



ACOUSTIC
LOGIC

Company Profile



Macquarie Bank Sydney

ALC is a company dedicated to the provision of a high quality and practical service in the field of noise and vibration engineering. The Directors of ALC have a combined experience of sixty years in this field. They have undertaken a wide range of projects and developed a businesslike approach to the field of noise and vibration engineering.

We understand that it is essential that all acoustic input be directed toward the attainment of both statutory and project acoustic objectives.



Riparian Plaza Brisbane

At the same time it is understood that all construction projects undertaken today operate under tight financial restraint and that all decisions taken may impact on the viability of a project.

Therefore it is an overriding premise of this company that in order to successfully service our clients we have to understand the nature of their business and what is required to make it profitable.



449 Punt Road Melbourne

ACOUSTIC LOGIC

ALC's definitive problem solving skills and industry knowledge base has been established through the design and construction of some of the largest projects in Australia. ALC's acoustic experience extends to all facets of the design and construction industry. ALC prides itself in solutions that not only have a strong technical basis, but are backed up by project experience and practical thinking.

Planning Studies
Industrial and Commercial projects
Traffic Noise
Rail Noise
Aircraft Noise



Latitude Tower Sydney

Universities and Tertiary Institutions
Medical Research and Scientific Facilities
Hospitals
Green Star Evaluation and Design



Westfield Sydney

Residential and Mixed Use Developments and Communities
Cinema and Leisure Centres
Construction Noise Assessments and Management



Australian Stock Exchange Sydney

general experience

ACOUSTIC LOGIC

ALC have been the consultants on a number of major commercial developments completed in the Sydney Central Business District in the past five years, as well as projects throughout Brisbane, Melbourne and Canberra. A sample of these projects are presented below.



Deutsche Bank Building Sydney

1 Bligh Street	Sydney
363 George Street	Sydney
AMEX Headquarters	Sydney
KPMG Tower	Sydney
7 Yarra Street	Melbourne
449 Punt Road	Melbourne
Northbank	Melbourne
Deutsche Bank Building	Sydney
Riparian Plaza	Brisbane
Macquarie Bank Building	Sydney
Latitude	Sydney
Gasworks Buildings A, F & G	Brisbane
Portside Commercial	Brisbane



Westpac Building Sydney

The acoustic standards and practices implemented into the design and construction of these buildings have established new benchmarks in high performance cost effective design. Through this broad experience, ALC have been able to refine acoustic systems, construction practices and provide the confidence to Client's that they will achieve the required results without over designing the systems.



Energex Brisbane



ANZ Victoria Harbour Melbourne

commercial experience



World Square Sydney

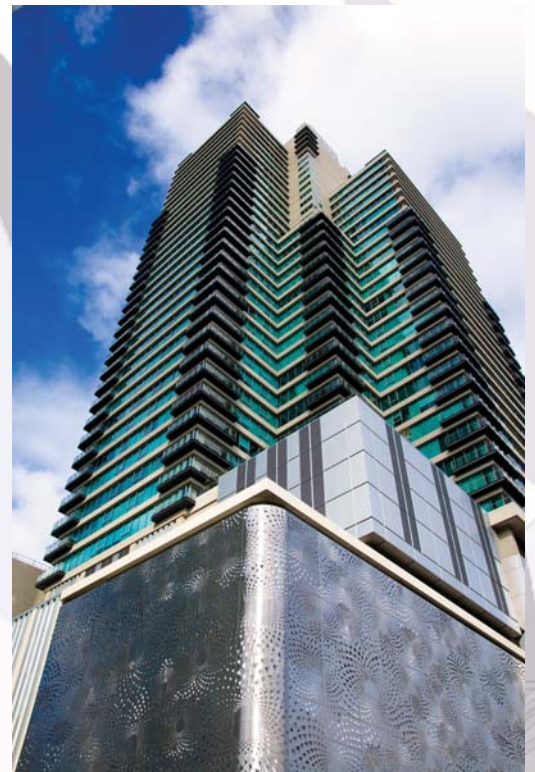
ALC has been involved with a large number of residential buildings, some of which amongst the major buildings constructed in Sydney, Brisbane, Canberra and Melbourne. Their expertise in the interpretation and application of building codes and industry standards have enabled bench mark acoustic outcomes at minimal cost.



Surfers Paradise Hilton Hotel & Residences Gold Coast



Finger Wharf Woolloomooloo



Royal Domain Towers Melbourne

NSW

The Hyde
 The Pinnacle
 Moore Park Gardens Stages I,II,III, and IV
 Bennelong
 The Cove
 Balmain Shores
 The Republic Stages I and II
 The Colonnades
 Sur-Mur - Cronulla
 The Wharf at Woolloomooloo
 The Altair – Kings Cross
 Whites at Paddington
 The Chelsea – Chatswood
 Chatswood Regency
 Hyde Park Gardens – City
 Atlas Apartments - Alexandria
 Marina One –Rushcutters Bay
 Cape Cabarita
 Stamford on Kent – City
 The Peninsula (Colgate Palmolive conversion) – Balmain
 The Madison – Hornsby
 King Street Wharf (all residential) – Darling harbour
 Number One Darling Harbour
 The Waterfront – Homebush Bay
 Sydney Park Stages I, II, III, IV, V VI – Erskineville
 The Watermark – Stages I, II, III, IV
 The Quadrant – Broadway
 The Peninsula – Manly
 Dalgety Square – Ultimo
 Goldsbrough Mort – Pyrmont
 The Piano Factory – Annandale
 Tri-Beca – Chippendale
 World Tower – City
 Eco – Victoria Park

ACT

The Forum – Canberra
 The Phoenix – Canberra
 The Globe – Canberra
 The National – Canberra
 Citywalk – Canberra

QLD

The Hilton Hotel and Residences - Gold Coast
 The Gasworks Precinct - Tower E - Brisbane
 Milton Railway - Brisbane
 The Mill - Brisbane
 Portside Wharf - Brisbane
 Hamilton Harbour - Brisbane
 SL8 - Brisbane
 River Place – Brisbane
 River City – Brisbane
 Cathedral Place – Brisbane
 The Republic - Brisbane
 Casino Towers - Brisbane
 Ellington Apartments - Brisbane
 Festival Towers - Brisbane
 Charlotte Towers - Brisbane
 Vue - Brisbane
 Wave - Gold Coast
 Jade - Gold Coast

VIC

Royal Domain Towers
 Flinders Wharf
 Seasons Apartments
 Marquise
 Mercy Hospital Residential Conversion
 Traven Court
 Stalwell Street - Richmond
 Commonwealth Games Village - Parkville
 Inkaman Street - St Kilda
 Northbank - Flinders Street
 Menzies at Malvern
 399 Bourke Street
 Clarendon Street - East Melbourne
 Enterprise Hotel - Spencer Street



Commonwealth Games Village Melbourne

One of the essential qualities of an acoustic consultant is the ability to recognise feasible alternatives for the various design systems/components required on a project. A highly innovative approach is required to provide advantages in the following areas:

- construction methodology
- cost effectiveness
- acoustic performance
- construction programme

ALC has proven in recent years that they can provide this level of value adding to construction projects. This ability has won them a large base of clients in a relatively short period of time. Their client base includes some of the largest builders and developers in Australia. A number of case studies are presented below which illustrate this fact.

PROJECT CASE STUDIES

- Melbourne Central - Victoria
- Latitude Commercial Tower - Sydney
- Mellenium Centre (Gallery of Modern Art) - Brisbane
- Surfers Paradise Hilton Hotel and Residences - Gold Coast
- Cinema and Entertainment Complex
- Acoustic Facade Evaluation
- Mechanical Noise Evaluation
- Inter-tenancy Wall Design

MELBOURNE CENTRAL - MELBOURNE - VICTORIA

This project involved the conversion of the old Diamuru department store into a cinema and entertainment complex. ALC was the third consultant to work on this project and was able to implement significant change to the design of the cinemas and entertainment areas.



Some of these changes included reducing the inter-cinema walls from 8 layers of plasterboard to a total of 4 layers and the removal of a 4 layer 9mm thick CFC floor which was to be installed in 4 cinemas which sat over a nightclub.

Other measures implemented included reducing the corridor/cinema construction and the ceiling constructions over the restaurant and entertainment tenancies. In all there are to be twelve cinemas in this complex, therefore the changes provided significant cost and time advantages to Bovis Lend Lease, with a total savings on acoustics of \$2m.

Melbourne Central Melbourne

LATITUDE COMMERCIAL TOWER - NEW SOUTH WALES

Latitude is a fifty storey commercial tower located on the corner of Goulburn and George Street, Sydney and is now occupied by Ernst & Young. ALC were commissioned as a secondary acoustic consultant to review the glazing design of the tower in an effort to reduce the glazing thickness specified for the development.

The original consultant specified double glazing consisting of 13.38mm laminated glass, a 12mm air gap and 10.38mm laminated glass. A complete review of the design including re-measurement of noise levels determined that the project acoustic requirements could be met using 10.38mm laminated glass, a 12mm air gap and 6.38mm laminated glass; an effective halving of the glazing costs on the project. The project was completed and fully compliance tested with outstanding results. Given the area of glazing associated with the tower, the cost savings effected by ALC were estimated at \$3.5m

MILLENIUM CENTRE - BRISBANE

ALC was initially asked to review the design of the mechanical services on this project. As well as the general acoustic design of the mechanical services, the principal issue was the acoustic treatment previously specified for the gallery.

The primary gallery is a 100m by 40m space that is air conditioned using by floor grilles connected to ductwork running at high level in the loading dock under the gallery. The initial project consultant has developed a design which required all the high level duct work to be clad with multiple layers of framed plasterboard and insulation.

Due to the complex network of duct work, the completion of this acoustic treatment was priced at \$1m, which represented a massive budget/cost issue for Bovis Lend Lease, not to mention there was insufficient clearance to fit in the recommended treatment. ALC reviewed this design and were able to provide an alternative design that achieved the client's quality expectations without cladding the duct work.



Latitude Tower Sydney

The answer lay in an understanding the fundamental acoustic principles (to prove our design, at our cost, we arranged to undertake laboratory testing of the design), and in understanding/managing the client's expectations (we demonstrated to the client the level of sound penetration into the gallery and got them to sign off on that). As well as identifying the appropriate technical solution, we managed Bovis Lend Lease's risk.

The project has been constructed, tested and all passed successfully. The saving for Bovis Lend Lease was \$A800,000.



Millenium Centre (Gallery of Modern Art) Brisbane

SURFERS PARADISE HILTON – GOLD COAST

The \$700 million Hilton Hotel development comprises two towers over a common podium level. The 54-level Orchid Tower has 224 residences and 169 hotel suites, with the 32-level Boulevard Tower containing 186 apartments. Brookfield engaged Acoustic Logic Consultancy after an initial peer review process was carried out to determine if cost savings could be realised whilst still meeting the Hilton Hotel acoustic requirements. Acoustic Logic Consultancy in the first instance rationalised the intertenancy and corridor wall systems developed by the previous acoustic consultant into a site wide one-wall system. This led to the deletion of one layer of 13mm fire rated plasterboard off each intertenancy and corridor wall for all 579 apartments throughout the development. Acoustic Logic Consultancy have carried out compliance testing on up to 30 walls to date with each achieving the project acoustic requirements.



Surfers Paradise Hilton Hotel and Residences Development Gold Coast

Notwithstanding the significant immediate cost savings associated with these wall constructions, Acoustic Logic Consultancy has also realised savings related to excessive attenuation measures associated with the mechanical services systems serving the project as specified by the previous acoustic consultant.

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