

**DRAFT AIR QUALITY MANAGEMENT PLAN:
DRAFT RESPONSE FROM COMBINED AIR QUALITY, NOISE ETC. WORKING GROUP**

A. CONDITIONS

1. Public health and public nuisance impacts: Schedule 2 versus Schedule 6:

- Schedule 6 Condition 1 states Tenement holder must ensure there is NO public health and/or public nuisance impacts from air emissions and/or dust generated by mining operations.
 - While DSD have indicated these conditions will be met if Schedule 2 conditions re dust limits are met, the Dept also stated conditions are the minimum Rex must meet (ie Schedule 2)
 - At the community meeting on 18th June, Rex presenter stated: *“It is not just about operating to compliance with the measurement criteria. It’s about minimising dust as far as possible”.*
 - This raises 2 issues;
 - What happens if local residents consider there is a public health or public nuisance impact from dust, even though limits are being maintained?
 - How can these community-perceived impacts be measured?
- **Recommendation;**
 - Performance indicators or measurement criteria to be developed by Rex in close consultation with the community, to identify and monitor what constitutes public health and public nuisance impacts from the community’s perspective.
 - These to be developed before any construction commences at Hillside.
 - Public Health and public nuisance indicators especially required in view of S. 2 Condition 5 (discussed below).
- Other criteria for which community-based indicators are needed:
 - “No adverse impacts”
 - “Maintaining acceptable levels of amenity” (p. 6 – draft MP)

2. Do S6 conditions apply during construction or only operation?

- Schedule 2 conditions do not state whether they apply to construction as well as operation.
- Schedule 6 C. 1: *no public health and/or public nuisance impactsgenerated by mining operation.* Also does not specify construction.
- Only Schedule 6. C 2 and C 3 specifically state it must apply during construction and operation.

Question Do air quality S2 and S6 conditions apply to construction and operation? If no measurement of PM2.5, PM10, TSP and TPP during construction, how can Schedule 6. Condition 2 and S 6.C 3 be assessed during this period?

3. No condition re cumulative effect of PM2.5, PM10 and TSP on human health – (ie how much total PM10, pm2.5 dust is an individual exposed to over a 24 hour period or over a 12 month

period, for example) This seems to reinforce the need for community-based indicators for public health impacts.

4. **Schedule 6, condition 2; no loss or abundance or diversity of native vegetation through dust contamination, deposition during construction, operation and post mine completion.**

QUESTION: Is this dealt with in the Native Vegetation Management Plan (esp wrt native orchids)?

If not,

- How will this be monitored
- When will that monitoring commence?
- Monitoring frequency?
- Rex strategies for rectifying problems if identified?

5. **Schedule 6, condition 3: no impacts on agricultural productivity during construction, operation and post mine completion. Includes:**

- Reduction in crop yield
- Reduction in grain quality
- Adverse health impacts on stock
- Performance indicators
- Measurement techniques,
- What types of monitoring
- Commencement of monitoring – start of construction?
- Monitoring frequency
- Rex strategies if problems identified
- What compensation/remedial action taken to fix the damage caused

Draft MP – page 21: *to assist in reviewing cumulative dust impacts around the Hillside mine, consultation and data sharing arrangements will be explored with neighbouring services”.*

This is too vague. No specific details about who, what, when, how measured.

DPC comment re this condition: *“Details of monitoring program and Rex’s response to identified contamination must be included in the PEPR – following adequate stakeholder engagement”* (*DSD response to questions re ML conditions – dated 3/7/15) .

THIS CONDITION WILL BE DISCUSSED AT UPCOMING FARMERS MEETING

6. **PM2.5 - Schedule 2 condition 3.1**

- NEPM dust concentration limits set for PM2.5 (p 6) – according to Andrew Q -- 25 ug/m³). We understand NEPM standards for PM2.5 currently being assessed. If limits set at below 25 ug/m³, will this be applied to Hillside?
- Schedule 2 Condition 3.1: allows Rex to stop monitoring PM2.5 after 1st year of operations if Director of Mines is satisfied Rex has
 - Has complied with PM 2.5 conditions for 1 year
 - Proves PM10 can be used as indicator for pm2.5

Question:

How valid is it to cut off PM2.5 measurements after one year of operation when the operation will be very small, there will be no blasting and little haul truck movement and PM2.5 poses greater risk to human health than PM10.

Recommendation: PM2.5 monitoring should be maintained until at least end of Year 5 and probably year 9, esp. given the following:

- Page 12 (draft MP): “Key risks identified in modelling is potential for exceedance of PM2.5 criteria in Year 9 to Receptor 25”.
- Dust is, according to draft MP, going to be most pronounced in Yrs 5 and 9

7. TSP – Schedule 2, condition 5(1)

- This allows Rex to exceed TSP limits if it satisfies Director of Mines that in so doing, there will be no increase in public nuisance.
- **DSD comment:** “DSD expects Rex to engage with the community in relation to any proposed change in existing compliance limits, prior to Rex making a submission”. (*DSD response to questions re ML conditions – dated 3/7/15). This is not stipulated in draft MP.

Recommendation

- Community must be informed and consulted beforehand of Rex’s intention to seek increase in limits. This needs to be stated in MP.
- Clear set of criteria or indicators needed to measure whether any increase in TSP limits will lead to increase in public nuisance (also see discussion Point 1 above).
- These indicators must be developed by the community in consultation with Rex.

Rationale:

- According to DPC, there will be no public nuisance impacts if Rex meets S2 condition 5 limits. In other words, what constitutes public nuisance for the purpose of Condition 5 is defined according to the limits set by that condition.
- The draft MP reflects this view - page 8: “privately owned land is considered dust-affected when dust levels exceed the criteria at any residence on privately owned land”
- By implication then, any increase beyond those limits would constitute a public nuisance.
- However, this “proxy” indicator of public nuisance ceases to have meaning if TSP emissions are increased at the discretion of the Director of Mines.
- This means there are no criteria or performance indicators for determining whether any increase in TSP emissions will constitute a public nuisance.
- DPC comment: “Public nuisance will be defined through scientific justification of alternative TSP. Up to Rex to investigate. Rex should also consult with community on what they believe constitutes public nuisance”. ... the PEPR will describe how it will be measured.(*DSD response to questions re ML conditions – dated 3/7/15).
- **The draft MP does not deal with this.**

B: CONTROL MEASURES

Mitigation strategies

- Page 13: *“to the extent possible, plan activities in areas close to mine boundary..... Use of phrase “to the extent possible” suggests it may not always be viable.*
Question: how flexible are mining operations (eg redirection of haul trucks) to allow this to occur, esp. as unfavourable conditions may persist for many days (eg south easterlies during summer?)
 Page 17: *“Where relocation not possible, temporarily halt activities”*. Again, if conditions persist for days, how viable is this option?
- Haul trucks – no indication of how to control dust from haul truck loads
- Water trucks: Page 15: three water trucks – what size and capacity? Compare with
 - Klien’s Point: one 70,000 litres
 - Arium one 15,000 litres
- Blasting;
 - Page 16: *“based on assessment of weather conditions ..to ensure no excess dust or fume emissions”*. How flexible can this be? Halt operations if unfavourable weather conditions persist for entire day?
 - Page 16: *Wherever practicable, blasts will be fired in suitable weather conditions....*
 What if this is not practicable – will blasts still go ahead?

C: MODELLING:

Baseline data collection

- 18th June meeting raised questions about the validity of non-local baseline data used for dust modelling at Hillside.
- Instead, baseline data used for modelling relied on:
 - PM2.5 - averaging period 1 yr - based on 2008 Netley monitoring data (where is Netley?)
 - PM2.5 - 24 hour av. 40% of background PM10 concentration at Schulz Reserve, Whyalla
 - PM10 – 24 hour average – 70th percentile of Schultz Reserve, Wuallyl for 2009- 2012
 - TPS – 1 year av. Annual average for site data 2012 – 14 (no mine operating)
 - TSP 24 hr average – 70th percentile for site data
- This was necessary because the baseline dust data collected for nearby locations (Rogues Point, Pine Point etc) were unusable.
- Management Plan - P 11 proposal to *“collect sufficient on-site PM10 data to establish a more representative air quality baseline - during early operations”*. Seems inadequate because:
 - the data will only be collected within the mine site, not at each sensitive receptors
 - no PM2.5 data will be recorded
 - will be collected AFTER operations commence, not before.

Recommendation: Need for baseline data collection at sensitive receptors at least 6 months prior to construction

D. AIR EMISSIONS: PM2.5, PM10, TSP

1. PM10/2.5 calculations/calibration of equipment

- Rex will base averages on hourly readings. Why not 10 minute readings?
- Calibration of equipment (page 23)
 - Questions:**
 - Will an independent agent (other than a Rex consultant/employee) oversee and regularly check the accuracy of Rex’s calibrations?
 - Does DSD have a monitoring role to ensure calibrations are accurate?
- Anomalous values:
 - MP page 27: selection of data for inclusion in calculation of averages: *visual analysis of raw data to remove anomalies:*
 - Negative values: *Negative values recorded are not removed unless the data is considered anomalous or below 5 ug/m3. As hourly values are averaged over 24 hours, negative values (due to moisture) will compensate for the over read in the preceding values and should therefore be left in to avoid positive bias in the measurements.*
 - Positive values: *Extremely high values and other suspect values (eg repetitive readings) should be reviewed ... to determine whether the data should be included or excluded”*

Questions/comments:

- Implication that all extremely high values (limits not specified) are “Suspect”. Why? .
- If negative values are left in, and extremely high values are excluded, won’t the averages be skewed to favour of underestimating dust emissions?
- Will the determination of which values to include/exclude be left to Rex’s discretion?
- Will a log be kept of each negative or high positive readings removed by Rex?
- Will this adjustment process be subject to independent audit by DPC?
- Where are the safeguards for the community against Rex manipulating the data in their favour?
- Power failure: (page 27)
 - no readings during power failure. Is that limited to regional blackouts only or does it also apply to internal power failures?
 - How many outages (f any) are Rex allowed due to their own maintenance regime, rather than regional blackouts?
 - *At least 75% of hourly data required for valid daily averages:* does that mean that, even if 100% values are present, Rex can select only 75% of these for their calculations?

2. Monitoring Locations – continuous real time monitoring

- The draft MP (page 13) makes it clear that the location of these monitors is fundamental for compliance monitoring and effectiveness of reactive control measures: eg
 - control measures “*triggered through air quality monitoring by management + compliance monitors.*
 - *Monitoring-based trigger alert system provides notification to enable operational activities to be adjusted*
 - *Management of short term dust episodes primarily undertaken using real-time monitoring (page 21)*

- On-site visual inspections: won't detect PM2.5 or PM10 – only TSP – so ***again location of monitors critical***
- Currently only five real time monitors proposed; Locations - Table 8
 1. Some distance from Rogues Point near highway – although contradiction about when and for how long (see below)
 2. Receptor 13: one house
 3. Receptor 25:
 4. Receptor 34;
 5. Adjacent to Pine Point
- ***What is missing***
 - *nothing due north between RP and Receptor 13,*
 - *nothing due NW between Receptor 13 and Receptor 25*
 - *nothing at Black Point*
 - *nothing along eastern edge of WRD along Gulf.*

3. PM2.5 monitoring: how many locations?

Page 23: “five BAM are installed to measure PM 2.5, PM10 and TSP concentrations in north, south, west of mine site” . Yet table 8 does not indicate all three of these components will be measured at each site. Instead, states:

- Near Rogues Point - - PM10
- Receptor 13: PM10, **PM2.5** (year 1 of operations)
- Receptor 25s PM10
- Receptor 34: PM10
- Pine Point PM10

Table 8 therefore suggests only one site where PM2.5 will be measured and that for first year of operation only.

Questions:

- Is there only one PM2.5 monitoring station?
- Will this monitoring cease after one year of operation? (as indicated by reference to PM2.5 at Receptor 13)
- If so, is Rex pre-empting a decision by Director of Mines for Rex to use of PM10 as substitute measurement for PM2.

Concerns:

- What contingencies are in place if PM10 not acceptable indicator of PM2.5
- Measuring for first year of operation is unacceptable (see earlier discussion)
- Even during that first year, to prove the company is complying with the PM2.5 limits, surely it is essential that this monitoring be undertaken at **all** BAM locations not just one.
- Why locate the only PM2.5 monitor at a single farmhouse to the NW of the mine when other locations (eg Rogues Point and Pine Point) have multiple permanent residences.

Recommendations:

- PM2.5 must be monitored at all five BAM locations

- that monitoring must continue until at least year 5 and preferably to year 9
- Any decision by Director of Mines to allow pm10 measures as substitute for PM2.5 must be done in full consultation with community (see earlier discussion)

4. Monitoring at Rogues Point

- Location:
 - Page 22: “location generally represents the closest privately owned residential areas to the site” – not at RP. This site is well away from nearest occupied house in middle of paddock . Not acceptable because:
 - Lack of proximity to houses at southern end of Rogues Point.
 - This position totally fails to capture dust coming off E WRD and moving across the bay directly to RP.
 - At 18th June meeting, Rex presenter stated “ that monitors were located between the mine and RP, so any dust that travels from the mine towards RP will be somewhere in this [inland] location” . This is not accurate – as noted above, dust will travel across the bay to RP from the Eastern WRD.
- When will monitors be positioned there?
 - Table 8 of draft MP: “NE of site **AFTER** year 1....: monitoring to expand to this site when monitor from use of PM2.5 becomes available to also cover monitoring in this direction” – unacceptable. Means this location will be without any real time monitoring throughout construction (18 months) and first year of operations *(total – 2.5 years.) Yet there are a number of permanently occupied dwellings at the very southern end of RP.
 - Power point presentation: Indicates monitor at RP until end of 1st year when it could be shifted - this suggestion even worse. Means that RP would be left without any real time monitors for the duration of the mining operation at Hillside even though it will be the community most affected by dust emissions from the mine.
 - Statement by Rex representative at Pine Point meeting: *That has been updated. There will be a monitor there from day 1. ...* In response to question about whether it will be shifted, responded: *No.*
 - **Which is it????:**

Requirements

- 1. Real time Monitors measuring PM10/2.5 and TSP must be located immediately adjacent to most southern permanently occupied house at Rogues Point close to the coast – not inland.**

Because of the curvature of the coast, dust from the extended Eastern WRD will travel directly to these houses across the bay, not overland. Hence, monitoring needs to pick up that dust as well as that which comes overland from more westerly sections of the mine.

- 2. At a minimum, monitors must be in place and functioning when construction commences and remain there for duration of operations**

Justification:

Rogues Point will be severely impacted by dust emissions for the life of the revised mine plan for the following reasons:

- Upwind location: MLP; 2013, 5-51’’: *most winds originating from SE, S and WSE*’’. RP upwind from all of these directions. Wind roses (see page 16, Pacific Environment report shows this location is exposed to winds in at least three of the four seasons (summer, autumn, spring) with strong westerlies also felt in winter.
- Increased exposure to emissions from extended eastern WRD as per changed mine plan. Under the revised plan, the WRD to east of site now covers a much greater area, and the timeframe over which dumping will now occur has extended - from 4-5 years to at least year 10.
- The Eastern WRD is located within approx. 2 kms from RP directly across a bay – so dust will travel over water, not over land. This means no physical (land) barriers to block out the dust from this source.
- The Eastern WRDs accounts for
 - a significant % of surface haul road time: (see table 1 below) AND
 - Majority of dust at mine site will be generated by haul roads (see table 2 below)

Table 1:

	Year 0	Year 1	Year 5	Year 9
NE WRD	38%	0%	20%	82.6%
SE WRD	25%	39%	25%	7.6%

Updated consultant’s report page 14

Table 2

	Yr 5	Yr 9
Annual TSP	62%	50%
Annual PM10	44%	39%
Annual Pm2.5	42%	38%

8. Monitoring at Black Point

Awaiting feedback from Progress Association

9. Monitoring of farm land

Awaiting feedback from farmers meeting

10. Monitoring on eastern side of lease adjacent to Gulf St Vincent

- No real time continuous monitors along coastal side of eastern WRD immediately adjacent to Gulf.
- Monitoring of this coastal strip was a key issue raised at the 18th June meeting.
- Rex response – “there are no houses there” - shows a distinct lack of understanding of local concerns re the potential contamination of Gulf waters and marine life, and its attendant implications for professional/recreational fishing, the new marine reef at Rogues Point and tourism.
- Rex’s response at the 18th June meeting – that mobile monitoring stations could be moved to this stretch when weather conditions requires it - is not a sufficient solution for the following reasons:

- Compared with BAMs, they lack the accuracy and precision of real time monitoring: see p.22 : *“To collect data at sufficient resolution for dust that may leave the site”... “does not require high level of accuracy”*. At the meeting on 18th June, Rex presenter noted that *“for boundary or early warning monitoring, don’t need such precise numbers – just need to know whether dust is going up or if its elevated”*. So doesn’t sound very precise.
- The decision re the deployment of mobile monitoring stations (when and for how long) rests entirely with Rex.
- The speed at which these monitors can be relocated may be too slow to pick up spikes in emission levels. 18th July meeting – noted that wind changes from NW to W occur very quickly and are amongst the strongest winds experienced here.
- The need for monitoring along this stretch of coast has become more critical because of
 - the substantial size increase under the new mine plan of the eastern WRD,
 - increase in longevity of use of Eastern WRD (from 4 or 5 years to over 10)
 - increased closeness of E WRD to the Gulf.
 - Potential impacts on the new artificial reef at RP which, at its northern end, is approx.. 1.5- 2 kms from the eastern WRD
- Marine monitoring as described in the baseline study by Cooe will potentially detect problems only after damage has been caused. An ongoing early warning system is needed here.

Requirement:

- In order for Rex to demonstrate full compliance with all air quality and marine conditions, and to allay community concerns real time permanent monitoring must be located at some mid point along the eastern side of the tenement, adjacent to the Gulf.
- The issue of power supply must be resolved to allow this to occur.

11. Monitoring of chemical and toxicological composition of air emissions

- *Condition 6, Schedule 2: Tenement holder must measure chemical and toxicological composition of dust emissions.*
- DPC comment: *“The lease contains air quality outcomes dealing with protection of public health and environment, including toxicological impacts on receptors.... The **PEPR will provide details on Rex’s response and management strategies** if testing and monitoring identifies dust chemical concentrations could be an issue. (DSD response to questions re ML conditions – dated 3/7/15)*
- This information is not contained in the draft MP. The lack of specificity - see page 24 - is of concern.

Questions:

- *Page 24: Monitoring for particular matter must comply with AS/NZS 3580.... Methods for sampling and analysis of ambient air* What are the standards?
- What standards must be met, what will be measured and how often.
- Will composition be determined for PM10, 2.5 and TSP? . Page 24 indicates 24 hour period every 6 days to measure TSP but no mention of PM10 and 2.5. This needs clarifying.
- How often will the data be analysed?
- How will the results be reported to the community and how frequently?
- What strategies will Rex put in place if unacceptable levels identified?

- No. and location of monitoring stations?
 - Will the high volume air sampler co-located with weather station be the only monitor for this condition?
 - If not, what other monitoring sources will be deployed? Where?
 - If this is only location, why here?
- Uranium - the MLP Response Document stated the Hillside operation will increase U238 and Radium 226 in soil concentrations on the southern edge of the mine by 12% and 5% resp. Why is there no monitoring of the composition of PM10 and PM2.5 in this southern section?

E. MONITORING of TDD

1. Location of monitors – gaps

- No monitors along coastal sides of eastern WRD other than at the far north and far south. Hence, no indication of amount of dust being deposited along coastal strip.
- Location of dust monitor at RP a long way from nearest residences. Needs to be immediately adjacent to houses on southern end of RP, especially given their vulnerability to dust blown across the bay from the Eastern WRD.
- No monitors at Black Point – *awaiting feedback from Progress Association .*
- No monitors immediately north – ie midway between M19 and M2.
- Farm locations – *awaiting feedback from farmers meeting*

2. Sampling period:

- 30 days continuous - does this mean deposition will be collected every 30 days, but monitor remains operational the entire time?

3. Compliance assessment and measurement:

- P 19 states;
 - compliance will be demonstrated by investigating spatial representation of winds and operational activities
 - Regional dust events – determined from comparative results of upwind and downwind monitoring?
- How feasible is it to differentiate between mine generated and background dust, given that data are collected only once per month, during which time wind speeds, direction etc are likely to have varied considerably?
- When will collection commence – pre-construction?
- Are all dust deposition samples analysed by independent body?
- What is being analysed? Presumably volume of deposition (as per condition), but no reference in MP to chemical and toxicological analysis of TDD. However, is this required to ensure Rex meets S6 Condition re no contamination of soils, crops etc.

Feedback to be sought from Farmers meeting

F: MONITORING of DUST FROM BLASTING

- Page 16: ensure no excess dust or fume emissions:
 - What criteria used to assess “excess fume emissions”?
 - What monitoring in place?

G: WEATHER STATION:

- P 24: Why this location. Given the strong on-shore winds especially in summer why is it located in the lee of the eastern WRD?
- P 25: 4 additional weather stations situated around mining operations area – co-located with compliance monitoring stations – which ones? There are presumably 5 BAMS so why 4 not 5 additional weather stations?

H: COMPLIANCE REPORTING

- P 18/ 25: annual compliance report insufficient for community accountability.
- Is the annual compliance report the main document the regulator will rely on?
- Regular updates to HMCV – should to be monthly and should be made publicly available.
- Operational responses – eg decision to halt activities – will community be informed when that happens?
- MP page 23: “Reporting to accord with Condition 9, s 2”. But this only applies to real time PM10 and PM2.5. Not TSP or TDD
 - How often will results of TSP and TDD be reported to community? Farmers may want monthly results because timing of dust deposition will have more impact in some months than others. *(Waiting for feedback from farmers)*
 - DSD response: *Any exceedance of TSP compliance criteria will constitute a failure – must be reported within 24 hours.* But given TSP and TDD based on monthly averages, there will clearly be a time lag from when deposition conditions were actually exceeded and when the monthly reading identified that exceedance.
 - Page 19: Any exceedance will be notified to DSD.
 - Will each exceedance be reported to community
 - What will be reported to DSD?
 - Will community be informed of DSD response?

I PUBLIC COMPLAINTS REGISTER

- As per condition 49, register needs to be public, on-line and updated at least monthly.
- What is missing:
 - A response must be provided to each complainant, even if no action taken.
 - Record of level of complainant satisfaction with Rex’s response.
 - If complainant not satisfied,
 - reasons for dissatisfaction
 - details of further investigation (if undertaken)
 - if no further investigation by Rex, provide complainant with contact details for specific Government Regulator
 - Time taken indicators: eg
 - Time investigation commenced/completed . (This is critical. Rex have indicated that, following a dust complaint, a person “will travel to boundary of site closest to complainant.” Any delay in doing so would render the investigation invalid because conditions may have changed).
 - Time to respond to complainant
 - Time to finalise complaint to satisfaction of complainant.
 - Complaints will inevitably be limited to TSP and (to a much lesser extent) TDD because of visibility. Unless there are clear performance indicators for health related issues,

complaints about PM10/2.5 will be very difficult to lodge and investigate. (see earlier discussion re need for community measurement criteria for health and public nuisance impacts).

J PERFORMANCE INDICATORS

- Page 28, 12. Only 3 listed:
 - Compliance with relevant conditions
 - Reduction in complaints
 - Compliance with MP.

Inadequate.

Additional requirements:

- As identified earlier, need specified performance indicators around community expectations re public nuisance and public health impacts, impacts on agriculture,
- Need for regular (eg 6 month or 12 month) community survey – possibly managed by HMCV
- Targets for responding to complaints: eg x% resolved within one day/one week/one month etc
- % of complainants satisfied with investigation outcomes
- 6 monthly community “satisfaction survey” re air emissions potentially auspiced by HMCV. Results to be published in YPCT, on HMCV website and distributed to stakeholders via HMCV email network.

K. MANAGEMENT PLAN REVIEW

- P 29: “Plan will be reviewed and if necessary revised to satisfaction of DSD and consultation with relevant agencies”. Community needs to be directly involved in any review, along with HMCV.
- If evidence of community dissatisfaction, need mechanism by which community can, itself, seek a review of the management plan.
- Should also be subject to ongoing review, not just annually, especially during early days of operation.

APPENDIX

Summary of questions/issues raised at Pine Point meeting; 18th June 2017

* *These have been incorporated/taken into account in preceding pages*

- Baseline data collection – questioned validity of the modelling which used baseline data from Whyalla. Require new baseline data collection .
- Location of monitors – esp real time monitors: concerns re
 - Rogues Point – located inland not on coast. And MP indicates won’t be there until end of first year.
 - Black point – none present
- New fish reef at Rogues Point raised – need to protect from dust

- Reliability of monitoring – calibration done monthly
- PM10/2.5 limits – do these apply nationally or only in remote areas? Response: National air quality standards – primarily set for urban areas where a lot of traffic, combustion emissions etc.
- Uniqueness of YP and location of Hillside mine – close to gulf, communities etc.
 - Variability of weather patterns – Rex need to get advice from 3rd 4th generation farmers re right spots to locate monitors.
 - Prevailing wind patterns vary from year to year. In wet years, mainly from SE and SW. In drought years as now, prevailing winds more from north.
 - Increasing frequency of winds from north and NW in recent years.
- Source of water for dust suppression – concern about salinity if using highly saline ground or sea water. Where does it run off to?
- Issue of increased mains water discussed – will it come down to Pine Point?
- Monitoring stations – how data will be relayed back to central point. Downloaded every 10 minutes and used to obtain an hourly average. Monitors also provide wind speed and wind direction to identify where the dust is coming from.
- No monitors on eastern side of gulf – Rex response: *“No houses there”*. Discussion of importance of marine life of Gulf and need for monitoring along eastern side of mine. Noted that when winds change from north to west, they are amongst strongest we get.
- Rex’s suggestion that dust monitoring requirements could be dealt with in marine MP not accepted.
- Rex noted need to put monitors where there are sensitive receptors. Gulf should be considered a sensitive receptor.
- Electricity requirements for monitors: real time monitors require electricity supply for air conditioning. Mobile monitors don’t.
- Real time data monitoring – how accessible are results for community
- Mobile monitors – purpose?

Signatories to this document:

Lauren Kakoschke (South Kilkerran Ag Bureau)
 Joy Wundersitz (YPLOG)
 Bob Sleath (Pine Point Progress Association)
 Dorothy Bradshaw (James Well/Rogues Point Progress Association)
 Peter Klopp (South Kilkerran Ag Bureau)
 Graham Mattschoss (Black Point Progress Association)
 Tania Stock (YP Council)
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Note: feedback still pending from Max Young, and Cathy and Malcolm Reddings