



Pollution Control Consultancy and Design



Excellence in Air, Noise and Water
Pollution Assessment and Control

www.pccd.com.au

Principal Consultant Profile

Pollution Control Consultancy and Design is managed by ALEX JOCHELSON [MEMech MIEAust CPEng (Reg)].

Alex has:

- a solid academic background;
- extensive, practical, field-orientated environmental engineering experience;
- excellent computer application skills; and
- the ability to develop inventive, functional and cost effective solutions.

Alex has a Master's degree in Mechanical Engineering (MEMech), and formal post-graduate training in air pollution control. He has completed many specialty in-service courses in air, noise and water pollution assessment and control.

His comprehensive experience in environmental engineering comprises:

- all important elements of engineering activities; and
- all principal fields of environment protection, i.e. it is a well balanced: **(1)** industrial, **(2)** design and research, **(3)** statutory and **(4)** consulting experience in air, water and noise pollution assessment and engineering control, viz.
 - (1)** four-year industrial experience (environment protection specialist at ferro-chromium smelting plant);
 - (2)** four-year design and research experience (design and research engineer at university);
 - (3)** nine-year industrial pollution control experience at the NSW Environment Protection Authority (EPA, now Department of Environment, Climate Change and Water) (engineer - operations, at Central and Inner Sydney Regions); and
 - (4)** current, since January 1995, consulting experience at Pollution Control Consultancy and Design (PCCD) (principal consultant).

Alex is:

- i. a Corporate Member and Chartered Professional Engineer of The Institution of Engineers, Australia (Engineers, Australia);
- ii. registered on the National Professional Engineers Register Section Three (NPER-3) under No 371231, in the Categories of Environmental Engineering and Mechanical Engineering [MIEAust CPEng (Reg)];
- iii. an accredited consultant: a Member of The Association of Consulting Engineers, Australia (MACEA) and Australian Acoustical Society (M.A.A.S.).

Our Services

Pollution Control Consultancy and Design (PCCD) provides a comprehensive range of professional services in air, noise and water pollution assessment and engineering control.

Our services include:

- all-inclusive environmental and occupational noise measurement, assessment and engineering control;
- noise control in buildings;
- determination of sound power by measurements of sound intensity;
- computer modelling of dispersion of noise;
- computer modelling of air pollution dispersion (e.g. odour, SO₂) to determine the:
 - appropriate location and height of stacks;
 - required air pollution control system (type and efficiency); and
 - existence, or frequency and duration of odour problems;
- environment impact statements (EIS);
- environmental management plans (EMP);
- noise management plans (NMP);
- pollution reduction programs (PRP);
- environmental reviews and voluntary environmental audits;
- negotiating with and making submissions to government departments [e.g. DECCW (EPA), WorkCover, Office of Liquor, Gaming and Racing (before: LAB), local councils];
- selecting new and troubleshooting existing air, noise and water pollution control systems.

For details about the comprehensive range of our services, please visit www.pccd.com.au

“Our services are of the highest professional standard, while our prices are competitive.”



Why Should You Engage Us?

1. WE ARE INDEPENDENT

PCCD is autonomous: it operates without any government, commercial and/or political affiliation, and so we provide impartial recommendations.

2. WE ARE CONFIDENTIAL

Because we are independent, any discussions between you and us, and any findings resulting from our activities carried out on your behalf remain strictly confidential.

3. WE ARE ACCREDITED

PCCD is a member firm of Consult Australia [formerly Association of Consulting Engineers, Australia (ACEA)] and Association of Australian Acoustical Consultants (AAAC). Its principal consultant is a corporate member of The Institution of Engineers, Australia (IEAust) and Australian Acoustical Society (AAS).

4. OUR FEES ARE COMPETITIVE

We use the best quality and up-to-date professional tools (measurement equipment, computers, printers and software), but keep other overheads low, and consequently we are able to match or even better any reasonable fees proposed by our competitors.

5. ALL OUR PROJECTS ARE SUPERVISED BY PRINCIPAL CONSULTANT

There is a number of consulting firms that have established their reputation and name through their most experienced and talented consultants. However, in many cases, these consultants have no time to supervise all (especially smaller) projects. Such projects are often carried out by junior, less experienced staff.

On contrary, all our projects, both large and small, are closely supervised and endorsed by Alex Jochelson - our principal consultant, whose formal qualifications and extensive professional experience will guarantee the high quality of project results.

6. OUR INITIAL CONSULTATION IS FREE

We are aware that most environment protection problems are site-specific and difficult to describe and recognize over the telephone. Therefore, our initial site inspection, discussion and advice are free.

7. WE DO EXPLAIN

We believe that our clients should fully understand our advice and therefore we clearly explain our findings and recommendations. And we have the ability and experience to put even very complicated technical concepts in simple terms.

8. WE PROVIDE COMPREHENSIVE SERVICES

We endeavour to provide complete (“one-stop-shop”) services in environment protection and therefore our services cover most aspects of air, noise and water pollution assessment and control. However, in cases when we feel that our expertise does not go far enough, we subcontract the most competent (in our opinion) consultants currently available on the market.

9. WE SOLVE PROBLEMS

Many consultants produce voluminous and confusing reports, in which they identify your problems but do not (or are not able to) provide the most important and essential for you part, viz. **the solution.**

Our reports are as clear and concise as possible (from time to time, by necessity, they include a large number of appendices for experts that may review our reports), and they always give you firm and practical recommendations on steps to take to eliminate the problems that we have discovered, if any.

We never complete our projects leaving you with a question: so what should I do next ?

Accreditation

Pollution Control Consultancy and Design is a member of:



CONSULT AUSTRALIA

Consult Australia [formerly
Association of Consulting
Engineers Australia (ACEA)]



Association of Australian
Acoustical Consultants (AAAC)

Its Principal Consultant, who endorses all our reports,
is a Corporate Member of:



Engineers, Australia
[The Institute of Engineers,
Australia (IEAust)]



Australian Acoustical Society
(AAS)

Sound Intensity

Whereas common environmental and occupational noise assessments are based on the sound pressure level, which is a scalar quantity that has only magnitude and is measured with a single microphone, the SOUND INTENSITY LEVEL is a vector quantity that has both magnitude and direction.

The SOUND INTENSITY LEVEL is measured with a sophisticated probe of two carefully spaced and opposite-directed microphones [on the photograph, our measuring equipment: a hand-held sound intensity system - Brüel & Kjær (B&K) Modular Precision Real-Time Sound Analyser type 2260 Investigator, with Sound Intensity Probe type 3595].

The advantages of sound intensity measurements over sound pressure measurements include the abilities to:

- determine the sound power level of a mechanical system (compressor, lawn-mower, air-conditioner, pump, fan) on the spot, in your laboratory or factory, without the necessity of placing this system during the measurements inside the anechoic or reverberant chambers (expensive), or in the acoustically free-field (in many cases unattainable);
- search for, identify, pinpoint, rank and quantify individually all significant sub-sources of noise within a mechanical system, such as noisy bearings, covering panels, fans, motors, gear boxes and supporting structure - this allows to design effective, optimally targeted (informed) noise reduction modifications; and
- scan walls, windows, doors, floors and ceilings to pinpoint the areas (acoustically weak spots) the noise penetrates through from a room accommodating noisy equipment.



“We use the best quality and up-to-date professional tools.”

Our Clients

Pollution Control Consultancy and Design (PCCD) provides services for a broad range of clients, from private individuals to large industry.

Our clients include:

SMALL and LARGE INDUSTRIES that need:

- an approval from the EPA (DECCW) or local councils for a new operation or for modification of an existing operation;
- verification of compliance with environment protection approval and/or licence conditions;
- a pollution reduction program (PRP), an environmental management plan (EMP) or a noise management plan (NMP);
- an environmental review or a voluntary environmental audit;
- an all-inclusive occupational noise survey;
- to reduce emission of excessive noise or odour;
- to install a new pollution control system.

ARCHITECTS, TOWN PLANNERS and LAND DEVELOPERS who need:

- an assessment of road traffic and aircraft noise and/or odour affecting proposed residential sites;
- an Environmental Impact Statement [or its part(s), such as a noise or odour impact] for an industrial development.

BUILDERS who need to know:

- how to reduce noise from building service systems (air-conditioners, ventilation fans, pumps, cooling towers);
- a size, structure and position of the effective noise control barrier (wall);
- through which elements of a building the noise penetrates into a room (measurements of sound intensity over walls, ceilings, floors, windows and doors).

PUBS, NIGHT-CLUBS and DISCOTHÈQUES that need to resolve their noise problem by:

- modification of the building (pinpointing noise “leaks” by measurements of sound intensity); or
- effective noise control at the mixing desk.

PRIVATE INDIVIDUALS whose residences are exposed to excessive:

- aircraft, railway and/or road traffic noise;
- noise from neighbours’ air-conditioners and/or swimming pool and spa pumps.



Pollution Control Consultancy and Design

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