

“THERE WILL BE NOISE”

A Preliminary Assessment of the potential noise levels generated by the proposed Hillside Mine.

Yorke Peninsula Land Owners Group **August 2013**

How much noise will Hillside generate?

At present, farm residences and small coastal settlements located within close proximity to Hillside (such as Pine Point, Rogues Point and Black Point) generally experience very low noise levels, with the highest levels coinciding with naturally occurring, intermittent phenomena such as rain and high winds (Rex’s MLP: Appendix 5.6-A). Once mining commences, these residences will experience much higher levels of noise 24 hours a day, seven days a week.

Noise emitted by the haul trucks and other mining equipment at Hillside will be extremely high. By Year 5, there will be over sixty 793D haul trucks operating at Hillside, along with at least 40 other pieces of heavy equipment (eg blasthole drills, bulldozers, excavators, face-shovels etc). Each of these pieces of equipment generates noise levels above 110 dB(A) (See table 1 below).

According to a chart provided by Rex Minerals, this places them in the ‘uncomfortable’ sound level category and is above the maximum level allowed at rock concerts. In fact, the noise produced by a single 793D haul truck, at 121 dB(A), exceeds the pain threshold.

Table 1: Noise levels generated by each piece of mining equipment

Item no.	Sound power level [dB(A)]
Blasthole Drills	118
Tracked Bulldozers	116
Excavators	120
Face shovels	123
Graders	113
Front-end loaders	111
Water cart	116

Source: Rex Minerals Mining Lease Proposal: Appendix 6.6-A – Tables 11

Added to this will be noise from the crushing and processing plants, ranging from 109 dB(A) for each copper regrind mill to 121 dB(A) for the SAG mill.

In a quiet rural environment noise carries great distances, particularly on very still, calm days. During the exploration phase at Hillside background noise from the drills were clearly audible

within several kms of the mine site, especially on calm days and nights. So how noisy will it be like when the mine becomes operational?

And unlike environmental 'noise' from wind, rain etc, this noise will be more grating and persistent because it will go on 24 hours a day, seven days a week, without surcease.

The problem will be particularly acute in the warmer months, especially at nights when it will potentially be impossible to sleep with windows open. If residents are forced to keep air conditioners on all night to block out the noise, will Rex compensate them for the additional electricity costs?

Potential impacts identified by Rex

According to Rex's Mining Lease Proposal (section 8, Table 8.3-11) the following potential noise impacts during construction, operation and mine closure at the mine site have been identified:

- Public nuisance impacts on surrounding residential receptors from noise emanating from the mine site during construction
- Public nuisance impacts on surrounding residential receptors from noise emanating from increase in road traffic from road diversions required for the Hillside Project
- Public nuisance impacts on surrounding residential receptors from noise emanating from the fixed plant mine site during operation
- Public nuisance impacts on surrounding residential receptors from noise emanating from the mobile plant mine site during operation (including rehabilitation)
- Public nuisance impacts on surrounding residential receptors from vibration during construction
- Public nuisance impacts on surrounding residential receptors from vibration during operation
- Displacement of terrestrial native fauna and marine fauna due to noise and vibration from mine construction and operation
- Reduced public amenity as a result of air overpressure (noise) associated with blast
- Public nuisance impacts on surrounding residential receptors from noise emanating from the removal and transport of extractive stockpiles.

While Rex claim these impacts will be avoided because of the mitigation strategies the company say they will implement, those strategies seem totally inadequate, as described below.

Proposed Mitigation Strategies

Rex have identified very few control measures that could be implemented to effect major reductions in noise impacts.

The Mining Lease Proposal refers to only three mitigation strategies:

- Control of noise at the source, including the use of quieter haul trucks
- Noise shielding within the propagation path
- Control of noise at the receiver.

But again, implementation of these will be at Rex's discretion, and there is also an indication that Rex has been 'let off the hook' by EPA. It seems that the need for the Company to adhere to regulatory noise levels have been waived.

Appendix 5.6B states that

Because the Hillside Copper Mine is a planned new mine, the EPA generally require that the project be designed to meet the indicative noise level criteria less 5 db(A) where reasonable and practicable. However, through the Hillside Cooper Project consultation process, it was agreed that the planning penalty does not apply in this case.

Rex also note that "strict compliance with the planning criteria, under worse case conditions, is neither reasonable nor practicable to achieve."

In other words, it would be too costly for them to adhere to the criteria. Again, the prime consideration seems to be cost savings, rather than concern for the welfare of local residents..

The way in which Rex intends to respond to residents' complaints about high noise levels also seems dismissive. The MLP (8-369) notes that, in relation to pre-construction noise complaints,

All noise complaints will be investigated and a response provided to the complainant within two working days. All noise complaints will be resolved and associative actions will be recorded in the data base.

*Monitoring of construction related noise levels shall be undertaken in response to a complaint **where this is considered an appropriate response** (my italics)'.*

*[Since there are no predicted exceedances of the internal noise level criterion for the mine site construction, **routine monitoring of construction noise is not warranted**].*

Again, all responses will be at the discretion of Rex with no stipulated oversight by an independent watch-dog, and presumably no recourse for appeal by the complainant to a third party.

Rezoning issues and noise levels

Rex's application in 2013 to the YPDC to have 5,000 hectares of land including and surrounding the Hillside Mine site redesignated from Primary Production and Coastal Conservation Zone to Mining seems to be based on its need to increase the permissible noise levels in the vicinity of the Mine site.

According to the MLP,

"The derivation of the applicable Noise EPA criteria is particularly dependent on the Council land use zones that Rex's proposed Mining Lease spans. In this case, the proposed ML spans the Primary Protection Zone and the Coastal Conservation Zone

*requiring an average indicative noise factor to be calculated for the noise source.
Based on advice received by Council the most appropriate Noise EPP land use category
applicable should be Rural Industry.*

According to the EPA's Environment Protection (Noise) Policy 2007 (see table below), indicative noise levels vary depending on the zoning allocated to the site/area in question. Permitted noise levels are clearly higher in an area designated as 'rural industry' than an area classified as 'rural living' or 'residential'.

Given the size and complexity of the proposed Hillside mine, classifying it as 'rural industry' also seems inappropriate

Land use category	Indicative noise factor (dB(A))	
	Day	Night
Rural Living	47	40
Residential	52	45
Rural Industry	57	50
Light Industry	57	50
Commercial	62	55
General Industry	65	55
Special Industry	70	60

The Government, DMITRE and Rex need to provide

- **unconditional guarantees that the potential impacts outlined in Table 8.3-23 will not occur, in line with a recent comment by the Minister for Mineral Resources and Energy, Mr Koutsantonis that "the first principle of mining is 'do no harm'"**
- **evidence that, if mining approval is granted, there will be stringent, external and independent monitoring systems in place that will identify problems and implement remedial responses immediately.**