

HILLSIDE MINE COMMUNITY VOICE

BLAST MANAGEMENT PLAN



DRAFT

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Rex Minerals is developing the Hillside open cut copper / gold mine near Ardrossan, Yorke Peninsula.

In 2014, the Hillside Mine was granted a Mining Lease (ML) by the DSD, allowing the mine to proceed under a series of lease conditions.

During the ML process a significant number of submissions from community and government were received – the Response Document answering these submission remains a very important source of information about the project.

Rex revised the original project to a smaller copper / gold mine, and recently received an updated assessment outlining additional detail that should be included in the PEPR - the Program for Environment Protection and Rehabilitation plan for the mine.

The PEPR will outline how the mine will be operated in a socially responsible and environmentally sustainable manner and ensure compliance with lease conditions, and will be submitted to Government.

As part of the PEPR, the Company outlines a series of management plans particularly around environmental management and community interaction.



The ML Conditions determined by DSD form the basis of certain compliance criteria and what is required of Rex Minerals when it develops, operates and closes the mine.

Some lease conditions may be very specific in what, how, when and where an activity or monitoring must take place (e.g. air quality PM₁₀ 10 minute averaging measured on a 24hour basis – the monitoring data must be retained and remain accessible on an unrestricted internet site for the life of the mine).

Other conditions are not as specific, however the PEPR will outline plans of operations that will be undertaken on the ML and how the Company proposes to operate to be within compliance of specific lease conditions.

During preparation of the PEPR, Rex is consulting with stakeholders particularly in relation to:

- Detail of management control measures to mitigate impacts.
- Where monitoring is to take place – specialist consultants make location recommendations based on baseline measurements, operating experience and science, and these may be influenced by local considerations.
- The reasonable timing or frequency of the monitoring (unless specified by the lease condition).
- The manner of reporting and frequency of reporting associated with the monitoring of the results (quarterly/annually etc.).



The objectives of this BMP are to provide a framework for:

- ensuring compliance with all relevant statutory requirements;
- Rex Minerals Policies and Standards;
- implementing tools and practices to manage and minimise the impact of blasting from mining operations on the environment and nearby residences;
- providing details on blast management responsibilities; and
- maintaining an effective response mechanism to deal with issues and complaints.



VIBRATION THROUGH THE AIR (OVERPRESSURE)

- Is the pressure caused by a blast-generated shock wave over and above normal atmospheric pressure. It is measured in decibels.
- Air overpressure is often below the range of human hearing.

EARTH (GROUND VIBRATION)

- Measured as vibration velocity (in mm/s) and frequency (Hz).

FLY-ROCK

- Requires a blast exclusion zone.

GENERATION OF DUST AND FUME

- Refer to Air Quality Management Plan.



- Pre-blast environmental assessment, considering wind speed, direction, and meteorological conditions.
- Use initiation systems that minimise vibration.
- Use adequate stemming lengths and quality, to ensure maximum confinement of explosive charges minimising fly-rock and overpressure.
- Use suitable stemming material.
- Ensure adequate burden is present on all faces.
- Adhere to blast loading and initiation designs.
- The establishment of a fly-rock exclusion zone before every blast (currently 426m).



Blasting criteria derived from AS2187.2 – 2006, Australian Standard “Explosives-Storage, transport and use Part 2: Use of explosives” (AS2187.2).

Vibration criteria for the Hillside mine at residential premises.

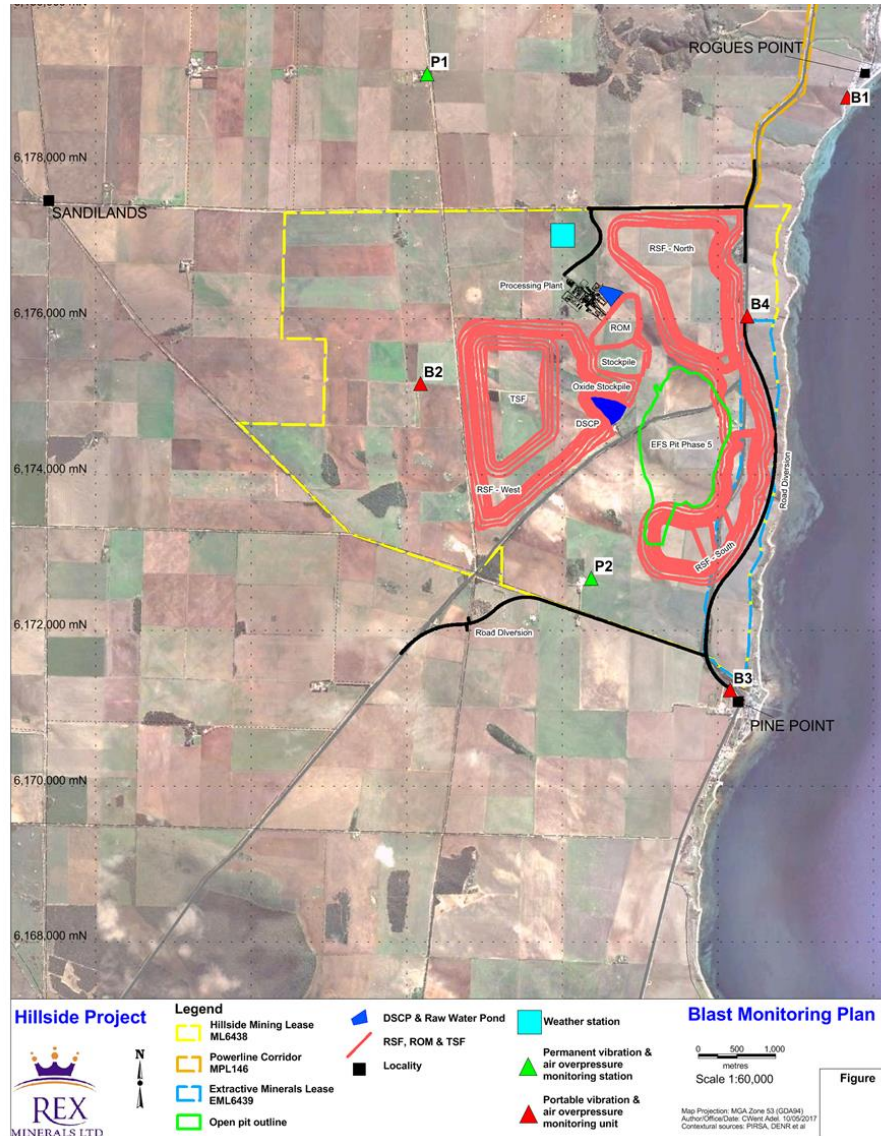
Parameter	Limits
Ground Vibration	5mm/s PPV for 95% blasts per year, 10mm/s PPV maximum unless agreement is reached with the occupier that a higher limit may apply.
Air Overpressure	115 dB(Lin) for 95% blasts per year, 120 dB(Lin) maximum unless agreement is reached with the occupier that a higher limit may apply.

Vibration criteria for commercial and industrial buildings or structures.

Parameter	Limits
Ground Vibration	25mm/s PPV maximum.

BLAST MANAGEMENT PLAN

MONITORING LOCATIONS



BLAST MANAGEMENT PLAN

TYPICAL BLAST OVERPRESSURE MONITORING STATION



WITH SOLAR PANEL POWER SUPPLY & AERIAL FOR DATA TRANSMISSION





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