

DRAFT WORKING GROUP RESPONSE TO DRAFT NOISE MANAGEMENT PLAN

1. **Need for community measurement criteria re. what constitutes “public nuisance” and adverse impacts” from their perspective.**

DSD assumes that no public nuisance impacts will result if Rex meet the noise criteria. However, these limits, ostensibly based on YP Council Zoning Levels (but later increased by 5 db(A) during negotiations with Rex), take no account of what local residents consider to be ‘public nuisance impacts’ or ‘adverse impact on amenity’ (see MP p.13) from a large scale mine operating in close proximity 24/7.

Requirement: Performance indicators/measurement criteria be developed by Rex in consultation with the community to define “public nuisance impacts” and “adverse impact on amenity”.

2. **Noise levels can be increased; Page 8: Condition 11:** *Rex can exceed stipulated noise levels if Director of Mines is satisfied that, based on info provided by acoustics expert, noise from mine will not cause adverse impact at sensitive receiver due to ambient noise, limited duration and /or frequency of occurrence of activity.*

- Reliance on information/advice from an external acoustics expert unfamiliar with the local environment and community is unacceptable.

Requirement:

- Community must be informed and consulted beforehand of Rex’s intention intends to seek approval to exceed stipulated noise levels
- Community-derived measurement criteria (see Point 1 above) must inform any assessment of whether such increases would cause adverse impacts at sensitive receivers.
- Community must also have input into determining how long such exceedances can stay in place. Temporary or permanent?
- These commitments much be included in MP.

DSD comment: *DSD expects that Rex would engage with the local community in the preparation of any application to exceed their current noise limits, to ascertain the community’s views on what they consider an acceptable level of noise. (DSD response to questions re ML conditions – dated 3.7.15)*

3. **Pre-mining tenement agreement changes resulting in higher noise limits**

1. The original noise limits offered to Rex by Government on 29th July 2014 (and ostensibly based on YP Council Zoning categories) were subsequently increased after negotiations with Rex;

- Noise levels for the Primary Production Zone increased from
 - 51 to 56 dB(A) during the day and
 - 44dB(A) to 49 dB(A) during the night
- Noise levels for the Settlement Zone increased from
 - 51dB(A) to 54 dB(A) during the day and
 - 42 b(B) to 47 dB(A) during the night.

2. Rex has also been exempted from EPA requirements re new mines: Appendix 5.6B of MLP noted: *“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 Copper Project consultation process, it was agreed that the planning penalty does not apply in this case”*. Rex justified this on the basis that *“strict compliance with the planning criteria, under worst case conditions, is neither reasonable or practicable to achieve”*.

If the original noise limits had not been increased and the EPA requirements re new mines had been imposed, the noise limits for the Hillside mine would be as follows:

- Noise levels for the Primary Production Zone:
 - 46 dB(A) during the day and
 - 39dB(A) during the night
- Noise levels for the Settlement Zone increased from
 - 46 dB(A) during the day and
 - 37 dbB(A) during the night.

Both decisions were made without any reference to or input from local residents or, we understand, from YP Council.

Question

- What implications does this have for public amenity.

This underscores the need for Rex to take on board DSD’s comment that: The limits set by the EPA are a minimum legal requirement designed to prevent public nuisance. Rex should also work with the local community in the development of the PEPR to make sure that community expectations are met. (DSD response to questions re ML conditions – dated 3.7.15)

4. Construction noise- time restrictions?

- EPA (Noise) Policy 2007: *“Construction activity with adverse impact on amenity must not occur on Sundays, public holidays or between 7am and 7 pm. (Noise and Vibration Management Plan – AECOM, p 11)*

Questions

- What does EPA define as “adverse impact on amenity”?
- Do these time restrictions apply to Hillside during road construction?

5. S. 2 Condition 10: mine generated noise versus ambient noise.

- Noise limits apply to noise emitted by the mine itself.

Questions:

- How accurately can mine-generated noise be differentiated from ambient noise?
- Given that real time monitoring cannot differentiate between these two components, how will Rex use this monitoring to determine if and when mine generated noise limits are being exceeded?
- How subjective is this decision, and to what extent is it subject to independent review? ie : does it allow Rex to claim that an exceedance is due to ambient noise, not mine noise?

- This problem doesn't seem to be resolved by attended noise monitoring and noise loggers, because
 - Of limited attendance time (15 mins at night time only) and 7 – 14 day noise loggers
 - Discretion re when and where to undertake this attended monitoring rests entirely with Rex.

6. Need for more extensive baseline measurement

- Given the above, baseline noise monitoring in the 12 months prior to any construction at Hillside seems critical. This would give an accurate and detailed understanding of levels, sources and diurnal/seasonal variation in ambient noise at key off-site locations pre-mining and provide a baseline to help identify the relative contribution of mine-generated noise to total noise levels once construction/operation starts.
- The baseline measurement done as part of the modelling for the MLP is totally inadequate for this purpose because of the limited time frame over which it was conducted. It involved unattended noise monitoring at six locations surrounding the proposed mine and port sites over a two week period 14-28 August 2012 (MLP Appendix 5.6A.). We are not aware of any further noise monitoring activity outside of the mining tenement area.

Recommendation: a period of baseline measurement (at least 6 months) should be undertaken prior to any work commencing at Hillside (including construction).

7. S 2 C 13: If noise limits are exceeded, Company must immediately cease activity that led to breach.

Question:

- How accurately can Rex identify what caused the breach?
- How quickly can they respond to shut down the cause of the noise?

8. When is exceedance not an exceedance?

- *Environmental Noise Impact Assessment – Resonate Acoustics pages 6-7: “exceedance of the recommended criteria does not necessarily mean that the development will be non-compliant. Following matters should be considered:*
 - *the amount by which the criterion is exceeded*
 - *the frequency and duration for which the criteria is exceeded*
 - *the ambient noise that has a noise level similar to the predicted noise level*
 - *the times of occurrence of the noise source*
 - *the number of persons likely to be adversely affected by the noise source and whether there is any need for quiet*
 - *The land uses in the vicinity of the noise sources.*

Questions:

- What does this mean for Hillside and nearby residents?
- Who determines whether exceedance equates to non-compliance? Rex or DSD?
- Using what evidence?
- What role does community have in this decision?

9. Modelling – MP p. 9

- Question accuracy of baseline measurements given failure to collect noise levels 24/7 for sufficient time period.
- Assumptions built into model can't be validated until operations commence.

10. Key noise risks:

Question:

- Given noise levels of most of plant at Hillside, how will Rex meet conditions; eg
 - Mobile plant – haul trucks @ 116 dbs
 - Excavator with rock breaker - 120 dbs
 - Primary crusher: 119
 - Hopper 107
 - SAG mill 121
 - Copper regrind 109

11. Proposed mitigation strategies

- Page 13: waste rock storage facilities: *“designed to provide shielding from general on-site operations. Won't shield noise from haul trucks dumping on top of WRDs , esp eastern WRD which will impact esp. on RP.*
- Page 13: *should site specific monitoring or real time monitoring indicate adverse noise impacts from the mine, REASONABLE and PRACTICAL measures to mitigate noise at affected receptors will be INVESTIGATED. See also page 14: restrict operations during adverse weather conditions on outer stockpile faces,... where practicable.*

Question:

- What involvement will the community have in determining what is reasonable and practical?

Recommendation:

- As an additional mitigation strategy to provide at least some noise/dust/lights screening for Rogues Point, the coastal side of St Vincent's Highway road diversion especially at northern end from where road starts to diverge until it reaches the coast, should be revegetated asap with mallee or similar trees.

12. Monitoring

Continuous real time noise monitor: noise monitoring station + real time audio link

- Page 19: Allows noise levels and local met. data to be analysed and compared against noise compliance predictions. **Question:** What does Predictions mean in this context?
- *Real time audio feed to identify contributing noise sources relating to displayed real time noise levels.* – **Question:** how does this work?
- **Question:** Will there be a graded “alert” system similar to the real time dust monitors, alerting Rex to possibility of exceedance and allow mitigation strategies to be implemented BEFORE exceedance occurs? See Page 19: *“real time noise monitoring will be programmed to alert key Hillside Mine personnel when trigger noise level is reached”*. **Question:** Does the term *trigger* mean an actual exceedance or an early warning of an exceedance?

- Page 13: A real time audio link will be provided at key locations to enable quicker discernment of influencing noise sources. **Question:** Which locations?
- See earlier discussion and questions re real time noise monitoring's inability to differentiate between mine generated and ambient noise levels.

Attended monitoring: ie sound level analyser, noise logger

- Seem to be three components for noise compliance audits;
 - Sound level analyser
 - Noise logger
 - Attendance by acoustics engineer.

Question: What does sound level analyser do compared with noise logger?

- Page 20: *used to quantify and describe acoustic environment at each monitoring location. There results to be compared with noise criteria. Allows for accurate determination of contribution made by mine to ambient noise levels.* **Question:** How can this very intermittent monitoring process be used to measure compliance if not done in conjunction with real time noise monitoring at the same site?
- If this is the only way to come to understanding of differentiation between ambient and mine generated noise, then during construction and first year at least of operation, needs to be undertaken almost continuously.

- Page 21: Noise loggers

Questions

- What are they?
 - What do they measure?
 - What **can't** they measure compared with attendant monitoring?
 - Why are they only left in place for between 7 and 14 days once every one to three months.
 - And why this lack of specificity – ie is it one month, 2 months or 3 months?
- Page 21: frequency
 - One 15 minute measurement by acoustics attendant and then another 15 minute observation when noise logger collected –both attendances at night - seems extremely limited. Given the very rapid shifts in noise levels over any 24 hour period, due to changes in wind direction/strength, rain events, whether tide is in/out etc.... a 15 minute observation seems meaningless.
 - Once every one to 3 months? This means that at any given location, such as Pine Point or Rogues Point, if observations are conducted on a monthly cycle (ie two observations per month per logger placement) the total time spent by an acoustics attendant would equate to $12 \times 2 \times 15 \text{ minutes} = 6 \text{ hours}$ over a 12 month period (all during the night time).
- Questions:**
- How can this be used to determine whether noise limits are being met, especially at sites such as RP and PP where no real time monitoring is currently planned?

- If this is the only way to come to understanding of differentiation between ambient and mine generated noise, then during construction and first year at least of operation, why isn't it being undertaken almost continuously.
- Night only measurement: Page 21:
 - Page 21: *"will be sufficient to prove compliance by monitoring during night period with assumption that compliance"* would be achieved during day. The assumption that day time levels will be higher than night time has not been verified by comprehensive baseline measurement. Also assumption people have greater tolerance to noise during day than at night not tested with local community. Note: rock breaker (120+ dbs) will not be used at night, but will be used during day, thereby adding to day-time noise levels.
 - Page 21: monitoring only at night because *"wind during the day is likely to be above speeds during which monitoring can be effectively done"*.

Questions:

- Assumes less wind at night than day – where is evidence for this?
- What is the wind speed cut-off point above which monitoring becomes ineffective?
- How useful is this method if it is restricted to times of low wind speeds, especially given the windy nature of the area at and around Hillside?
- Selection of observation times:

Question: How will the times/locations of attendant monitoring be selected? Seems to provide Company with considerable discretion re when and where to conduct these attended monitoring sessions – ie to select monitoring times to guarantee low noise level readings at any particular receptor. Eg measure at RP when northerly wind blowing and measure at Pine Point when SW winds blowing.

Location of Monitors:

	Noise monitoring station + real time audio link – unattended, continuous*	Sound level analyser + noise logger (attended 1.3 months)#	Sound level analyser – attended 1-3 months)#
Receptor 11; farm house	C1		A2
Receptor 13: farm house	C2		A3
Receptor 25; farm house	C3		
Receptor 34; farm house	C4		
Receptor 35: farm house		A5	
Rogues Point		A1	
Tank - Sandy Church Rd		A4	
Pine Point		A6	

* Purpose = operational noise management # Purpose – noise limit compliance audit

- All 4 real-time monitors are located inland. In at least the two inland sites to the north of the mine, some of the mine generated noise is likely to be screened by undulating, elevated topography between the house and the mine site.

- No real time monitors at either PP or RP and in neither case there is very little, if any, topographic screening between these locations and the mine site.

Rogues Point:

- RP does not have a real time noise monitor – only an attended sound level analyser + noise logger even though there are a number of permanent residences located at southern, most exposed section of Rogues Point.
- Noise exposure likely to be very high. Reasons similar to that for high dust exposure (see WG response to Air Quality Management Plan for details) : namely:
 - Proximity to Eastern WRD + length of time (years) over which it will be used + % of dumping that will occur there compared with other WRD to west.
 - Direction of prevailing winds
 - Fact that Eastern WRD located across the bay, not across land from RP – no barriers to interrupt noise

Requirement;

RP requires a real time noise monitor + attended monitoring/noise logger.

Pine Point:

- Like RP, PP only has attended monitoring, no real time monitoring. Yet, like RP, it is very close to mine site.

Waiting for feedback from Pine Point Progress Association but likely the requirements will be the same as for Rogues Point.

Black Point – no noise monitors at all.

Waiting for feedback from BP Progress Association

13. Reporting

- Page 20: *Independent acoustic engineer will carry out routine compliance audits on biannual basis* – ie very 2 years. This is unacceptable.
Requirement: Must be done at least every 6 months during first years of construction/operation and then at least annually, or following a sustained series of complaints.
- P.22: Rex will engage acoustic engineer within 3 months of commencement of earthworks.
- **Question:** What does commencement of earthworks mean? How long after road construction starts will this occur?
- P 22 – will report on performance of this Plan in ACR – every 12 months – not enough.
- **Question:** How frequently will Rex report attended monitoring results to community and in what form?

14. Community complaints process

- Need clearly specified time frames within which investigation and response to individual must occur.

- Each complaint must be followed up with complainant to see if satisfied with response.
- If not, need independent appeals process.
- All complaints to be recorded for public scrutiny on weekly basis.
- Page 16: *If landowner thinks noise criteria being exceeded..... attended noise monitoring units will be deployed– if mutual agreement can't be reached then **independent** review?*

Questions:

- Who will conduct independent review?
- How quickly can these units be deployed? Need to be there immediately complainant thinks criteria being exceeded, not the next day!
- Page 17; response to complainant will be provided **as soon as practical**.
Requirement: *as soon as practical* too open-ended. Need clear set of response targets: esp re.
 - time lag between complaint and investigation,
 - duration of investigation and
 - time taken to report back to complainant.

15. Breaches

Questions:

- Does each breach need to be reported to DSD and if so, within what time frame?
- Will the community be informed of each breach, the cause of that breach and Rex's operational response?
- See earlier comments re when exceedences may not constitute a breach of conditions.

16. Review of MP

- Doesn't specify a regularly scheduled review of the Management Plan; only if certain circumstances arise. Seems inadequate.
- Can community request a review if, in their view, mine generated noise is creating a public nuisance?

17. Performance indicators

- Page 23: lists minimisation of noise complaints as evidenced by trends in frequency and extent of complaint as a PI. By itself, this is insufficient. May be other factors leading to reduction in noise complaints – eg frustration from lack of satisfactory responses from Rex causing people to give up because continued complaining is perceived as a waste of time.
- As noted earlier, in consultation with community, Rex needs to develop a specific set of indicators or measurement criteria re what the community considers to be
 - Adverse impacts on amenity
 - Public nuisance impacts
 - Need to be in place before construction starts, and constantly reviewed as residents gain more first-hand experience of mine generated noise.
- Regular community satisfaction surveys auspiced by HMCV (as per recommendation in Air Quality WG Response document)

ISSUES RAISED AT COMMUNITY DISCUSSION SESSION 18th June 2017

- Do conditions apply during construction – yes
- Baseline monitoring?
- Location of real time noise monitoring – none at RP, PP
- Attended noise monitors – length of time acoustic engineer is on site
- Who is responsible for noise of trucks on highway – not Rex but DPTI issue
- No WRDs on SW side of mine – will this create sound shell for nearby sensitive receiver?*
- Effect of living below cliffs at Pine Point on noise levels*.

*Note: These 2 issues have not been raised in preceding document. While verbal response provided at meeting, a written response from Rex is requested.

Signatories to this document:

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Note: feedback still pending from Max Young, and Cathy and Malcolm Reddings