



ROB BULLEN

PRINCIPAL

AREAS OF EXPERTISE

- Environmental noise assessment – Mines, Quarries & Industry
- Transportation noise assessment – Road, Railway & Aircraft
- Design of noise controls for transportation and industrial sources
- Noise impact description and assistance in development of Environmental Noise Policy
- Computer modelling of noise propagation
- Monitoring and assessment of vibration and blasting
- Design of noise controls in buildings
- Acoustical software development (Noiseworks, BarnOwl)

QUALIFICATIONS

- PhD (Acoustics)
- Bachelor of Science (Physics) (Hons)

AFFILIATIONS

- Member, Australian Acoustical Society (MAAS)
- Member, Australian Standards Committee EV-011 – Aircraft & Helicopter Noise

PUBLICATIONS

- Over 20 publications in refereed journals
- Numerous reports and conference papers

AWARDS

- Received 'Excellence in Acoustics Award', 1995 for Sydney Airport Noise Management Plan

EMPLOYMENT HISTORY

- 1979 – 1985 Scientific Officer, National Acoustic Laboratories
- 1985 – 1987 Scientific Officer, Electricity Commission of NSW
- 1987 – 1992 Senior Acoustic Engineer, Renzo Tonin & Associates
- 1992 – 1999 Principal and National Practice Leader, (Acoustics) ERM Mitchell McCotter Pty Ltd
- 1999 – Jun 2010 Director, Wilkinson Murray
- Jul 2010 – Present Principal, Wilkinson Murray

PROFILE

Rob has over 25 years' experience in the assessment and control of environmental noise. This includes internationally-recognised research into noise impact assessment, and provision of advice to regulatory bodies including the NSW Department of Environment & Climate Change (DECC) on noise policy and guidelines.

He has been responsible for the calculation and assessment of noise impact in numerous large projects, including the Second Sydney Airport EIS; Brisbane Airport New Parallel Runway EIS; M2, M4 and Eastern Distributor Freeways; various coal mines including Mount Pleasant, Hunter Valley South, Mount Arthur North and Anvil Hill; and rail projects including the Epping to Chatswood Rail Link; Perth Metro Rail project; and WestRail project in Hong Kong.

Rob's other activities include representation on the Australian Standards Committee for Aircraft and Helicopter Noise, and giving regular lectures in acoustics for Architecture students at the University of Technology Sydney, and other lectures at the Universities of NSW and Sydney.

Rob has also presented numerous conference papers, talks and lectures.

TRANSPORT

- M2 Motorway
- M4 Motorway widening
- Eastern Distributor barrier design
- Five Islands Bridge upgrading
- Bulahdelah Bypass
- Bookham Bypass
- Pacific Highway, Karuah – Bulahdelah
- Parramatta Rail Link – EIS and detailed design of vibration isolation
- Perth MetroRail – detailed design of vibration isolation treatments
- WestRail project, Hong Kong
- London Underground noise level calculations
- Rail noise measurement survey and development of rail noise database
- Brisbane Airport New Parallel Runway EIS
- Gold Coast Airport Runway Extension EIS
- Sydney Airport Master Plan
- Precision Runway Monitor noise trial, Sydney Airport
- Domestic Common User Terminal Noise Impact Study, Sydney Airport
- Second Sydney Airport EIS (1996 and 2015)
- Sydney Airport Noise Management Plan
- ANEF for Melbourne Airport
- ANEF for Brisbane Airport
- Noise impact survey, Jandakot Airport

ARCHITECTURAL / INDUSTRIAL

- 2EA Radio Studios
- Ritz-Carlton Hotel, Sydney
- Observatory Hotel, Sydney
- Quay West Apartments, Sydney
- BHP Eastern Gas Pipeline
- Tomago Aluminium Plant
- CSR Oberon Timber Processing Plant

MINES & QUARRIES

- Anvil Hill Coal Mine
- Mount Arthur North Coal Mine
- Mount Pleasant Coal Mine
- Bulga Coal Mine
- Ravensworth East Coal Mine
- Penrith Lakes Quarry
- Mt Flora Quarry
- North Boambee Quarry

RESEARCH & POLICY

- Conducted internationally-recognised research on reaction to noise from aircraft, road traffic and impulsive sources
- Co-author of the National Acoustic Laboratories study which forms the basis of the ANEF system for land use planning around Australian airports
- Provided advice to bodies including the NSW Department of Environment, Climate Change & Water (DECCW), WA Environmental Protection Authority (EPA), Queensland Department of Environment and Heritage, NSW Roads and Traffic Authority, Main Roads WA and NSW Minerals Council on noise policy issues
- Published over 20 papers in refereed journals on noise impact assessment

PUBLICATIONS IN REFEREED JOURNALS

- R. Bullen & F. Fricke, 1976 – *Jnl Sound & Vibn* **46**(1), 33-42. Sound propagation in a street
- R. Bullen & F. Fricke, 1977 – *Jnl Sound & Vibn* **54**(1), 123-129. Sound propagation at a street intersection in an urban environment
- R. Bullen, 1979 – *Jnl Sound & Vibn* **65**(1), 11-28. Statistical evaluation of the accuracy of external sound level predictions arising from models
- R. Bullen & F. Fricke, 1982 – *Jnl Sound & Vibn* **80**(1), 11-23. Sound propagation through vegetation
- R. Bullen & F. Fricke, 1982 – *Jnl Sound & Vibn* **80**(1), 25-30. Time distribution of impulse noise in an enclosure
- R. Bullen, 1983 – *Jnl Sound & Vibn* **89**(2), 287-289. A mathematical model for noise propagation between buildings
– comments
- R.B. Bullen & A.J. Hede, 1983 – *Jnl Acoust. Soc Am* **73**(5), 1624-1630. Time-of-day corrections in measures of aircraft noise exposure
- R.B. Bullen & A.J. Hede, 1982 – *Jnl Sound & Vibn* **82**(1), 29-37. Assessment of community noise exposure from rifle shooting
- A.J. Hede & R.B. Bullen, 1982 – *Jnl Sound & Vibn* **82**(1), 39-49. Community reaction to noise from a suburban rifle range
- R.B. Bullen & R.F.S. Job, 1985 – *Jnl Acoust. Soc Am* **78**(2), 799-800. Community response to blasting – re-analysis of data
- R.F.S. Job & R.B. Bullen, 1985 – *Jnl Sound & Vibn* **100**(1), 127-129. Demand characteristics in experimental comparisons of the effects of noise and vibration
- R.B. Bullen, A.J. Hede & E. Kyriacos, 1986 – *Jnl Sound & Vibn* **108**(2), 199-225. Reaction to aircraft noise around Australian airports
- R.B. Bullen & A.J. Hede, 1986 – *Jnl Sound & Vibn* **108**(2), 227-245. Comparison of the effectiveness of measures of aircraft noise using social survey data
- R.F.S. Job & R.B. Bullen, 1987 – *Jnl Sound & Vibn* **116**(1), 161-168. The effects of a face to face interview vs. a group administered questionnaire in determining reaction to noise in the workplace
- R.B. Bullen, A. J. Hede & R.F.S. Job, 1991 – *Noise Control Engineering* **37**(3), 115-125. Community reaction to noise from an artillery range
- R.B. Bullen, A.J. Hede & T. Williams 1996 – *Acoustics Australia*. Sleep disturbance due to environmental noise: A proposed assessment index
- A.L. Brown & R.B. Bullen, 2003 – *Acoustics Australia*. Road Traffic Noise Exposure in Australian Capital Cities
- R. Bullen, 2003 – *Acoustics Australia*. Long-Term Environmental Monitoring and Noise Source Identification
- R. Bullen, 2012 – *Proceedings Acoustics 2012*. The Harmonoise noise prediction algorithm: Validation and use under Australian conditions.