on an individual’s health due to lack of sleep...

As another Maules Creek resident puts it:

“Living beside a coal mine has proven to impose its presence on all family members and visitors. A good sleep is never assured. The roar is unimaginable - anytime of day or night.”

Put simply by yet another Maules Creek resident, a mother of young children:

“Accumulated tiredness and a poor night sleep are not good for human health. My children hate the sleep disturbance and at times are jumping on me in the night saying ‘Mum, make it stop.’ If it wasn’t sleep time - you may think yes there is background noise but it is combined with the low frequency noise that really disturbs sleep. It is invasive and gets in your

head and body. I find it very draining. Waking up from a half sleep when the noise stops is harsh.”

Thorough assessment of low-frequency noise and its affect on the community must be sought by an independent organization. The current auditing of mine noise is based on monthly 15 minute monitoring periods, which is a tiny percentage of the mine’s operation, being 24/7.

Andrew and Stephanie Darley have written to the Department of Planning and Environment. They are currently completing tertiary education courses in Agriculture. Their hope is to return to the family property at Boggabri. They struggled to obtain a building entitlement allowing them to create a dwelling to suit the intergenerational change facing their family. The mine and associated infrastructure noise will be a major issue for them.

These rural communities want the next generation to remain and have a future. When younger members leave to enhance their education it is important that they return if they can. Unfortunately options for these members to do just that are jeopardised.

Chief Judge Preston NSW Land and Environment Court on noise from Warkworth Mine stated:

“Even if it can be accepted that the mines are operating within the noise limits required under the existing consents or proposed under the new conditions, I am satisfied, based on the evidence of the residents which was supported by the available monitoring data, that the noise levels of the present operations of the mine are at a level sufficient to impact on amenity, including sleep disruption.”

This was eloquently put in a submission from a Sydney visitor to Maules Creek:

“Noise conditions are no small matter, particularly in a rural agricultural region such as Maules Creek. Having regularly travelled to Maules Creek over the past several years it is clear that the worsening noise and dust conditions in the region are causing severe distress to landholders - a process which is also distressing to observe. Those landholders derive little

comfort from the company's insistence that the noise impact is minimal or lower than in other mining regions. In particular I have met a number of landowners who, having previously supported the initial mine proposal, have changed their view just because the noise impacts were not what was 'written on the box'. Sadly, it seems unlikely now that their concerns will make a material difference to their situation. Having trusted that the mining company was providing accurate information and having been reassured by government departments, their trust in both the company and the Department has now been broken."

Phil Laird, of Boggabri, puts it simply: "Our property "Middle Creek" neighbours mine owned land and has a direct line of sight to the mine. Our experience is that the mine is very noisy on calm, cool mornings when there is an inversion layer".

Inversion layers are very common in the Maules Creek valley which according to the proponent is 41% of the time generally and 69% of the time in winter.

The effect is to concentrate dust and noise in the lower atmosphere against the Nandewar Range, which traps cool morning air blowing from the south until a stronger breeze disrupts and lifts the cool air in the lower atmosphere.

"My family and I objected to the original mine application in 2011 because of the significant impacts from noise and dust. Our community group spent several thousand dollars on scientific experts to peer review the proponents noise and dust modeling," he said.

Urgent and effective action is needed from the NSW Government to protect the health and amenity of NSW communities that are affected by mine noise. This should start by recognising how large-scale mines in rural areas erode one of the determinants of good health: sleep.

Rumbling, roaring, whirring, banging or "the car that never comes" are all typical of mine noise, heard for long distances.

Approving of the Vickery megamine will do only one thing – to create a new Maules Creek, a mine which is out of control in so many aspects of environmental management. The unique disturbing noises created by rural megamines need to be recognised as a severe disruption to peoples' lives and physical and mental health.

Due to these impacts, the Vickery mine must be rejected