

## CURRICULUM VITAE

### DEREK COSIJN

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#### Personal Details:

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#### Summary of Key Qualifications and Experience:

I have 39 years of professional experience over a wide range of civil engineering, transportation planning, environmental and acoustic projects. I qualified as a civil engineer in 1967 and then studied further to obtain a post-graduate Diploma in Town Planning in 1974. I have worked in both the planning and construction aspects of the civil engineering profession gaining experience in road construction, road planning, transportation planning, traffic engineering, general environmental and environmental noise issues. Over the last 30 years I have focused on aspects of transportation planning with specific emphasis, *inter alia*, on environmental and noise management and control. I have worked on a wide spectrum of planning projects related to the transportation and development industry, with clients ranging from the National Department of Transport, provincial transportation/road authorities, provincial environmental authorities, the metropolitan authorities and many local councils to private organizations and consultants.

I have been actively involved in numerous environmental projects since 1975, when I worked in Canada for three years. My area of special expertise is environmental noise (acoustical engineering). The environmental projects have ranged through EIAs and noise impact assessments, policy formulation and guideline development.

In 2002 I started my own consultancy, Calyx Environmental cc, specialising in environmental and noise impact assessment. At the same time (Year 2001), I formed a partnership/working association with Jongens Keet Associates.

I am a professional engineer, registered with the Engineering Council of South Africa (ECSA), a Fellow of the South African Institution Civil Engineering, a Member of the Southern African Acoustics Institute, a member of the International Association for Impact Assessment (IAIA), South African Chapter and have also been certified as an Environmental Assessment Practitioner of South Africa.

**Education:**

- BSc (Civil) Engineering, University of the Witwatersrand, 1967
- Post graduate Diploma in Town Planning, University of the Witwatersrand, 1974
- Several short courses on various aspects of environmental management and noise control (listed later).

**Experience:****1a. Partner, Jongens Keet Associates, (April 2001 – Present)**

As a partner with JKA, I have been responsible for the following projects:

- The Noise Management Programme for Centurion Town Council.
- Pier Café Noise Impact Assessment.
- Centurion Land Use Noise Zoning Data Base.
- N4 Toll Route: Toll Plaza Noise Impact Assessment.
- Gautrain Noise Impact Study.
- N17 Noise Impact Study.
- N1/N3 Buccleuch Interchange Noise Impact Assessment.
- N1 Noise Impact Assessment (Louis Trichardt).
- Waterhaven Clay Target Shooting Range Noise Impact Assessment.
- City of Tshwane Noise Management Policy.
- Road R50 Re-alignment (Delmas) Noise Impact Assessment.
- Road R513 (Cullinan) Noise Impact Assessment.
- Tutuka Power Station Coal Supply Railway Noise Impact Assessment.
- Majuba Power Station Coal Supply Railway Noise Impact Assessment.
- Gauteng Freeway Congestion SEA: Noise Impact Assessment.
- Usutu Coal Mine (Camden Power Station) Noise Impact Assessment.
- Olifants River Water Resources Development Project Noise Impact Assessment.
- Montecasino Phase 2 Development Noise Impact Assessment.
- Mercedes Workshops (Centurion) Noise (OH&S Act) Investigation.
- Cabanga Conference Centre Noise Impact Assessment.
- Road K139 (Derdepoort Link) Noise Impact Assessment.
- Samancor Middelburg Ferrochrome Plant Noise Impact Assessment.
- Impala Platinum (Springs) Oxygen Plant Noise Impact Assessment
- Gauteng Provincial Government Precinct (Johannesburg CBD) Noise Impact Study.
- Motaganeng Township Development Project (Burgersfort) Noise Impact Assessment.
- Olievenhoutsbosch Residential Township Noise Impact Assessment.
- Matimba B Power Station Alternative Site Assessment, Scoping and EIA (Noise Impact).
- Implats Springs Base Metals Refinery Expansion Noise Impact Assessment.
- KwaZulu Natal Peaking Power Plant Noise Impact Assessment.
- Mafube Mine - Arnot Power Station Conveyor Belt Noise Impact Assessment.
- Sishen South Iron Ore Mine Project Noise Impact Assessment.

- Staatsartillerie Road (Tshwane) Noise Impact Assessment.
- Olievenhoutbosch Township Noise Attenuation Barrier Design.
- Northern Golf Courses Estate Noise Impact Assessment.
- Rua Vista Township Noise Attenuation Barrier Design.
- Holcim Roodepoort Cement Factory Expansion Noise Impact Assessment
- Impala Rustenburg Platinum Mine #17 Shaft Noise Impact Assessment.
- Concentrating Solar Power Generation Plant (Upington) Noise Impact Assessment.
- N17 (Brakpan) Overlay Noise Impact Assessment.
- N1 Overlay Noise Impact Assessment at Matoks.
- Witbank (Kendal) Area Power Station Noise Impact Assessment.
- African Renaissance Township Development Noise Impact Assessment.
- Erasmia Ext 10 Township Noise Impact Assessment.
- Northern Free State Area Power Station Noise Impact Assessment.
- Veremo Mine (Roosenekal) Noise Impact Assessment.
- Newmarket Racecourse Redevelopment Noise Impact Assessment.
- Steelpoort Pumped Storage Scheme Noise Impact Assessment.
- Ruighoek Mine (Rustenburg) Noise Impact Assessment.
- Lethlakeng Calcrete Mine (Botswana) Noise Impact Assessment.
- Shebas Ridge Mine (Groblersdal) Noise Impact Assessment.

**1b. Partner, Calyx Environmental cc, (April 2001 – Present)**

As a partner with Calyx Environmental, I have been responsible for the following projects:

- Tambo Memorial Hospital Medical Waste Incinerator Environmental Scoping Study.
- Tembisa Hospital Medical Waste Incinerator Environmental Scoping Study.
- Medical Waste Incinerator Standard Operating, Maintenance and Safety Manual.
- Nietverdiend Police Station Upgrading: Environmental Issues.
- Morokweng Police Station Upgrading: Environmental Issues.
- Lwala Mine Traffic Environmental Impact Assessment.
- Mac-West Mine Noise Impact Assessment.
- Tutuka Power Station Coal Supply Railway Construction Traffic Impact Assessment.
- Majuba Power Station Coal Supply Railway Construction Traffic Impact Assessment.
- City of Tshwane Noise Zone Demarcation and Definition.
- NCP Chlorchem Expansion Traffic Environmental Assessment.

**2. Associate, Booz Allen & Hamilton, (February 2000 – March 2001)**

While working for BAHSA, I was responsible for the following projects:

- The development of Guidelines for the Environmental Management of Transportation Projects for the City Council of Pretoria.
- The Noise Management Programme for Centurion Town Council.
- The preparation of a Traffic Calming Policy for Kempton Park Town Council.

- Pretoria Defence Clay Target Shooting Club (Lyttelton) Noise Impact Study.
- Medical Waste Incinerator Environmental Scoping Study (preliminary assessment).

### 3. Associate, Stanway Edwards Ngomane Associates (Pty) Ltd, (1986-2000)

As an Associate with the firm, I was responsible for the project management and technical investigation of the following types of projects:

- *Environmental and Noise Management:*
  - Environmental impact assessment (EIA)
  - State of the environment reporting
  - Noise impact assessment studies
  - Noise management policy development
  - Outdoor advertising policy development
  - Transportation environmental management procedure formulation
  - Environmental management plans/programmes
  - Professional review of environmental reports.
- *Traffic Engineering and Transportation Planning*
  - General transportation analysis
  - Traffic impact studies
  - Parking and loading policy development
  - Traffic operation safety assessment
  - Road traffic management systems
  - Transportation demand management
  - Road hierarchy definition
  - Traffic calming
  - Road traffic sign policy development
  - Professional review of transportation investigation and research reports.

Specific projects were as follows:

- *General Environmental and Noise Related Projects*

N1 and N12 Freeway Noise Study (DoT); Noise Attenuation Barrier Evaluation Study (DoT); Costing Analysis of Freeway Traffic-generated-noise Attenuation Barriers (DoT); Pretoria Central Area Freeway/Light Rail Noise Evaluation; Sandown Mews Traffic Noise Impact; Inanda Access Road Noise Evaluation Study; Transportation Environmental Management Manual; Consultant to Centurion Town Council on Noise

Management; Samancor Mine Noise Zoning; MoAfrica Development- Noise and Air Pollution Assessment; Centurion Noise Management Policy; Springs' Outdoor Advertising Policy; Centurion Speed Hump Noise Evaluation; Rooihuiskraal Road / N14 Interchange Noise Impact Study; GPMC Road Environmental Assessment; Charles Street Corridor Noise Impact Study; Environmental Plan for the Khayalami Metropolitan Council's Integrated Transport Plan; and the following Environmental Impact Assessment (EIA) / Public Involvement Programme Co-ordination Projects:

- Melle Street-St Davids Place Road Link EIA;
  - Inanda-Wiggins Aqueduct EIA (Durban);
  - Granite Road (Fourways Boulevard) EIA (Sandton);
  - Rivonia Road/N1 Interchange EIA (Sandton); and
  - PWV9 - Environmental Evaluation of the Crossing Alternatives for the Daspoortrant.
- *Transportation Planning*

Vosloorus Transportation Study; N OFS Transportation Study; Vosloorus Road Modelling; Transportation Sketch Planning in ORMET (Daveyton, Duduza, Kwa-Thema, Tsakane, Tokoza, Wattville); Public Transport Evaluation in Springs/Kwa-Thema, Brakpan/Tsakane and Tembisa; Nellmapius Area Public Passenger Transport Needs Study (Pretoria).
  - *Road and Traffic Studies*

Ridge School Parking Study; DoT Road Traffic Management System; Road Network Management Study; Transportation Demand Management Guidelines; Road Network Planning in Tembisa, Springs, Midrand, Nigel and Brakpan; Harare Traffic Management Study; National Route 2/8X Operational Safety Assessment; Arterial Road K60 Needs Evaluation; various road and traffic safety assessments.
  - *Miscellaneous Projects and Activities*
    - ORMET Parking and Loading Policy Study.
    - South African Road Traffic Signs Manual, Volume 2 (responsible for drafting six Chapters).
    - Developed the "Guidelines for Public Participation in the Planning of Civil Engineering Projects" for SAICE.
    - Provided assistance to the Department of Transport for the setting up and running of their Road Traffic Management System.
    - CSRA/CUTA Working Group for Outdoor Advertising along Roads.
    - Traffic and Road Problem Identification System – Data Base for NDoT.
    - Presented short course on Integrated Environmental Management (IEM) and EIA to the Department of Civil Engineering, University of the Witwatersrand (1993).

#### **4. Director, Gericke Construction, 1981-1986**

I was the Director-in-Charge of the technical aspects of construction (projects were civil- and building-related).

#### **5. Associate, De Leuw Cather Associates, 1971-1981 (inclusive of 3 years with De Leuw Cather Canada, now DELCAN)**

I was the project manager on numerous projects related to geometric design of roads, traffic engineering, transportation and environmental issues during this period. Projects included:

- *General Environmental and Noise Related Projects*
  - Alberta Surface Transportation Noise Attenuation Study (Canada).
  - University of Alberta Area Transportation/Environmental Study (Edmonton, Canada)
  - Environmental aspects related to the basic planning of provincial and urban roads.
  
- *Transportation Planning*

Fort Saskatchewan Transportation Study (Alberta, Canada); St Albert SE Sector Transportation Study (Alberta, Canada); University of Alberta Area Transportation Study (Edmonton, Canada); Edmonton North West Industrial Area Rail Access Study.
  
- *Road and Traffic Studies*

Camrose Central Traffic and Parking Study (Alberta Canada); Planning of roads: PWV16, K110, K123, K126, Rivonia Road (Sandton) and Carse O'Gowrie Road (Parktown); Planning of several rural provincial roads; Numerous traffic impact studies; Parkmore Traffic Signals; Rivonia Road Traffic Signal Synchronisation Scheme; Modderfontein Parking Study; Benoni South Industrial Area Access Study.

#### **Training Courses**

The following environmental and noise management related training courses have been attended:

- Delcan in-house basic introduction to acoustics and transportation noise (Delcan/BBN/ LNG/ University of Calgary, 1976)
- Risk Assessment (IAIAsa 1998 Pre-Conference Course)
- IAIA and Poverty (IAIAsa 1999 Pre-Conference Course)
- Social Impact Assessment, Planning with People in Mind (IAIAsa 2000 Pre-Conference Course)
- A Practical Approach to Environmental Due Diligence in South Africa (IAIAsa 2000 Pre-Conference Course)
- Public Participation: from Theory to Practice (IAIAsa2000 Pre-Conference Course)

**Chronological Work History:**

|                 |  |   |
|-----------------|--|---|
| 1968-1971:      | Site and Design Engineer                 | Roberts Construction                              |
| 1971-1975:      | Design/Traffic Engineer                  | De Leuw Cather & Associates Inc. (SA)             |
| 1975-1977:      | Transportation/<br>Environmental Planner | De Leuw Cather (Canada)                           |
| 1978-1981:      | Associate                                | De Leuw Cather & Associates Inc. (SA)             |
| 1981-1986:      | Director                                 | F C Gericke (Pty) Ltd. Construction,              |
| 1986-1997:      | Associate                                | Stanway Edwards Associates (Pty) Ltd              |
| 1997-2000:      | Associate                                | Stanway Edwards Ngomane Associates<br>(Pty) Ltd   |
| 2000-2001:      | Associate                                | Booz•Allen & Hamilton (South Africa)<br>Ltd       |
| 2001 to Present | Partner<br>Partner                       | Jongens Keet Associates<br>Calyx Environmental cc |

**Professional Affiliations:**

- Registered Professional Engineer (Pr Eng) with the Engineering Council of South Africa
- Certified Environmental Assessment Practitioner of South Africa (EAPSA)
- Fellow of the South African Institution of Civil Engineering
- Member of the International Association of Impact Assessment (SA Chapter)
- Member of the Southern African Acoustics Institute.

**Publications:**

- Cosijn D, *Parking and Loading Policy for ORMET*. Annual Transportation Conference 1988.
- Cosijn D, *Road and Traffic Environmental Manual*. Annual Transportation Conference 1991.
- L Herhold and Cosijn D, *Growth Management and Transportation Planning - A Means to Restructure Our Urban Areas*. Annual Transportation Conference 1994. (#)
- Cosijn D, *Comprehensive Environmental Management of Transportation Projects*. SAICE Environmental Conference 1994.

- Cosijn D, *Transportation Demand Management - A Means for Relieving Congestion*. Annual Transportation Conference 1995.
  - Cosijn D, *Severance as a Factor in Linear Transportation Facility Planning*. SAICE Environmental Conference 1996.
  - Cosijn D, *Environmental Investigation of the Alternatives for the PWV9 Freeway Crossing of the Daspoortrant*. SAICE Environmental Conference 1999.
  - Cosijn D and R Slater, *Summary of the Operational Safety Assessment of the National Route N2 Approaches to Knysna*. South African Transportation Conference, 1999.
  - Cosijn D, *Transportation: Is the Environmental Message being Driven Home Successfully?* IAIAAsa2000 Conference.
  - Cosijn D, *Environmental Noise: A Case for Sound Management*. IAIAAsa2001 Conference.
  - Cosijn D and Van Niekerk JL, *Noise and Vibration Impact Assessment of the Gautrain High Speed Rail Link*. Southern African Transport Conference (SATC) 2003.
  - Van Niekerk JL, Morgan JPL and Cosijn D, *Gautrain Tunnels: Surface Vibration and Ground-borne Noise*. Journal of the South African Institute of Mining and Metallurgy, Volume 104, No 4, May 2004. (#)
- (#) - See Awards

## Awards

1. The Paper Van Niekerk JL, Morgan JPL and Cosijn D, *Gautrain Tunnels: Surface Vibration and Ground-borne Noise*, Journal of the South African Institute of Mining and Metallurgy, Volume 104, No 4, May 2004 was awarded the Certificate of Merit (Alec Wilson Memorial Award) by the South African Institute of Mining and Metallurgy on 16 August 2006.
2. The Paper L Herhold and Cosijn D, *Growth Management and Transportation Planning - A Means to Restructure Our Urban Areas*, Annual Transportation Conference 1994 was selected as one of the best papers of the Conference. The authors were invited to a banquet hosted by and were presented to HRH Princess Anne.

## Professional Activities

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| 1989 to 1993 | Member of convening committee for Annual Transportation Conference |
| 1991 to 1999 | Member of SAICE Transportation Division Committee                  |

1994 to 1999            Member of SAICE Environmental Division Committee

1994                    Member of convening committee for SAICE Environmental Conference 1994

**References:**

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