

## **ABRIDGED PROFILE - A.W.D. JONGENS**

A.W.D. Jongens, trading as Jongens Keet Associates, provides a consulting service, backed by more than 37 years of experience, to government departments, defence institutions, provincial and local authorities, local & international industries, public and private bodies throughout Africa in all aspects relating to building & architectural acoustics, noise & vibration control, community & environmental noise, noise management policy formulation and environmental noise impact assessment.

### **A.W.D. Jongens:**

M.Sc. (Electrical Engineering) University of Cape Town;  
Department of Electrical Engineering, University of Cape Town (1971 - present) Senior Lecturer;  
Part time professor Department of Architecture, University of the Orange Free State (1998 – 1999)  
Registered with the Engineering Council of South Africa;  
Member of the South African Institute of Electrical Engineers;  
Senior member of the Southern African Acoustics Institute (Council member 1989, 1996 – 1998);  
Member of the Nederlands Akoestisch Genootschap;  
Acoustical advisor to the City Engineer's Department, on environmental & community noise and formulation of Municipal Noise By-Laws (1973 – 1985);  
Member South African Bureau of Standards (SABS) Steering Committee for Acoustics & Noise Abatement (1988 – 1993);  
Member SABS/SANS technical committee for Acoustics & Noise Abatement ( 1993 – present);  
Member Council for Scientific & Industrial Research National Calibration Service Special Technical Committee on Acoustics (1988 – 1992);  
Member International Standards Organisation, TC43 Working Group 38 (1993 – present);  
Member specialist advisory team to Cape Town Olympic Bid Committee (1996 – 1997);  
Author and co-author of more than 40 research publications;  
Convenor of Southern African Acoustics Institute Symposia (1995 and 1997);  
Acoustical advisor to Stanway Edwards Ngomane Associates (Pty) Ltd., Pretoria (1991-2000);  
Reviewer of numerous specialist reports.

## **ABRIDGED SELECTION OF PROJECTS**

### **Noise and Environmental Management Policy Formulation.**

Centurion Noise Management Policy;  
Coega Industrial Development Zone, Eastern Cape: Noise Pollution Guidelines;  
East London Industrial Development Zone: Environmental Noise Management Policy and Guidelines;  
Roggebaai Canal Tourism Precinct, Cape Town: Noise Management Policy and Guidelines.

### **Environmental Noise Impact Assessments and Mitigation - Transportation Noise.**

Proposed Kirstenbosch Freeway, Cape Peninsula;  
Proposed South Road Extension between William Nicol Drive and Rivonia Road, Johannesburg;  
Impact of road noise on Morningside Wedge, Johannesburg ;  
Access Roads to the Victoria & Alfred Waterfront Development, Cape Town;  
Cape Town International Airport;  
N2 Freeway Raapenberg Interchange, Cape Peninsula;  
Jan Smuts Drive proposed widening, Pinelands;  
Ottery to Blue Route proposed arterial Road, Cape Peninsula;  
Blaauwberg Road & bridge widening;  
Railway line between Phalaborwa, South Africa and Maputo, Mozambique (impact of ore trains);  
Stanhope Road widening & interchange, Claremont, Cape Peninsula;  
Platinum Toll Road (N4) between Pretoria and Botswana;  
Formula One racetrack for Airports Company of South Africa.  
N1, N2 Winelands Toll Roads, Western Cape  
N2 Wild Coast Toll Road between East London and Durban;  
GrangerBay Boulevard, Cape Town;

Robert Mugabe Extension, Windhoek, Namibia;  
Foreshore Freeway, Cape Town;  
Huguenot Tunnel Toll Plaza, Paarl;  
Frans Conradie Road Extension, Cape Town;  
Eastern Bypass, Worcester;  
R60 between Worcester & Robertson, Western Cape;  
Harbour arterial road, East London;  
Rail Link between Coega Station and the Port of Ngqura, Eastern Cape;  
N2 Paardevlei Interchange, Western Cape;  
N2 Knysna Toll Highway.

### **Environmental Noise Impact Assessments and Mitigation – Mining & Industries.**

Caltex oil refinery, Milnerton, Cape;  
Fedmis fertiliser plant, Milnerton, Cape;  
British Petroleum S.A., Cape;  
Royal Dutch Shell oil refinery, Rotterdam, The Netherlands;  
Moss Gas refinery, Mossel Bay, Cape;  
Rand Refinery, Germiston, Transvaal;  
Everite, Brackenfell, Cape;  
South African Nylon Spinners, Bellville, Cape;  
Rhodes Fruit Farm Frozen & Preserved Foods, Groot Drakenstein, Cape;  
Pretoria Portland Cement De Hoek Cement Works, Piketberg, Cape;  
ALUSAF aluminium smelting plant, Richards Bay, Natal;  
Serina kaolin mine, Brakkekloof, Cape;  
Serina kaolin mine, Noordhoek, Cape;  
Ohlsson's Breweries, Newlands, Cape;  
Freshmark, Brackenfell;  
Pretoria Portland Cement limestone mine, Eastern Cape;  
Hoechst Durban Fibres factory, Jacobs, Natal;  
Natal Portland Cement Simuma cement factory, Oribi Gorge, Natal;  
Anglo Alpha proposed limestone mine and cement factory, Saldanha, Cape;  
Proposed Steel plant Maputo, Mozambique and slurry pipeline between Phaladorwa and Maputo;  
Kudu gas powered power station, Oranjemund, Namibia;  
Saldanha Steel Plant, Saldanha;  
African Portland Cement factory & mines, Otjiwarongo, Namibia;  
Cullinan Mine expansion, Pretoria;  
Bellville South Waste Disposal site;  
Landfill sites proposed at Atlantis and at Kalbaskraal;  
Peaking electrical power plants at Mossel Bay and at Atlantis;  
Eskom Wind Energy Facility along West Coast;  
Mittal Steel metal recovery facility, Saldanha.

### **Environmental Noise Impact Assessments – Miscellaneous.**

Western Cape Shooting Complex, Atlantis;  
2010 Soccer Stadium, Green Point, Cape Town.

### **Shipboard Acoustics.**

H.M.S. Oberon class submarine: investigation of main shaft vibration.  
S.A. Navy Daphne class submarine: investigation of diesel engine exhaust noise.  
S.A. Navy strike craft: investigation of engine noise.  
SAS Agulhas research ship: investigation of propeller cavitation noise;  
Castoro Otto floating crane: noise impact & mitigation of diesel generators ;  
Debmar Pacific, De Beers diamond mining vessel: mitigation of noise from winches;  
Coral Sea, De Beers diamond mining vessel: mitigation of engine room noise.

### **Motor Vehicle Noise & Vibration.**

Leyland S.A. Rover prototype: reduction of driveline and exhaust noise & vibration;  
Leyland S.A. Austin Marina: reduction of driveline and exhaust noise & vibration;  
Development of signal processing techniques incorporated in machine condition assessment.

### **Architectural and Building Acoustics.**

#### **Concert Halls, Theatres, Cinemas and Exhibition Centres.**

Medical Research Council, Bellville: Auditorium;  
Bellville Civic Centre: multi-purpose hall;  
Strand Civic Centre: multi-purpose hall;  
City Hall of Cape Town Grand Hall: assessment of existing acoustics & recommendations;  
Sports Science Institute, Southern Life Auditorium, Newlands: including vibration isolation from adjacent railway line and gymnasium above;  
Good Hope Centre exhibition & multi-purpose hall, Cape Town: assessment of existing acoustics;  
IMAX theatre, BMW Pavilion, Waterfront, Cape Town;  
Cape Town International Airport: measurement and assessment of public address system.  
Holocaust Centre, Cape Town;  
Jewish Museum, Cape Town;  
Community Hall, Camphill Village, Hermanus;  
District Six Museum, Cape Town;  
IMAX theatre, Menlyn Park, Pretoria;  
IMAX theatre, Gateway, Umhlanga, Durban;  
Sea Point Aquarium, Cape Town;  
Grandwest Casino, Cape Town: cinemas and ice rink;

#### **Conference & Convention Centres.**

Conference Centre, Spier, Stellenbosch  
Conference Centre, Windhoek, Namibia  
Conference Centre, BMW Pavilion, Waterfront, Cape Town  
Conference Centre, Vineyard Hotel, Newlands;  
International Convention Centre, Foreshore, Cape Town;  
Capricorn Conference Centre, Muizenberg;  
Polokwane International Convention Centre, Polokwane.

#### **Corporate Offices and residential developments.**

BP Centre, Cape Town;  
Shell House, Cape Town: open-plan offices;  
Sanlam Head Office, Bellville: auditorium, executive offices, training centre, TV studio;  
SANTAM Head Office, Bellville: Auditorium, training centre, TV studio & executive offices;  
Metropolitan Life Corporate Head Offices, Bellville: auditorium, atrium and executive offices;  
Vodacom Techno-Centre Bellville: atrium acoustics, vibration isolation of punch presses;  
Mutual Park, Pinelands;  
Victoria and Alfred Waterfront Marina Residential Development, Cape Town;  
Panorama Palms retirement village, Panorama: mitigation against N1 Freeway noise;  
Namdeb Daimond Corporation, Oranjemund, Namibia: executive offices;  
Vodacom Corporate Offices, Century City;  
AAA Head Office, Luanda;  
Roggebaai Canal Tourism Precinct, Waterfront, Cape Town;  
Board of Executors Corporate Head Office, Waterfront, Cape Town;  
Victoria 332 Residential Development, Clifton;  
The Bantry Residential Development, Bantry Bay;  
Thesen Islands, Drymill Residential Apartments, Knysna.

#### **Shopping Centres.**

Tygervalley Shopping Centre, Tygerberg – recommendations to reduce noise level in shopping mall.  
Century City Shopping Centre & cinemas.  
Longbeach Mall, Noordhoek: cinemas and plantrooms.  
Constantia Village Shopping Centre: plantroom noise.

**Large Church Complexes.**

Pietermaritzburg Cathedral, Pietermaritzburg, Natal;  
New Apostolic Church, Silvertown, Cape;

**Hotels.**

Vineyard Hotel, Newlands: improved sound insulation between suites; reduction of plumbing noise  
Mount Nelson Hotel, Cape Town: improved sound insulation between suites.  
Alphen Hotel, Constantia: improved sound insulation between suites.  
Cape Grace Hotel, Waterfront, Cape Town: Low-noise design of complete building;  
Table Bay Hotel, Waterfront, Cape Town: Low-noise design of a.c. plantroom & ventilation system, stand-by generator. Improvements to airborne sound insulation of façade;  
Proposed Ritz-Carlton Hotel, Spier, Stellenbosch;  
Arabella Estate Hotel, Hermanus, Western Cape;  
15 on Orange Hotel, Cape Town;  
The Oyster Box Hotel, Umhlanga, Durban.

**Outdoor Amphitheatres.**

Hotel de la Roche, Paarl, design of 800 seat amphitheatre;  
Spier, Stellenbosch, design of 1000 seat amphitheatre;

**Other Projects.**

Acoustics Laboratories, University of Cape Town;  
Underwater sound testing facilities, Institute for Maritime Technology, Simon's Town;  
SANLAM Training Centre Complex, Bellville, Cape Town;  
Grandwest Casino, Goodwood, Cape Town: cinemas and ice rink;  
Sea Point Pavilion redevelopment, Cape Town;  
Military building, United Arab Emirates;  
Cyclelab, Westlake, Cape Town.

**Materials Research.**

Investigation of physical and sound absorption properties of materials used in the building industry and porous asphalt used for quiet road surfaces;  
Investigation of sound insulation properties of building elements;  
Development of a new procedure to measure the sound absorption coefficient of road surfaces, in-situ, adopted as standard measurement procedure by the International Standards Organisation. ISO Standard 13472-3 "Acoustics – Measurement of sound absorption properties of road surfaces in situ – Part 3: Spot method"