

Acoustics



The EMM acoustics team specialises in environmental, architectural building and vibration-related services. Our broad experience has been gained from many challenging projects and we are dedicated to providing our clients with practical and cost-effective advice.

A photograph showing two acoustic measurement stations in a grassy field at sunset. Each station consists of a vertical pole with a microphone or sensor at the top, mounted on a tripod. In the foreground, two solar panels are laid out on the grass, likely to power the equipment. The background shows a fence, trees, and a sunset sky with orange and blue tones.

EMM's acoustic team includes experts with experience in the NSW Land and Environment Court, WA Tribunal Hearings and the NSW Independent Hearing and Assessment Panel.

EMM's team of acoustic experts provides the highest standard of acoustic services, including noise and vibration impact assessment, monitoring and management, architectural design, noise control, and 3-D computer modelling.

The acoustic services team has high level regulatory and community consultation experience across a wide range of sectors, including mining, industry, retail, government and infrastructure. Our senior professionals regularly provide expert evidence and serve on independent review panels.

EMM's ACOUSTIC SERVICES

- Environmental noise assessments
- Road and rail noise and vibration assessments
- Compliance noise and vibration monitoring
- Architectural acoustics
- Aircraft noise modelling
- Overpressure and ground vibration assessments for blasting, construction and operations
- Design of practical noise controls

OUR PEOPLE

The acoustic team is led by:

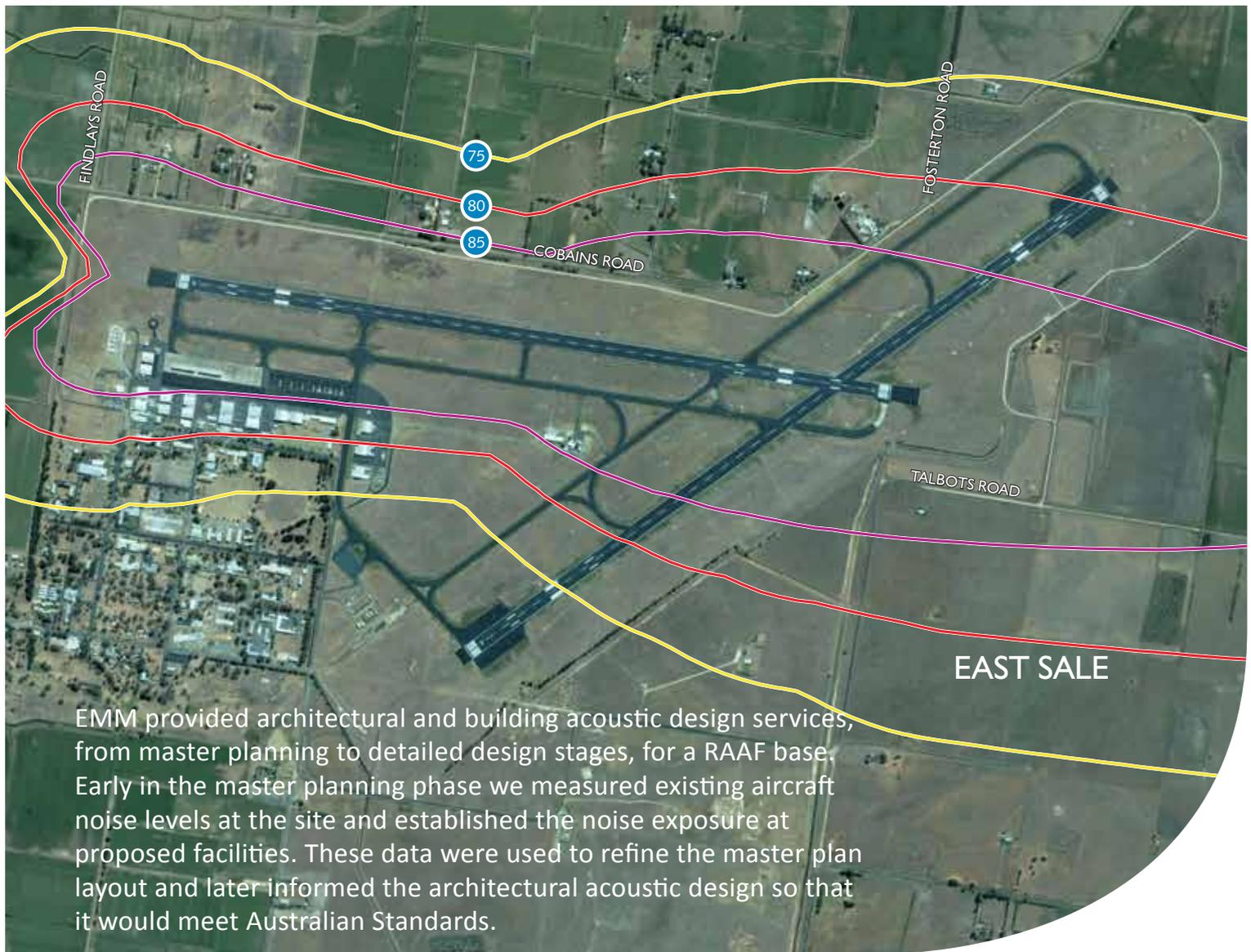
Najah Ishac BE (Mech), MEngSc, MIEAust, MAAS – Director

Najah is an acoustics expert who has provided high-level services to government, resources, infrastructure and property sectors for over 20 years. His expertise is in environmental noise, architectural acoustics and expert testimony.

He has managed teams of specialists on major road, rail, aircraft, mines, energy generation and industrial projects. These have included: the Warkworth, Mangoola Coal and Cobbora coal projects, the T4 expansion of Newcastle Port, the Muswellbrook Rail Strategy, West Rail Noise Modelling in Hong Kong, Heavy Vehicle Noise Reduction Study for the NSW RTA, Second Sydney Airport ANEF contour calculations, Changi and Seletar airport noise in Singapore, and the noise barrier design for the M2 and M4 motorways.

Najah specialises in large-scale infrastructure project approvals, negotiating with consent authorities and consulting communities.

Najah has served on the NSW Department of Planning panels on a number of occasions.



EMM provided architectural and building acoustic design services, from master planning to detailed design stages, for a RAAF base. Early in the master planning phase we measured existing aircraft noise levels at the site and established the noise exposure at proposed facilities. These data were used to refine the master plan layout and later informed the architectural acoustic design so that it would meet Australian Standards.

Daniel Weston BEngTech, MDesSc MAAS – Associate, Acoustic Services Manager

Daniel has over 10 years experience in acoustics and brings a variety of environmental, architectural and building acoustic expertise to the EMM team.

He has prepared noise and vibration impact assessments for large mine, quarry, industrial, transport and commercial projects, and has provided noise minimisation strategies for road, rail and industry in master plan development schemes. Daniel has a special interest in architectural and building acoustic design, with considerable project experience on residential, commercial, education, health and industrial developments from the concept to completion stage in Australia and the United Kingdom.

Daniel has expertise in signal analysis and has a thorough knowledge of noise and vibration measurement technologies. He has developed bespoke signal generation and acoustic measurement systems that have added value to assessment procedures and regular compliance monitoring.

Katie Teyhan BE/BMath, MIEAust, MAAS – Associate, Newcastle Acoustics Manager

Katie's extensive experience in environmental acoustics includes measurement, prediction and assessment of noise and vibration associated with mining, industry, roads and railway transportation systems, as well as in the acoustical planning of land uses near such developments. She has also conducted many peer reviews and audits and prepared expert evidence in relation to noise and vibration assessment, methodology and compliance.

Katie has developed and executed external acoustics and vibration training services and has provided internal training and technical mentoring to staff.



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PROJECT EXAMPLES

Mangoola Coal noise modelling and monitoring

Client: Glencore

The acoustic team conducted a comprehensive package of works for Glencore's Mangoola Coal open cut operations in NSW. We have been engaged at Mangoola Coal since 2014 for routine monthly attended compliance noise monitoring and ongoing technical support.

Key issues include a neighbouring residential community that is highly noise-sensitive, a highly scrutinised environmental assessment process. There are high expectations regarding the quality of noise monitoring and assessments, very quiet ambient noise environment, low frequency noise emissions, and consideration of cumulative noise impacts from other mines in the area. EMM has, and continues to, provide technical advice in relation to Mangoola Coal's response to regulating authorities. This has involved detailed, targeted noise monitoring programs as well as direct liaison with the EPA and DPE. EMM has recently been engaged to provide a corporate-level training package in relation to low frequency noise.

Maitland to Minimbah Third Track Project

Client: GHD

EMM conducted a comprehensive peer review of the Maitland to Minimbah Third Track Project, including a detailed 3-D environmental noise model and noise and vibration measurements to verify operational noise levels.

North West Rail Link Early Works

Client: Baulderstone Pty Ltd

EMM worked with the Baulderstone team on the North West Rail Link early works program, pre-assessing potential construction noise and vibration impacts. Our work included multiple out-of-hours noise impact assessments that were required to gain approval for works outside standard hours in accordance with the environment protection licence. EMM identified best practice noise and vibration control and management, and developed and monitored noise and vibration from the works to quantify, manage and reduce impacts.

Proposed Warkworth Continuation 2014

Client: Rio Tinto Coal Australia/Coal & Allied

EMM prepared the environmental assessment and reporting for open-cut coal mining at the Warkworth Mine in the Hunter Valley. A large component was the noise and vibration impact assessment that required extensive field validation (using speakers) and included detailed 3-D modelling. We presented expert evidence regarding the findings in the NSW Land and Environment Court.

Newell Highway Grong Grong Improvement

Client: Roads and Maritime Services

EMM completed an operational and construction noise and vibration assessment of the proposed Newell Highway bypass at Grong Grong in NSW. We used long-term and short-term noise monitoring to establish existing traffic and ambient noise levels, prepared the noise contours and assessed potential impacts in accordance with NSW policy.