



Submission on Vickery Extension Coal Mine NOISE IMPACT ASSESSMENT

Background

The Leard Forest Research Node is a citizen science group based in Maules Creek which has been conducting noise monitoring of coal mines in the Leard Forest mining precinct since 2015.

We have conducted noise monitoring over this period and studied the noise at residential receivers, as well as observed the mining activities from vantage points and correlated the noise sources with effects at receivers.

Within the first year of operation of the Maules Creek mine (in 2014), the reason the Leard Forest Research Node was formed was specifically because of the noise levels that were affecting Maules Creek residents many kilometres further than the supposed 35dB contour line. In one instance even as early as 2014 one landowner 8km further than the 35dB line (ie 12km from the mine) who was experiencing regular exceedances of a significant order, was compelled to construct a large structure to shield his residence from the noise from the mine.

This is significant, as 12km is also the distance between the proposed Vickery mine and the town of Boggabri, which is most at risk from low frequency noise from this mine judging from experience at Whitehaven Coal's other similarly-sized mine at Maules Creek.

Residents of the area were increasingly telling how Whitehaven Coal promised them “you won’t even know we are here”, similar to the statements that are being made to Vickery farmers e.g. one landowner 500m from the train line who has been told “you won’t hear us”.

Noise Modelling must be independent

We submit that the noise modelling prepared by Wilkinson Murray must be peer reviewed, and the results made public.

Wilkinson Murray uses a different “proprietary” assessment method for adverse weather conditions than the Approved Mine assessment. This involves using a contiguous dataset of wind speed, direction and temperature inversion, determined by the CALMET model of the Project, which is not available from the local weather stations.

The lack of transparency around Wilkinson Murray’s assessment method is extremely worrying.

We acknowledge, however, that the method nominated in the Noise Policy for Industry is used for the Mine Extension assessment as per Fact Sheet D of the NPfI for a definition of standard meteorological conditions and noise-enhancing meteorological condition.

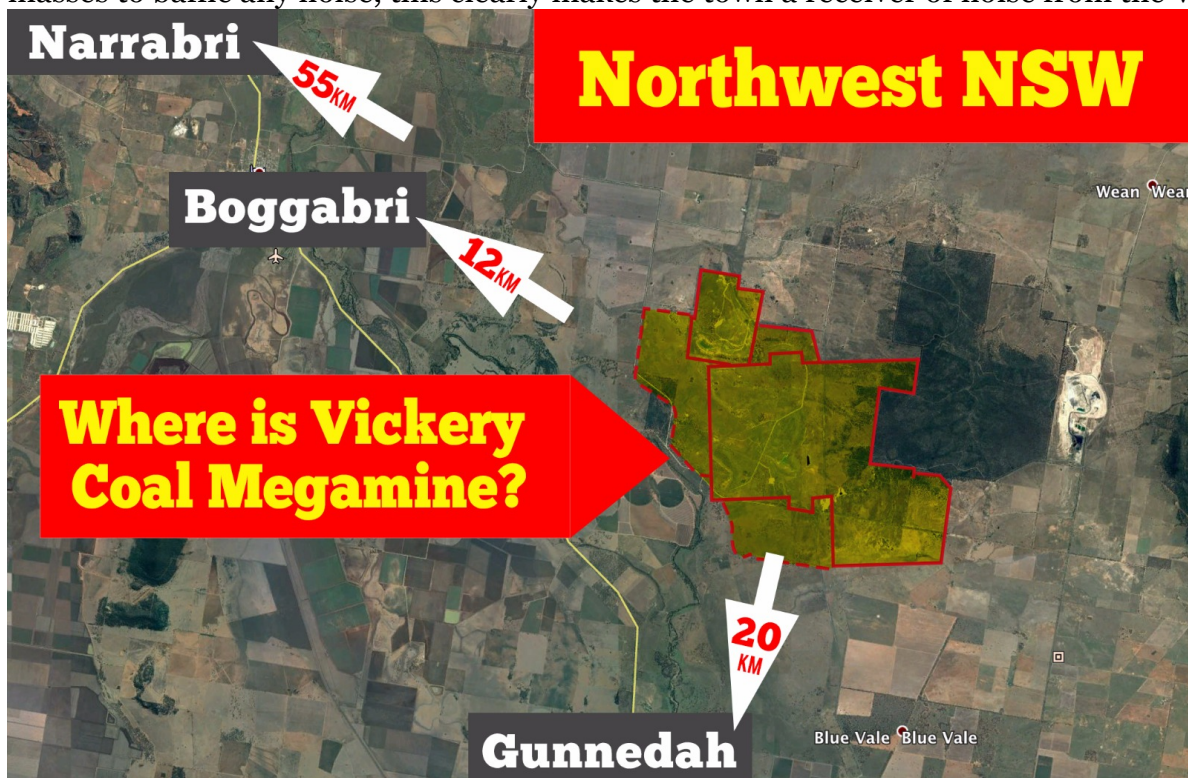
Influence of topography

This is a description of the topography of the mine area:

“To the north, south and west of the Project mining area the topography is gently sloping to almost flat, and generally drains towards the Namoi River. These floodplains typically have elevations of between 250 to 260 m AHD.”

(Source: EIS, p 4-4)

As the town of Boggabri being just 12km in a North Westerly direction and with little or no land masses to baffle any noise, this clearly makes the town a receiver of noise from the Vickery mine.



Anomaly calling for investigation

We compared the Noise Contours of the 2013 EIS and the 2018 EIS and found that the contours have become closer together, without any logical reason to justify this. Normally the change in distance between contour lines would be the results of changes in topography but clearly here that is not the case.

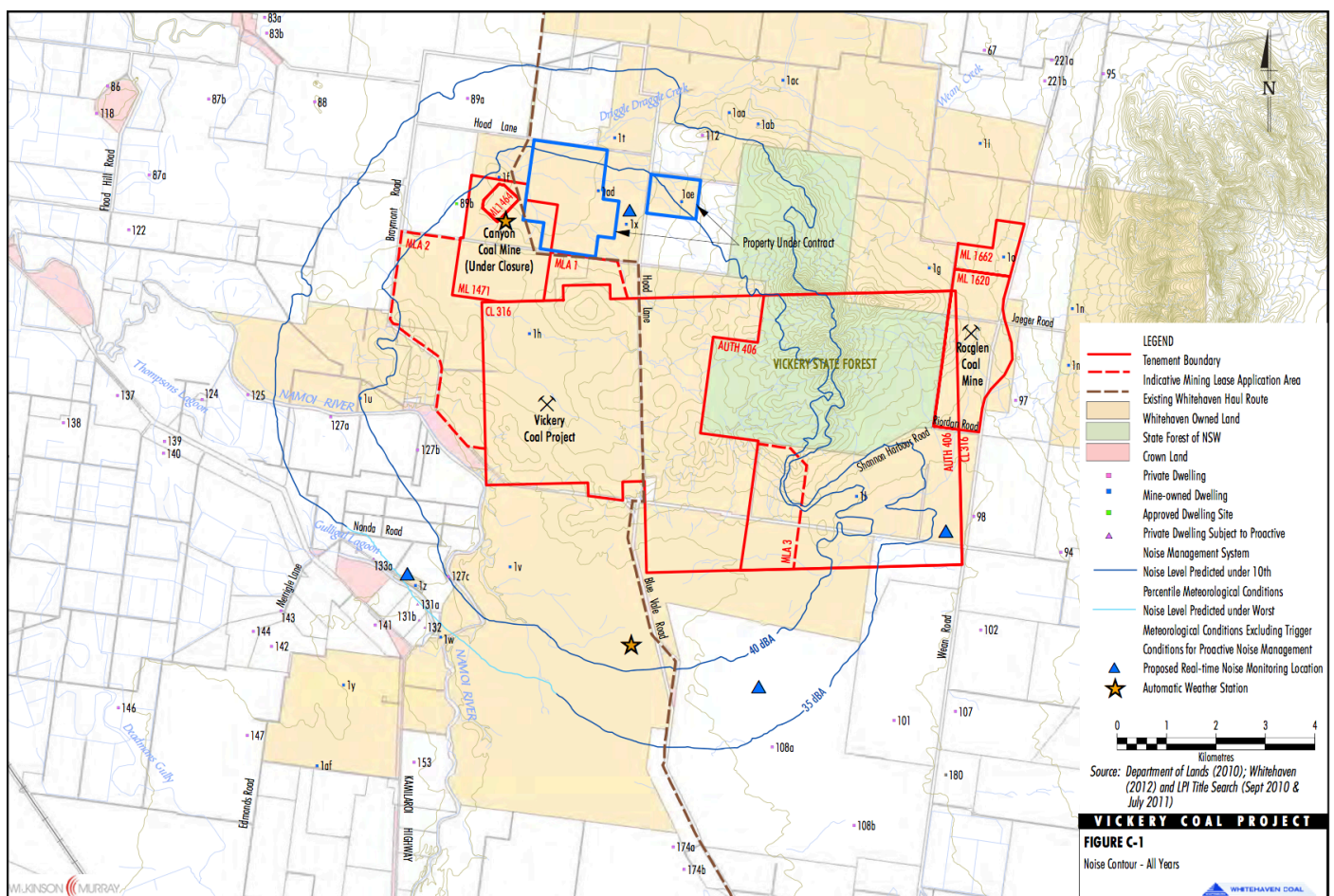
This anomaly calls for further investigation, preferably by a trained acoustic professional who can explain why this is so.

Our first approach was to compare what was modelled in the original 2013 EIS, representing a much smaller coal mine which does not have these elements:

- Rail spur and rail load out facility
- Coal handling and processing facility (CHPP) and conveyor belts catering not only for the larger Vickery mine but also 3-4 Million Tonnes per Annum of additional coal imported from Tarrawonga, Rocglen and elsewhere (possibly Sunnyside) mine.

Our first review of the **2018 modelled noise contours show them to be exceptionally small** for a coal mine of that size i.e. 10 MTPA (or 7 MTPA averaged over life of mine)

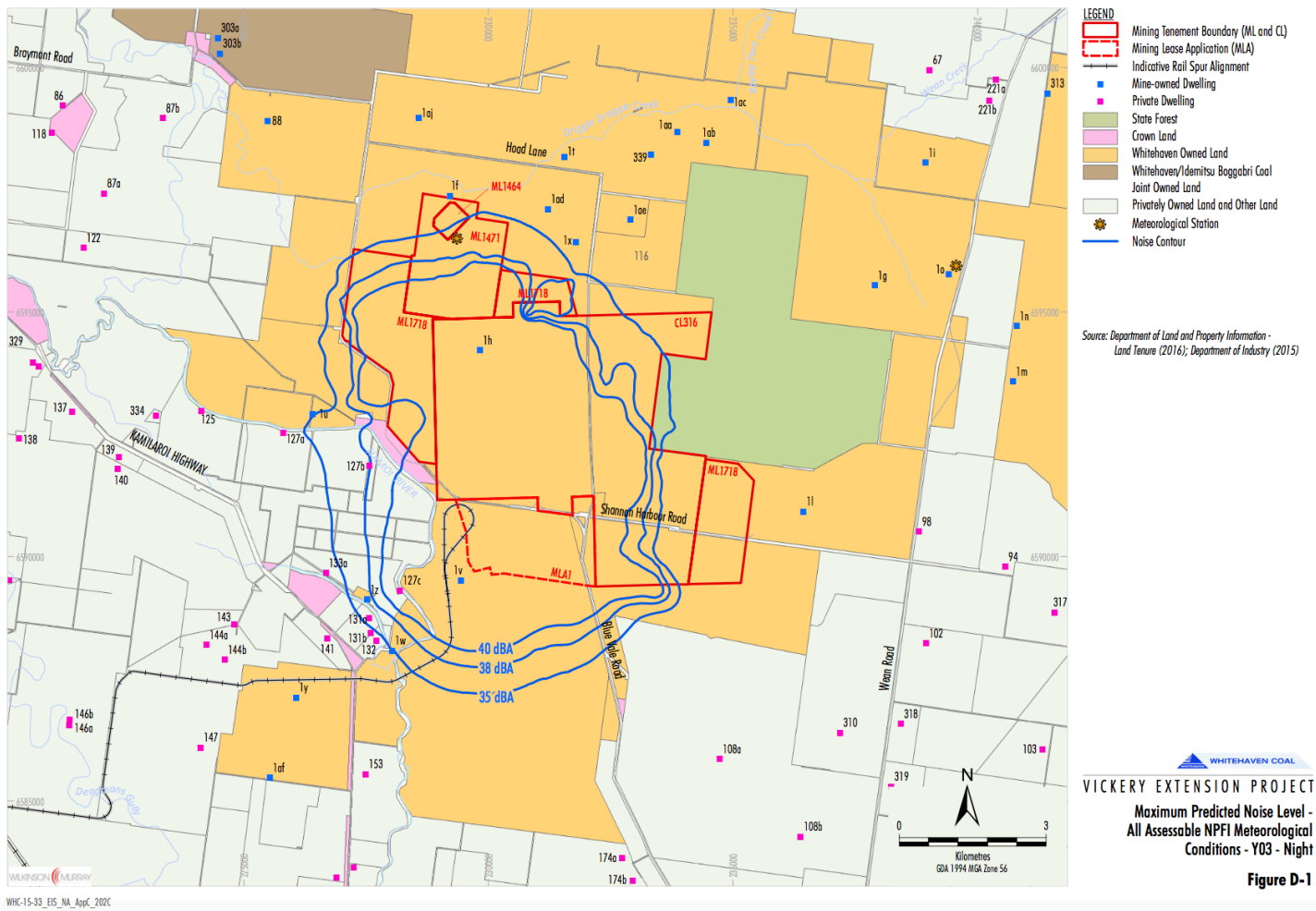
2013 version



2018 version

This version shows how the 35dB contour has been moved dramatically closer to the mine.

This cannot be explained by the changes in the Industrial Noise Policy.



ISSUES

1. Why are the predicted noise levels at receivers on average approximately 15% lower in 2018, than 2013 (see below table), yet in 2018 the mine will be processing an additional 3-4 MTPA from other mines, has increased in size from 4.5 MTPA to up to 10 MTPA, and includes a rail spur and loader, the CHPP and conveyor belts, all of which were not present in 2013?
2. In the EIS for 2013 there is a Table for Indicative Sound Power Levels that lists 11 light plants in Yr 2 and 15 light plants for Years 7, 17 and 26 at 104 LAeq (dBA) each. The same Table of Indicative Sound Power Levels in the 2018 EIS (p. 31 of Appendix 4 - Noise and Blasting Assessment) does not mention any light plants.
3. Again the 2013 table (as above) lists one pump for yr 7, two pumps for yr 17 and one pump for yr 26 at 100 LAeq (dBA), while the 2018 table does not mention any pumps. The 10 pumps from the bore fields, which will on occasion be operating simultaneously, and the pump from the river are missing from the indicative sound power levels in this EIS.
4. The figures showing the modelled noise contours do not show Years 1 or 2 of the Project life – Impact assessment commences at Yr 3. This omits the years when height of overburden is lowest and workings in pit will be at their shallowest and there is less embankment to buffer the noise.
5. Footnote 2 of the table of “Indicative Equipment Sound Power Levels” (p. 32 of Appendix 4 - Noise and Blasting Assessment) notes that 32% of the trucks are assumed to be stationary at any period in time and footnote 4 notes that the assessment has considered mine operated routines which dictates that 50% of the pit dozers are expected to be stationary.

As no sound power levels are given in the table for when these machines are stationary (or idling) does the term “the assessment has considered” mean that when the dozers or trucks are stationary, the noise from these vehicles are not included in the noise modelling?

6. Is there cladding on the CHPP?
7. Are the conveyors enclosed, or open?
8. The rail spur, where it undergoes two 90 degree turns in the bottom left-hand quadrant of the Project site does appear to influence noise levels at all, which we do not think is credible. We have concerns that noise from the rail spur, specifically relating to rail squeal and flanging, have been under-estimated.

TABLE OF RECEIVERS

The following Table shows the most affected Receivers, comparing 2013 and 2018 predictions and the mean differential between 2013-2018 showing the extent to which noise levels are alleged by the Wilkinson Murray to have fallen in the much larger project which includes the 14MTPA CHPP and railway.

Table: Comparison of 2013-2018 receivers

Predicted $L_{Aeq}15min$ Operational noise levels from project (period = night, meteorological condition = P10)

receiver/ residence	Owners	Property name	2013 Yr 2	Yr 7	Yr 17	Yr 26	2018 Yr 3	Yr 7	Yr 21	mean dif (%)
86	Peter Watson Holdings		<20	21	<20	<20	10	18	10	
87a	David Sinclair Riley	Croydon	27	28	27	27	20	26	21	-18
87b	David Sinclair Riley	Yarrah	26	29	28	28	21	27	21	-17
108a	Anthony Wannan & Pauline Winter	Coulstoun	32	35	34	35	22	25	28	-26
108b	Anthony Wannan & Pauline Winter	Coulstoun	26	30	29	28	19	21	23	-26
122	Nandewar Pty Ltd		27	28	27	27	20	25	22	-18
125	S.Maunder	Undoulya	34	34	32	31	26	30	27	-16
127a	Barlows	Mirrabinda	38	39	35	34	31	33	30	-14
127b	Barlows	Mirrabinda	42	43	38	39	36	38	36	-9
127c	Barlows	Mirrabinda	40	39	36	35	39	40	36	2
131a	Keelers	Dennison	35	35	35	34	33	34	34	-3
131b	Eric & Carol Hannan	Lanreef	35	35	35	33	32	33	33	-5
132	Eric & Carol Hannan	Lanreef								
133a	Grant McIveen	Clinton	35	35	35	34	31	33	34	-6
137	Anthony Clarence & Georgina Carrigan	Milchengowrie	28	29	27	27	21	25	23	-17
138	Anthony Clarence Carrigan	Dia-Lynn	26	27	26	25	19	23	22	-18
139	Kenneth & Susan Crawford	Gowrie	30	30	28	28	23	26	24	-16
140	David and Janet Watts	Erinvale	30	30	28	28	23	26	24	-16
141	Michael & Amanda Heineman	-	35	35	33	32	28	30	30	-13
143	Scott Llewellyn Johns	-	32	32	30	29	25	28	27	-13
144a	Errol and Jennifer Darley	Merrigle	30	30	29	28	23	26	26	-15
153	Robert & Heather Mansfield	Avona	31	31	29	28	24	26	27	-14
174b	Selkirk Pastoral Co.	Nayla	28	30	30	28	19	23	24	-24
310 (101)	Alexander Jock Laurie	Brolga	28	32	30	31	20	23	27	-23

CONCLUSION

The “Issues” referred to above need to be addressed by the Proponent and the Noise Impact Assessment re-submitted with the missing sound power sources included.

Until such time, we do not believe it is plausible for the Proponent to claim that the 10MTPA Vickery mine, including a 14MTPA-capacity CHPP and railway could be quieter than a 4.5MTPA coal mine with no CHPP and no railway.

Leard Forest Research Node
1212 Black Mountain Creek Road
Maules Creek NSW 2382

leardforestresearchnode@gmail.com