



TO ALL AAS MEMBERS and interested parties

TECHNICAL MEETING

8pm Wednesday 8th November 2006

An Investigation into Low Frequency Noise Annoyance – Bengalla Mine, Hunter Valley NSW

by

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A "vibration" annoyance problem existed for local residents located approximately 3km west of Bengalla Mine Coal Handling and Preparation Plant (CHPP). As the result of community and regulatory pressure, an exhaustive investigation spanning over a number of years was conducted to scientifically prove or disprove whether the mine propagated sufficient noise or vibration, through normal plant operations, to be discernible to the complainants.

Part of the investigation process included the design of an anti-phase control system, which electronically coupled two identical vibrating screens for the purpose of noise control. Theoretically, operating these vibrating screens with a phase shift near 180° a reduction of the basic tone could be achieved.

With permission from Bengalla Mine, this presentation offers insight into the analysis methodology behind the investigation over the duration, such as results from various diagnostic measurements, the anti-phase control system design and performance testing, residential room modal analysis and associated results of spatial sound pressure mapping. Based on the presented results a final outcome is concluded.

The meeting will commence at 8pm in the H.H. Davis Room, Department of Mechanical Engineering, Engineering South Building (see university map below). Parking is available on Victoria Drive.

Anyone interested in attending the meeting is encouraged to also join us prior the meeting for friendly dinner and drinks at Caffè Buongiorno, Rundle Street, at **6:30pm** beforehand.

Please RSVP to Luke Zoontjens via 8303 5460 or luke.zoontjens@mecheng.adelaide.edu.au, to help us organise the event.

PLACE: H.H. Davis Room, Level 1, Engineering South Building, The University of Adelaide, North Terrace Campus.

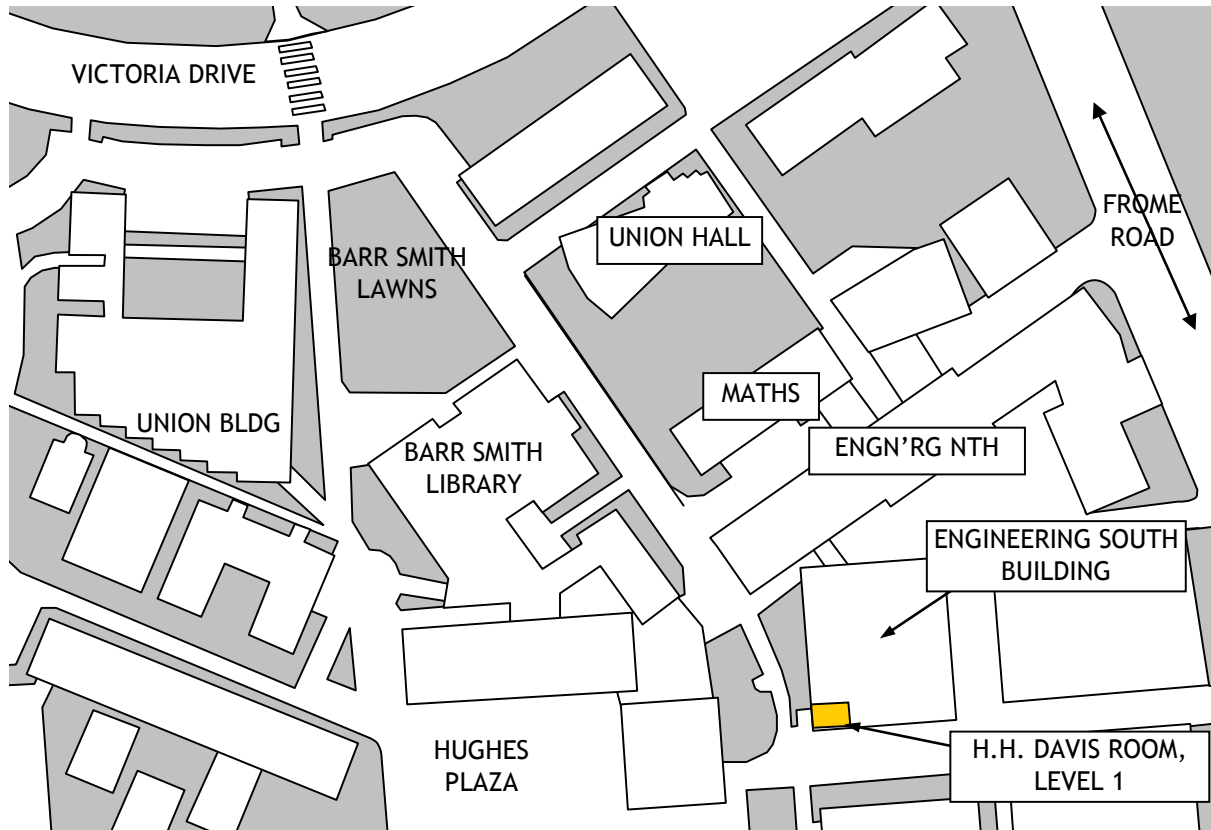
TIMING: 8PM WEDNESDAY 8TH NOVEMBER, 2006



Australian Acoustical Society

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