



NOISE MEASUREMENT SERVICES

PROFESSIONAL NOISE MEASUREMENT, ASSESSMENT AND REPORTING

Noise Measurement Services provides consultancy services in the assessment, management and control of environmental and workplace noise. Our site-specific report presents sound level measurements recorded and analysed, discusses noise criteria to be achieved, identifies noise mitigation measures and recommends options to achieve required design criteria. Noise management plans are developed for industrial activities where different levels of compliance may be required over time.

Projects undertaken requiring noise monitoring and assessment include -

- Residential development affected by road, rail and aircraft noise.
- Industrial and commercial noise control.
- Assessment of effects from quarries, mining, and other extractive industries.
- Occupational noise exposure (Work, Health & Safety).
- Assessment of intrusive noise (noise that disturbs or annoys).
- Environmental noise management plans.

Noise monitoring, modelling and assessment are key parts of every report to illustrate immediate and long-term effects of noise on the development. NMS staff are fully trained to gather relevant information about the site, the effect of noise on the development and how the development may affect its neighbours.

Reporting includes, building construction assessment to the Building Code of Australia and the requirements of 'Queensland Development Code Mandatory Part 4.4 – Buildings in Transport Noise Corridors'. The Code provides requirements for new houses, townhouses, units, hotel and motels as well as renovations for residences near main roads.

Noise Monitoring and Assessment

A typical noise monitoring program provides continuous recording of sound levels, and is ideally suited to short or long-term monitoring. Class 1 and Class 2 sound level meters are used to collect and store measured sound levels. Data is processed using software to obtain results over daily, weekly, monthly and even annual periods together with numerical tables, time history and spectrograms of Leq and Ln.

Remote telemetry Larson Davis systems are employed as necessary for long-term monitoring and have in-built calibration and solar power. Audio recording is standard with the Larson Davis 831. Noise Tutor and DNA analysis programs are available for logging and reporting data

Occupational noise and vibration assessments are undertaken with Cirrus dosebadges for noise and the Norsonic NOR-136 6-channel vibration meter for hand-arm and whole-body vibration. Building code certification is undertaken with Class 1 sound level meters and a Norsonic tapping machine.



The NoiseLab Professional 4 sound recording and analysis program from Delta provides computer-based sound recording for sound measurement, tonality and sound quality analysis.

Studio Six Digital sound recording apps and hardware are available for use with Apple smartphones and tablets. Typical applications are for environmental and personal sound exposure, spectrum analysis and speaker systems applications.

Residential and Industrial Noise Prediction

Our site-specific report discusses noise criteria to be achieved, identifies noise mitigation measures and recommends options to achieve required design criteria. NMS applies standard prediction techniques under ISO9613-2, CONCAWE and BS5228 Parts 1 and 2, for assessment of noise to relevant noise management legislation, guidelines and codes of practice. Prediction calculations are undertaken with PEN3D, SoundPLAN, and standard analysis protocols.



The predictions are based on 'most-likely' placement of plant and equipment to give a representative assessment for different plant and activities operating in different locations and for varying times of day or night. Both single point and noise contour calculations are used to determine the noise level at noise sensitive premises.

Noise contours show the range of noise levels in the locality due to the operation of the mine and plant. Single point calculations give the predicted noise at a specific location. Refinement may be made this model through collection of reliable sound power level data, modelling for variable source locations, topographic (barrier) effects and meteorological conditions.

Please [contact us](#) to discuss your noise assessment and reporting needs.

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