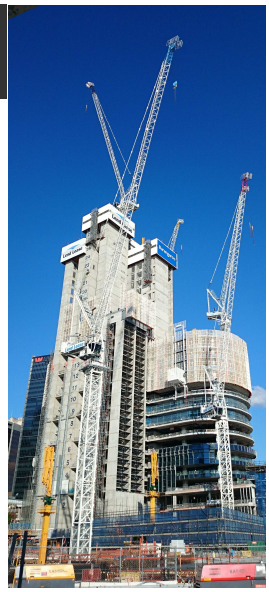
NSW DIVISION
TECHNICAL MEETING

Structural isolation of swimming pools



Date: **Tuesday, 22 November 2016**

Venue: **Room G25, Electrical Engineering Building, UNSW, Kensington**
Location G17 on campus map
http://fmtoolbox.unsw.edu.au/comms/KensingtonCampus.pdf

Time: 6:00 pm for 6:30 pm start
Refreshments prior to talk

Speaker: Timothy Murray, Embelton

RSVP: Thursday, 17 November to Paul Maddock by email
paul.maddock@epa.nsw.gov.au
AAS members (and guests upon request) are welcome to attend.

Structural isolation of above ground swimming pools in multi-tenancy residences is a widely employed design in Australia to mitigate noise and vibration transfer to the main structure.

Given the significant mass involved in a typical concrete shell swimming pool, there are often a number of challenges involved with employing an isolation system. For example, products currently available to the market are seemingly well defined for pool applications in terms of isolation performance and damping, however the underlying structure's stiffness is often ignored, even when mounting points are located mid-span on a structural slab.

This talk will present theoretical performance calculations of single and two-degree-of-freedom systems with specific application to typical swimming pool isolation systems. Test data from an isolated pool and a number of 'do's and don'ts' design considerations from Embelton's experience will also be discussed.

Tim Murray is the principal engineer at Embelton Engineering. With over 10 years of experience in designing mechanical components and systems, he has overseen the bespoke design and installation of a number of large scale commercial and industrial vibration isolation systems. Tim takes a particular interest in swimming pool applications due to the complex vibration characteristics that can occur as a result of incorporating pools into higher density living and works with consultants and operators on sensitive projects to design and supply compliant solutions.