

Rob Bullen Consulting

Curriculum Vitae: Rob Bullen

CONTACT



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QUALIFICATIONS

PhD (Acoustics)

Bachelor of Science (Physics) (Hons)

AFFILIATIONS

Member, Australian Acoustical Society
(MAAS)

Member, Australian Standards Committee
EV-011 – Aircraft & Helicopter Noise



CURRENT POSITIONS

Principal: Rob Bullen Consulting
Director: Stirfry Software
Principal: SoundScience P/L
Lecturer: University of Technology Sydney
University of Sydney
University of Tasmania

PUBLICATIONS

Over 20 publications in refereed journals,
which have received over 250 citations.
Numerous reports and conference papers.

“EXCELLENCE IN ACOUSTICS” AWARDS

1995 for Sydney Airport Noise Management
Plan
2005 for “BarnOwl” noise monitor

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PROFILE

Rob has over 35 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 Western 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.

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 (SoundSoup, BarnOwl)

EMPLOYMENT

- 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 – 2010 Director, Wilkinson Murray Principal, Wilkinson Murray
- 2010 – Present Principal, Wilkinson Murray
- 2012 – Present Principal, Stirfry Software
- Sept 2017-Present Principal, Rob Bullen Consulting

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SELECTED PROJECT EXPERIENCE

AIRCRAFT NOISE

- Western Sydney Airport
- 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

OTHER TRANSPORTATION NOISE

- 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

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

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RESEARCH AND POLICY EXPERIENCE

- 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 Environment Protection Authority, WA Environmental Protection Authority, Queensland Department of Environment and Heritage, NSW Roads and Maritime Services, Main Roads WA and NSW Minerals Council on noise policy issues
- Published over 20 papers in refereed journals, which have received over 250 citations. Regularly acts as a reviewer for scientific publications.

TEACHING EXPERIENCE

- University of Technology Sydney: Teaches Acoustics section of “Lighting, Acoustics and Advanced Environmental Control” course, Architecture faculty (since 2005)
- University of Sydney: Teaches postgraduate course “Advanced Acoustic Practice”, Architecture faculty, when permanent staff unavailable (since 2009)
- University of Tasmania: Lecture and tutorial as part of Architecture course (since 2013)
- Regular undergraduate lectures at University of NSW and University of Sydney
- Roads and Maritime Services: Conducted two-day training courses in acoustics for environmental officers and project managers

SOFTWARE DEVELOPMENT

- Developed “BarnOwl” directional noise monitor, including source detection algorithms (patented) and implementation in C#
- Developed “SoundSoup” iPad app for modelling sound in a room, including modelling algorithms and implementation in Objective C
- Developed Matlab code for implementation of a heavy vehicle detection system
- Developed “NoiseWorks” program for acoustic calculation in Windows

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SELECTED 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.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.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
- A.L. Brown & R. B. Bullen, 2004 – Acoustics Bulletin 29(3), 22-27. Exposure to Road Traffic Noise in Australia
- 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.
- J. Peng, R. Bullen & S. Kean 2014 - Proceedings Inter-Noise. The effects of vegetation on traffic noise.
- R. Bullen, 2015 – Acoustics Australia. Simulation of Room Reverberation Using a Feedback Delay Network