

SOCIAL AMENITY MANAGEMENT Blast and Vibration Management Plan

Objective	<p>To:</p> <ul style="list-style-type: none"> • Ensure that statutory requirements and corporate standards are met; • Manage the operations in a way that minimises blast and vibration impacts to environment, neighbours and structures, and limits interference to mining production; • Review blast design and monitoring results to ensure limits are not exceeded; and • Keep the local community and regulators informed of activities where required and to respond quickly and effectively to issues and complaints. 													
Scope	<p>HVO Environmental Protection Licence boundary, including:</p> <ul style="list-style-type: none"> • Operating Pits • CPPs • Loading Points. 													
Key Environmental Issues	<p>Air blast overpressure and vibration impacts as a result of operational activities that may affect:</p> <ul style="list-style-type: none"> • Communities (Warkworth, Maison Dieu, Jerrys Plains) • Residences within zone of affectation • Residences beyond zone of affectation • Neighbouring mines • Sensitive buildings. 													
Performance Criteria	<p><i>Air Blast Overpressure and Vibration Limits</i></p> <table border="1" data-bbox="448 1137 1422 1357"> <thead> <tr> <th></th> <th>Limit</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Air Blast Overpressure</td> <td>> 115 dB (Lin Peak)</td> <td>95% over 12 months</td> </tr> <tr> <td>> 120 dB (Lin Peak)</td> <td>0% at any time</td> </tr> <tr> <td rowspan="2">Vibration</td> <td>> 5 mm/sec (ppv)</td> <td>95% over 12 months</td> </tr> <tr> <td>> 10 mm/sec (ppv)</td> <td>0% at any time</td> </tr> </tbody> </table>		Limit	Frequency	Air Blast Overpressure	> 115 dB (Lin Peak)	95% over 12 months	> 120 dB (Lin Peak)	0% at any time	Vibration	> 5 mm/sec (ppv)	95% over 12 months	> 10 mm/sec (ppv)	0% at any time
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Control Measures	<p>Control measures include:</p> <ul style="list-style-type: none"> • A program of regular monitoring, including identification of sensitive buildings; • Notification procedure for nearby residents; • Assessment of weather conditions prior to blasting and no blasting when unfavourable weather conditions area present; • Blasting to occur generally within the hours of 7am to 6pm Monday to Saturday, and no blasting on Sundays or public holidays unless otherwise agreed with the Department of Environment and Climate Change; • Ensuring good blast design and evacuating the area within 300 to 500 m of a blast to ensure safety from fly rock; • Road Closure Management Plan; and • Completion of a Ground Disturbance Permit prior to blasting activities to avoid damage to subsurface utilities. 													

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<p>Monitoring and Inspection</p>	<p><i>Monitoring</i> Real time air blast overpressure and vibration monitoring for all blasts.</p> <p><i>Inspection</i> Inspection of structures on neighbouring properties upon request as required in development consent conditions.</p>
<p>Incident Management</p>	<p><i>Incident Reporting</i> Incident reporting as per CNA Environmental Procedure <i>Incident Management and Reporting</i> (EP1.8).</p> <p><i>Complaints Management</i> Complaints management as per CNA Environmental Procedure Communications (EP1.9).</p> <p><i>Incident Response – Exceedance or Complaint</i> Investigate event and identify blast location, timing and climatic conditions to determine if additional management measures are required.</p>
<p>Performance Reporting</p>	<p>Reporting in Annual Environmental Management Report of:</p> <ul style="list-style-type: none"> • Monitoring results • Complaints and exceedances • Performance against implementation of control measures.
<p>Definitions</p>	<p><i>Adverse Weather</i> - Wind speeds in excess 3 m/s (at 10 m above ground level); and/or temperature inversion conditions in excess of 3°C/100m, and wind speeds in excess of 2 m/s (at 10 m above ground level).</p> <p><i>dB(LinPeak)</i> - The peak sound pressure level expressed as decibels with no frequency weighting.</p> <p><i>PPV</i> - The maximum velocity of a particle of the transmission medium, used in assessment of vibration.</p> <p><i>Temperature inversion</i> - A meteorological condition where atmospheric temperature increases with altitude.</p>
<p>Key Documents</p>	<p><i>Development Consents</i> DA 450-10-2003 – Conditions 4.12 to 4.19; DA 114-12-98 – Condition 6.2; and DA 215/97 – Condition 11.</p> <p><i>Licences</i> EPL 640.</p> <p><i>EMS Documents</i> RT Environment Standard Noise and Vibration Control (V1.0); CNA Environmental Standard Noise and Vibration Management (ES9); and CNA Environmental Procedure Blasting (EP9.2).</p> <p><i>Forms</i> CNA Ground Disturbance Permit; and CNA Environmental Risk Assessment Checklist.</p>