



GHD building acoustics

“Building acoustics is a key consideration of a building design and is critical to a building’s functionality”

Craig McVie, GHD Service Line Leader
Air Noise and Meteorological Assessments

GHD provides a range of building acoustic services for all types of developments from individual dwellings to large scale residential, commercial, mixed-used developments, hotel, industrial, defence, health and educational facilities. Our highly qualified and skilled acoustic engineers have extensive experience in building acoustics with the ability to guide and assist architects and developers from design to commissioning to achieve design requirements.

Identifying needs

Potential noise and vibration issues need to be identified and addressed from the planning and design phase through to detailed design development, construction, compliance testing and ongoing operational stages of projects. We’ll be able to guide you through the lifecycle process meeting, contractual and legislative requirements to avoid the potential substantial expenses associated with noise control retrofits.

Services

By working with us, you’ll enjoy access to the following services:

Building services noise and vibration

- Building services (i.e. mechanical, hydraulics) design review for noise and vibration assessment.
- Provide design solutions for noise and vibration control including silencer, attenuator design, plant room design and treatment, plant vibration isolation, vertical transportation noise and vibration control.

Building Code of Australia (BCA) compliance

- Advice on minimum requirements with consideration to the BCA, Australian and International Standards and privacy requirements.
- Assessment of sound insulation performances of building components (inter-tenancy wall, floor-ceiling assemblies) and provide design recommendations to comply with the legislative requirements and design criteria.
- Site testing of constructed partitions, including airborne sound transmission and impact sound transmission.

Noise intrusion assessment

- Noise intrusion assessment of buildings adjacent to busy roads, rail corridors, industry and under aircraft flight path.
- GHD provides advice on acoustic treatments of exposed facades with consideration to applicable state regulations and guidelines, development control plans, and Australian and international standards.
- Vibration assessment of buildings in the vicinity of railway tracks and tunnels.

Green Star assessment

- Green Star Indoor Environmental Quality (IEQ) assessments for building acoustics.

Environmental noise assessment

- Measurement, acoustic modelling and assessment of noise emissions from plant rooms, outdoor mechanical plant, and carpark, traffic, café, restaurants and childcare.
- Provide cost-effective and practical noise control design recommendations.

Room acoustics

- Determination of appropriate criteria with consideration to the space, volume, layout, functionality, applicable Australian and international standards, and contractual requirements.
- Assessment of Reverberation and Speech Privacy in key acoustic spaces and provide design recommendations.
- Assessment of Sound Pressure Level (SPL) and Speech Transmission Index (STI) for Loud Speaker design coverage.

Construction noise and vibration

- Short-term and long-term measurement and monitoring of construction noise and vibration.
- Construction noise and vibration assessment.
- Development of project specific Construction Noise and Vibration Management Plans (CNVMP).
- Provide practical cost-effective engineering solutions to mitigate construction noise and vibration impact.

Occupation Certification

- Acoustic testing of air-borne and impact sound insulation performance of walls and floors.
- Measurement of indoor sound levels to ensure that the measured sound complies with acoustic design requirements.

Computational fluid dynamics (CFD) modelling

- Ventilation modelling of tunnels, substations, data centres, shooting ranges, etc.
- Wind modelling and wind shear assessments.
- Thermal comfort assessments.

What to expect

We consult, not subcontract. Expect us to embark on the project journey with you - we acknowledge your decision making environment is unique and we seek to integrate with your team. With us, you can expect to work with industry professionals that have hands-on experience in your area of operations. Be confident that the advice we offer on the ground is based on significant knowledge of the industry. Reliability in delivery is key, and we combine this with commercial intelligence to harness project success.

To learn more about building acoustics, contact:

Stephen Trainor

Market Leader - Environment, Australia

T 61 7 3316 3903

E stephen.trainor@ghd.com

W www.ghd.com/building-acoustics

