

Section 1.2
Pulp Mill Project Environmental Monitoring Program



Table 1.2.1 Environmental Noise – continuous monitoring (unattended)

Sub Program	Period	Objective	Locations	Frequency	Measurement Parameters	Reporting
Continuous Monitoring	<ol style="list-style-type: none"> 1. Pre-construction 2. Construction and commissioning 3. Operation 	<ol style="list-style-type: none"> 1. Define existing acoustic environment. 2. Monitor and control of noise emissions during construction and commissioning 3. To demonstrate compliance with licence conditions 4. Facilitate management, monitoring and validation of complaints 5. Provide data to facilitate noise control action when required 6. Check for 'background creep' 	<p>One location on pulp mill site</p> <p>One sound level meter shared between two locations in Rowella.</p> <p>Location(s) to be approved by the Director</p>	Continuous	<ul style="list-style-type: none"> ▪ 6 off $L_{An, 10min}$ statistical measurements (overall) ▪ 1/1 octave & 1/3 octave band spectra ▪ 1/3 octave $L_{An, 10min}$ statistics ▪ Exceedance event logging and sound byte capture ▪ Or as approved by the Director 	<ol style="list-style-type: none"> 1. Summary data reporting at 3 month intervals (seasonal) of DTAE agreed data 2. Correlate with weather data 3. Interpretation and analysis where appropriate 4. Reporting format to be reviewed and updated periodically as agreed with DTAE 5. Investigation and reporting of complaints as and when required as part of NMP for site 6. Review ongoing monitoring requirements with DTAE 2 years after commissioning is completed

Table 1.2.2 Environmental Noise – periodic monitoring (attended)

Sub Program	Period	Objective	Locations	Frequency	Measurement Parameters	Reporting
Periodic Monitoring (Seasonal Survey)	<ol style="list-style-type: none"> Pre-construction Construction and commissioning Operation 	<ol style="list-style-type: none"> Define existing acoustic environment. Monitor and control of noise emissions during construction and commissioning To demonstrate compliance with licence conditions Facilitate management, monitoring and validation of complaints Provide data to facilitate noise control action when required Check for 'background creep' 	<p>At least 9 positions in Rowella and on mill sites other than continuous monitoring locations</p> <p>Locations to be agreed with the Director</p>	<p>Seasonal (4 surveys/year)</p> <p>As required for investigations or special projects</p>	<ul style="list-style-type: none"> 6 off $L_{An, 10min}$ statistical measurements (overall) 1/3 octave and narrow band spectra over 1 minute periods (minimum) Or as approved by the Director 	<ol style="list-style-type: none"> Data reporting following each seasonal survey Correlate with weather data Interpretation and analysis of measurements as appropriate Observations of noise sources
Periodic Monitoring (Intensive spatial validation survey)		Quantify noise when significant amounts of noise are being generated on site	Up to 20 locations in the Rowella area	<p>Once only for construction</p> <p>Once only for operation</p>	<ul style="list-style-type: none"> 6 off L_{An} statistical measurements (overall) 1/3 octave and narrow band spectra over 1 minute periods (minimum) Or as approved by the Director 	<ol style="list-style-type: none"> Data reporting following each survey Correlate with weather data Interpretation and analysis of measurements as appropriate Observations of noise sources Correlation with sources measured on site

Other Notes

- Summary data from continuous monitoring sites to be publicly available
- Database to be stored by both Gunns and Gunns consultants
- All sound level meters to be Type 1 instruments.
- Field calibration of continuous monitoring instrumentation to be carried out monthly to 2 years after commissioning, then 3 monthly.
- Annual certification of continuous monitoring instrumentation by NATA approved laboratory.

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Table 1.2.3 Ground Vibration – continuous monitoring (unattended)

Sub Program	Period	Objective	Locations	Frequency	Measurement Parameters	Reporting
Continuous Monitoring	<ol style="list-style-type: none"> 1. Construction and commissioning 2. 2 years post-commissioning 	<ol style="list-style-type: none"> 1. Provide record of any ground vibration exceedance 2. Provide record of blast overpressure events 3. provide evidence of compliance of licence vibration limits 	<p>At least one location in Rowella</p> <p>Location(s) to be approved by the Director</p>	Continuously available – threshold triggered	<ul style="list-style-type: none"> ▪ As per requirements of Australian Standard AS2187.2-2006 'Explosives – Storage and use Part 2: Use of explosives.' ▪ Ground vibration Vector Peak Particle Velocity (VPPV) mm/s rms ▪ Blast overpressure. Sound pressure level (dB) ▪ Or as approved by the Director 	<ol style="list-style-type: none"> 1. Data reporting monthly during site preparation, construction and commissioning 2. Correlate recorded events with site activity 3. Interpretation and analysis of measurements as appropriate. 4. Reporting to be 3 monthly after commissioning for 2 years only. 5. Or as approved by the Director

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