

ANNEXURE E

CVs of specialists



M Luger

CURRICULUM VITAE

Name of Firm :	Ninham Shand (Pty) Ltd	Name of Staff :	Mike Luger
Profession :	Director	Year of Birth :	1968
Years with Firm :	10	Nationality :	South African

Membership in Professional Societies: Member, International Association for Impact Assessment
Member, Southern African Institute of Ecologists and Environmental Scientists Certified Environmental Assessment Practitioner.

Key Qualifications:

Mr Luger has 10 years experience in environmental impact assessments, overseen the development of several environmental management plans and conducted many public processes.

Experience Record:

1) Regulatory Processes and Environmental Impact Assessment:

2004 to date	Project manager	Clanwilliam Dam raising: Environmental project manager for the feasibility study into the proposed raising of the dam	2004
2004 to date	Project manager	Joint Maputo River Basin Study: Managed the ecological situation assessment and formulated scopes of work for strategic environmental assessment and environmental flows	
2003 to date	Project manager	PetroSA: Managed the strategic environmental evaluation of the proposed development of gas in the western Cape	
2003 -2004	Project manager	Plettenberg Bay Water Study: Managed EIA process, ozonation and freshwater requirements of the Keurbooms and Piesangs Rivers	
2001 to date	Project manager	Lower Orange River Management Study: Managed a multidisciplinary investigation into the management of the water resources of the Orange River to address the optimal usage of the available resources and to suggest ways of augmenting the supply.	
1996	Project manager	Table Mountain Group Aquifer Feasibility Study: Managed investigation into the potential of utilising the deep confined fractured rock aquifer that underlies the mountain chain for water supply to the City of Cape Town	
2000-2003	Project manager	Breede River Basin Study: Managed investigation into the water resources of the Breede River basin, how these are used, what opportunities and constraints are influencing further development and use of the land and water, and how water resources could further be harnessed and used	
1995	Junior Environmental Scientist	Initial Environmental Assessment of the proposed railway link between De-Hoek and Saldanha, Saldanha, Western Cape, South Africa	
1999	Project manager	Berg Dam: Oversaw the compilation of an Exemption Report for a farm dam in the Ceres area Upington Water Augmentation: Managed the compilation of a Scoping Report of the proposed proposed abstraction works and upgrading of the purification works.	
1997 - 1999		Skuifraam Supplement Scheme: Conducted an environmental impact assessment of the proposed abstraction of water from the Berg River to augment the supply to the Cape Town Metropolitan Area.	
1997		Ladybrand Water Purification Works: Undertook an initial environmental assessment of a proposed water purification works on the Caledon River	
1997		Winburg Dam: Undertook an initial environmental assessment of a proposed off-channel storage dam located in the Eastern Free State.	



M Luger

- 1995-1996 Skuifraam Dam: Compiled an environmental impact assessment as part of the integrated environmental management process for this regional water supply scheme. The study included co-ordination of the vegetation, archaeological, faunal, social, forestry and instream flow requirements
- 1994 De Bos Pipeline: Undertook a preliminary site investigation of a proposed upgrading of a pipeline near Hermanus
- 1994 Brackenfell Municipality Waste Disposal Site: Undertook a site assessment and social impact assessment to determine possible impacts relating to the waste disposal site

2) Environmental Management Plans:

- 2001-2002 Project Manager Environmental Management Plan: Managed the development of a state of the art EMP to be incorporated into all tender documents initiated by the seven line functions of the Cape Metropolitan Council
- 1999 Project Manager Kalksteefontein: Managed the production of a scoping report and oversaw implementation of the EMP for the project
- 1999 Table Mountain Dams: Provided input into the compilation of the environmental management plan for the stabilisation of the Woodhead and Hely-Hutchinson Dams within the Cape
- 1999 Skuifraam Dam Decision: Compiled an information pamphlet and posters as part of the Minister's decision on Skuifraam Dam and provided various inputs into the Record of Decision and advised DWAF on the Appeal process.
- 1999 Bulk wastewater: Provided input into the preparation of an Environmental Management Plan for the upgrading of all wastewater infrastructure in the CMA.
- 1998 Carinus Bridge: Provided environmental comment on alternative measures to stabilise the road embankment over the Berg River
- 1996 Lotus River: Provided preliminary environmental comment for the management of this severely degraded urban river and canal system
- 1996 Western Cape System Analysis Evaluation Study: Compiled the information document for the Evaluation Conference, which aimed to provide public input into the selection of water supply options for the Western Cape until 2010

M Luger

Countries of Work Experience: South Africa, Namibia, Swaziland, Mozambique

Education: BSc (Environmental and Geographical Science, and Zoology), University of Cape Town, South Africa, 1989
BSc (Hons) (Environmental and Geographical Science), University of Cape Town, South Africa, 1990
MPhil (Sci) (Environmental and Geographical Science), University of Cape Town, South Africa, 1998.

Employment Record :

2003 to date Director, Ninham Shand – Environmental Discipline Head
2001 - 2003 Senior Associate, Ninham Shand – Environmental Discipline Head
2000 – 2001 Associate, Ninham Shand – Environmental Section Head
1997 – 2000 Principal Environmental Scientist, Ninham Shand - Environmental Section Head
1996 – 1997 Senior Environmental Scientist, Ninham Shand
1993 – 1996 Environmental Scientist, Ninham Shand
1987 – 1992 Student, Part-time Lecturer and Tutor, Department of Environmental and Geographical Science, University of Cape Town

Languages: English (first), Afrikaans (second)



A B LAWSON Pr Sci Nat

CURRICULUM VITAE

Name of Firm :	Ninham Shand (Pty) Ltd	Name of Staff :	Brett Lawson
Profession :	Associate, Environmental Practitioner	Year of Birth :	1954
Years with Firm :	1	Nationality :	South African

Membership in Professional Societies: Environmental Assessment Practitioners of South Africa
 South African Council for Natural Science Professions
 (Reg No. 400106/04)
 International Association for Impact Assessment South Africa

Key Qualifications:

Mr Lawson has an MA in Environmental and Geographical Science, as well as diplomas in wildlife management, business management, environmental management and environmental auditing. He spent 12 years in wildlife management and research with conservation agencies in southern and South Africa, and nine years in the more holistic field of environmental management in the National Lake Areas and Eskom. He was one of the founders of Bohlweki, the first emergent environmental consultancy established in South Africa, and later started The Environmental Partnership which he recently relinquished as a fully empowered environmental consultancy. He thus has considerable multi-disciplinary experience across the range of environmental sciences.

Experience Record:**1) Regulatory Processes and Environmental Impact Assessment:**

2005	Project Manager	Open Cycle Gas Turbine power plant, fuel supply pipeline, substation and transmission lines, Mossel Bay, Western Cape, South Africa
2004	Project Manager	Helderstroom Prison upgrade, Caledon, Western Cape, South Africa
2004	Project Manager	Kraaifontein residential development, Western Cape, South Africa
2002	Project Manager	Liesbeek River canal rehabilitation, Cape Town, Western Cape, South Africa
2002	Project Manager	Blue Downs Police Station, Western Cape, South Africa
2001-2003	Project Manager	Table Mountain National Park's Glen, Boulders and Constantia Nek facilities, Cape Town, Western Cape, South Africa
2001	Project Manager	Helderberg 132/11 kV substation, Western Cape, South Africa
2001	Project Manager	Kuilsrivier housing development, Western Cape, South Africa
2000	Project Manager	Hazeldean Housing Development, Western Cape, South Africa
2000	Project Manager	Cape Town International Convention Centre, Cape Town, Western Cape, South Africa
2000	Project Manager	Saldanha - Vredenberg 66 kV powerline, Western Cape, South Africa
2000	Project Manager	Siemens cellphone mast sites, Western Cape, South Africa
2000	Project Manager	Gordons Sports Institute, Western Cape, South Africa
1999	Specialist on consulting team	Gurue - Lichanga 110 kV powerline, Mozambique
1999	Project Manager	Cape Town International Airport Precinct 2, Cape Town, Western Cape, South Africa
1999	Project Manager	Kraaifontein urban development, Western Cape, South Africa
1999	Project Manager	Rooiels residential development, Western Cape, South Africa
1999	Project Manager	Suikerbossie development, Hout Bay, Western Cape, South Africa
1999	Project Manager	Milnerton Racecourse redevelopment, Cape Town, Western Cape, South Africa
1998	Project Manager	Somerset Square development, Somerset West, Western Cape, South Africa



A B Lawson

1998	Project Manager	Longbeach Mall, Noordhoek, Western Cape, South Africa
1998	Project Manager	Noree 66/11 kV substation, Western Cape, South Africa
1998	Project Manager	Wynberg traffic alleviation study, Western Cape, South Africa
1997	Project Manager	Myrtle Grove Wine Estate, Western Cape, South Africa
1997	Project Manager	Ottery/South/Constantia Road, Cape Town, Western Cape, South Africa
1997	Consulting team member	Vanguard Drive, Cape Town, Western Cape, South Africa
1997	Consulting team member	Sheffield – Symphony Road, Cape Town, Western Cape, South Africa
1996	Consulting team member	Blackheath transport interchange, Western Cape, South Africa
1996	Consulting team member	Kaalfontein residential development, Gauteng, South Africa
1993	Environmental advisor	Waenhuiskrans electricification, Southern Cape, South Africa
1992	Environmental advisor	Knysna – Robberg 66 kV powerline, Southern Cape, South Africa
1992	Environmental advisor	Rietvlei – Plattekloof 132 kV powerline, Western Cape, South Africa
1992	Environmental advisor	Kraaifontein – Scottsdene 66 kV powerline, Western Cape, South Africa
1992	Environmental advisor	Caledon – Jagersbos 66 kV powerline, Western Cape, South Africa
1991	Environmental advisor	Woodville – Wilderness 66 kV powerline, Southern Cape, South Africa
1991	Environmental advisor	Blue Downs – Firgrove 132 kV powerline, Western Cape, South Africa

2) Environmental Management Plans:

2002-2004	Project Manager	Chapmans Peak Drive road rehabilitation, Western Cape, South Africa
2003	Project Manager	Cape Town International Convention Centre, Cape Town, Western Cape, South Africa
2001	Project Manager	Saldanha Port service corridor bridge, Saldanha, Western Cape, South Africa
2001	Project Manager	Vredenberg - Saldanha Road, Western Cape, South Africa
2001	Project Manager	Stellenbosch Arterial Road, Western Cape, South Africa
1998	Project Manager	Arabella Golf Course, Hermanus, Western Cape, South Africa
1996	Project Manager	Vredenberg - Paternoster Road, Western Cape, South Africa

3) Institutional and Policy Development and Professional Review Services:

2005	Project Manager	Independent review of EIA for golf course development, Malmesbury, Western Cape, South Africa
2002-2004	Consulting team member	Independent review of EIA/EMP for Chapmans Peak Drive road rehabilitation, Cape Town, Western Cape, South Africa
2002	Project Manager	Independent review of powerline EIA, Northern Cape, South Africa
1999	Project Manager	Independent review of landfill EIA, Hermanus, Western Cape, South Africa
1998 – 2000	Project Manager	Independent review of electricity distribution EIAs, Western Cape, South Africa



A B Lawson

1996	Project Manager	Strategic review of Eskom's Annual Report, South Africa
2005	Project Manager	Independent review of EIA for golf course development, Malmesbury, Western Cape, South Africa
2002-2004	Consulting team member	Independent review of EIA/EMP for Chapmans Peak Drive road rehabilitation, Cape Town, Western Cape, South Africa

4) Assessment of Water Resource Developments and Catchment Management:

2002	Specialist on consulting team	Port of Durban Master Plan, Durban, KwaZulu Natal, South Africa
2002	Project Manager	Liesbeek River canal rehabilitation, Cape Town, Western Cape, South Africa
2000	Specialist on consulting team	Faunal study for Zoarvlei management plan, Cape Town, Western Cape, South Africa
1988	Warden/ Ecologist	Wilderness National Park Management Plan, Southern Cape, South Africa

5) Specialist Facilitation, Public Processes, Training and Social Surveys:

2005	Project Manager	Open Cycle Gas Turbine power plant, fuel supply pipeline, substation and transmission lines, Mossel Bay, Western Cape, South Africa
2002	Project Manager	Kalk Bay heritage assessment, Kalk Bay, Western Cape, South Africa
1998	Project Manager	Krantzkop SEA, Wellington, Western Cape, South Africa
1997	Project Manager	Wildevollevlei waste water treatment plant, Western Cape, South Africa
1996	Project Manager	Bellville – Cape Town cycle path, Western Cape, South Africa

6) Environmental Planning:

2002	Specialist on consulting team	Port of Durban Master Plan, Durban, KwaZulu Natal, South Africa
2002	Specialist on consulting team	Paarl Farms planning study, Western Cape, South Africa
2002	Project Manager	SEA for Lansdowne Road corridor, Cape Town, Western Cape, South Africa
2001	Specialist on consulting team	Scenic Drive Network management plan, Cape Town, Western Cape, South Africa
2001	Specialist on consulting team	Avifaunal study for Paradyskloof powerline EIA, Western Cape, South Africa
2000	Specialist on consulting team	Faunal study for Zoarvlei management plan, Cape Town, Western Cape, South Africa
1998	Consulting team member	Krantzkop SEA, Wellington, Western Cape, South Africa
1998	Specialist on consulting team	Conservation Management Plan for Krantzkop nature reserve, Wellington, Western Cape, South Africa
1995	Environmental advisor	Salt River Powerstation decommissioning, Cape Town, Western Cape, South Africa
1992-1994	Environmental advisor	Fixed-point photographic monitoring, Western Cape, South Africa
1988	Warden/ Ecologist	Wilderness National Park Management Plan, Southern Cape, South Africa
1986	Ranger/ Ecologist	Avifaunal monitoring, Southern Cape, South Africa
1982-1985	Ranger/ Ecologist	Golden Gate Highlands National Park Management Plan, Free State, South Africa
1981	Research technician	Research methodology, Jonkershoek Research Station, Western Cape, South Africa

A B Lawson

1980	Research technician	Research methodology, Jonkershoek Research Station, Western Cape, South Africa
------	---------------------	--

7) Business/Corporate Environmental Services:

2003-2004	Consulting team member	Environmental management system for toll road, Cape Town, Western Cape, South Africa
1997	Project Manager	Environmental audits of landfill sites, Gauteng and Western Cape, South Africa
1996	Consulting team member	Environmental audit of Johannesburg International Airport, Gauteng, South Africa
1993-1995	Environmental advisor (team member)	Environmental audits of electricity powerlines, Limpopo, Mpumalanga, Western Cape
1993-1995	Environmental advisor (team member)	Environmental management system for electricity utility, Western Cape, South Africa
1993-1994	Environmental advisor (team member)	Environmental audits electricity substations, KwaZulu/Natal, Mpumalanga and Gauteng, South Africa
1993	Environmental advisor (team member)	Environmental audits of powerstations, Gauteng, South Africa

8) Project Management:

2005	Project Manager	Open Cycle Gas Turbine power plant, fuel supply pipeline, substation and transmission lines, Mossel Bay, Western Cape, South Africa
------	-----------------	---

Countries of Work Experience: Botswana, Mozambique, Namibia, South Africa.

Education: - Diploma in Nature Conservation and Wildlife Management, Pretoria Technikon, 1976
 Certificated in-service training (various)
 BA in Geography, University of South Africa, 1985.
 Diploma in Small Business Management, Potchefstroom University, 1989.
 MA in Enviro. & Geographical Science, University of Cape Town, 1996.

Employment Record :

2004 to date	Associate, Ninham Shand Consulting Engineers, Cape Town, South Africa
1998-2004	Director, The Environmental Partnership, Cape Town, South Africa
1995-1998	Chief Consultant, Bohlweki Environmental (Pty) Ltd, Cape Town, South Africa
1990-1995	Environmental Advisor, Eskom, Western Cape, South Africa
1985-1990	Senior Ranger/Warden, National Parks Board, Western Cape, South Africa
1982-1985	Ranger, National Parks Board, Free State, South Africa
1980-1982	Research Technician, Department of Nature and Environmental Conservation, Western Cape, South Africa
1975-1980	Conservator, Department of Nature and Environmental Conservation, Western Cape, South Africa
1974-1975	Game Ranger, Limshapo Game Conservation Syndicate, Botswana
1973	Field Technician, Mineral Services (Pty) Ltd, Namibia

Languages: English (first), Afrikaans (second)

K Govender

2) Environmental Management Plans:

2005	Project Staff	Withoogte Dam
2005 to date	Project Staff	Strategic Borrow Pits
2005	Project Staff	Ladismith EMPR
2005	Project Staff	Borchard's Quarry
2005	Project Staff	Mossel River Dam Phase 2
2005	Project Staff	Resealing of TR1/2 EMP
2005	Project Staff	Klein Constantia Dam EMP
2003	Project Staff	Mossel River Dam
2003	Project Staff	DEAT IEM Guidelines
2003	Project Staff	Darling effluent pipeline
2003	Project Staff	Pniel Wastewater Treatment Works Upgarde, Pniel
2003	Project Staff	EMP Development
2003	Project Staff	Carinus Scour Protection, Velddrif
2003	Project Staff	Laaiplek Fishing Harbour Refurbishment, Velddrif
2003	Project Staff	Noordhoek Social Housing Development, Velddrif
2003	Project Staff	Athlone Wastewater Treatment Works Refurbishment, Cape Town
2003	Project Staff	Coega: Main Road 435, Port Elizabeth
2003	Project Staff	Laingsburg Social Housing, Laingsburg
2003	Project Staff	Murraysberg Road Rehabilitation, Murraysberg
2000 - 2001	Project Staff	South Cape and Klein Karoo Roads, Western Cape
2001 - 2002	Project Staff	Upgrading of Trunk Road 19, Eastern Cape
2001	Project Staff (Junior)	Port Owen Dredging
2000	Project Staff (Junior)	CMC Generic Environmental Management Plan, Cape Town
2000	Project Staff (Junior)	Milnerton Golf Course Treated Effluent Pipeline, Table View
2003	Project Staff	N1/12 Colesberg to Orange River
	Project Staff	South Cape and Klein Karoo Roads, Western Cape
2001 - 2002	Project Staff	Upgrading of Trunk Road 19, Eastern Cape

K Govender

3) Institutional and Policy Development and Professional Review Services:

2003	Project Staff	DEAT IEM Guidelines
2003	Project Staff	Olifants/ Doring Internal Strategic Perspective
2003	Project Staff	Breede River Basin Study
2000	Project Staff (Junior)	Salt River CMP
2000	Project Staff (Junior)	Provincial Situation Assessment, Western, Eastern and Northern Cape

4) Assessment of Water Resource Developments and Catchment Management:

2003	Project Staff	Olifants/ Doring Internal Strategic Perspective
2003	Project Staff	Mouton Citrus Farm Dams
2003	Project Staff	Strathmore Dam
2003	Project Staff	Sedgefield water Augmentation Study
2003	Project Staff	Breede River Basin Study
2001	Project Staff	Panarama Canal, Stellenberg

5) Specialist Facilitation, Public Processes, Training and Social Surveys:

2003	Project Staff	Chapman's Peak Toll Plaza and Realignment
2002	Project Staff	L'Aubade Mountain Retreat, Western Cape

6) Environmental Planning:

2001 - 2002	Project Staff	Upgrading of Trunk Road 19, Eastern Cape
----------------	---------------	--

Countries of Work Experience: South Africa

Education: BSc (Environmental and Geographical Science), University of Cape Town, South Africa, 1998.
BSc (Hons) (Environmental and Geographical Science), University of Cape Town, South Africa, 1999.
MSc (Environmental and Geographical Science), University of Cape Town, South Africa, 2004

Employment Record:

2003 to date	Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
2002	Masters student, University of Cape Town, Cape Town, South Africa
2000-2001	Environmental Scientist, Ninham Shand Consulting Engineers, Cape Town, South Africa
1998 – 1999	Honours student, University of Cape Town, Cape Town, South Africa
1996 – 1998	Undergraduate student, University of Cape Town, Cape Town, South Africa

Languages: English (first), Afrikaans (second)



K Shippey

CURRICULUM VITAE

Name of Firm :	Ninham Shand (Pty) Ltd	Name of Staff :	Karen Shippey
Profession :	Associate, Environmental Practitioner	Year of Birth :	1974
Years with Firm :	4	Nationality :	South African

Membership in Professional Societies:

- Environmental Assessment Practitioners of South Africa
- South African Council for Natural Science Professions (Reg No. 400132/05)
- South African Institute of Ecologists and Environmental Scientists
- International Association for Impact Assessment South Africa

Key Qualifications:

Ms Shippey, has 9 years experience as an Environmental Practitioner working in the environmental impact assessment, environmental management and policy field. Her experience includes project design, project management, understanding of the ecological, social and sustainable development requirements including specialist input co-ordination and process development. Ms Shippey has developed significant expertise in the field of public and community engagement. This includes specialist facilitation, development of consultation processes and conflict resolution. She is an Associate in the Environmental Department of the Cape Town office.

Experience Record:**1) Regulatory Processes and Environmental Impact Assessment:**

2005	Project Manager	EIA for the Upgrade of Bonnievale Wastewater Treatment Works, Western Cape, South Africa
2004-2005	EIA Task Leader	Feasibility Study for the Raising of Clanwilliam Dam in the Western Cape, South Africa
2002 to date	EIA and Social & Legal Task Leader	Table Mountain Aquifer Feasibility and Pilot Project, Western Cape, South Africa
2002	Project Manager	Newlands Station re-development Screening Process, Cape Town Western Cape, South Africa
1999	Environmental Scientist	Milnerton Lagoon Wall Re-construction: Scoping Report, Cape Town, Western Cape, South Africa
1999	Environmental Scientist	NSRI Site Melbosstrand: Scoping Report, Cape Town, Western Cape, South Africa
1996	Environmental Scientist	Cellular Tower positioning: Environmental Impact Assessment, Atlantis, Western Cape, South Africa
1996	Junior Environmental Scientist	Environmental Impact Assessment for the proposed ESKOM wellfield at Koeberg Private Nature Reserve, Cape Town Western Cape, South Africa
1995-1997	Environmental Scientist	Milnerton Lagoon Beach Development: Environmental Impact Assessment, Cape Town, Western Cape, South Africa
1995	Junior Environmental Scientist	Initial Environmental Assessment of the proposed railway link between De-Hoek and Saldanha, Saldanha, Western Cape, South Africa

2) Environmental Management Plans:

2001-2002	Project Manager	Bracken Nature Reserve: Environmental Management Plan for Nature Reserve, Brackenfell, Western Cape, South Africa
1999	Project Manager	Silwerstroom Environmental Management System, Silwerstroomstrand, Western Cape, South Africa
1999	Project Manager	Zoarvlei Environmental Management Plan, Cape Town, Western Cape, South Africa
1997	Project Manager	Groundwater Resource: Environmental Management System, Witzands, Western Cape, South Africa

K Shippey

1997	Environmental Scientist	Milnerton Lagoonbeach Development Environmental Management Plan, Cape Town, Western Cape, South Africa
1996-1997	Environmental Scientist	Environmental Management System for the Koeberg Private Nature Reserve, Atlantis, Western Cape, South Africa
1997-1999	Environmental Scientist	Leisure Bay: Environmental Site Monitoring and Environmental Management, Cape Town, South Africa
1997-1999	Environmental Scientist	Neptune's Isle: Environmental Site Monitoring and Environmental Management, Cape Town, Western Cape, South Africa
1997-2000	Environmental Scientist	Environmental Site Management and Monitoring: Milnerton Lagoonbeach Development, Cape Town, Western Cape, South Africa
1999	Environmental Scientist	Re-construction Milnerton Lagoon wall: Environmental Site Monitoring, Cape Town, Western Cape, South Africa

3) Institutional and Policy Development and Professional Review Services:

2004- to date	Project Manager/ Reviewer	Marine & Coastal Management Long-term contract assistance in implementing the NEMA Control of Vehicles in the Coastal Zone Regulations, South Africa
2003- 2004	Project Manager/ Reviewer	Marine & Coastal Management short- term contract assistance in implementing the NEMA Control of Vehicles in the Coastal Zone Regulations, South Africa
2003	Project Manager/ Reviewer	Pinnacle Point Casino Hotel Review, Western Cape, South Africa
2003	Project Manager/ Reviewer	George Shopping Mall Review, Western Cape, South Africa
2003- 2005	Olifants Doorn ISP Co-ordinator	Olifants Doring Water Management Area Internal Strategic Perspective, South Africa
2003	Project Manager	Western Cape State of the Environment Report Terms of Reference Development, Western Cape South Africa
2003	Member of review team	IUCN Greening Technical Review, South Africa
2002	Project Manager / Reviewer	L'Aubade Mountain Resort Review, Franschoek, Western Cape South Africa

4) Assessment of Water Resource Developments and Catchment Management:

2004-2005	EIA Task Leader	Feasibility Study for the Raising of Clanwilliam Dam in the Western Cape, South Africa
2005-2006	Public Participation Co-ordination	Development of Reconciliation Strategies for Large Bulk Water Supply Systems in the Western Cape , South Africa
2003-2006	Project Manager	Southern High Confidence Reserve Determination: Project Management, Western and Eastern Cape, South Africa
2003-2004	Olifants Doorn ISP Co-ordinator	Olifants Doring Water Management Area Internal Strategic Perspective, WesternCape, South Africa
2002 to date	EIA and Social & Legal Task Leader	Table Mountain Aquifer Feasibility and Pilot Project, Western Cape, South Africa
2002 – 2004	Project Manager	South African Rainfall Enhancement Project Completion Phase, Limpopo, South Africa

5) Specialist Facilitation, Public Processes, Training and Social Surveys:

2005-2006	Public Participation Co-ordination	Development of Reconciliation Strategies for Large Bulk Water Supply Systems in the Western Cape , South Africa
-----------	------------------------------------	---

K Shippey

2004	Project Manager / Specialist Facilitator	SANP Washhouse Precinct Public Facilitation, Cape Town, Western Cape, South Africa
2003	Specialist Facilitator	Chapman's Peak EIA for the Proposed Toll Road Plazas and Road Realignment - Public Meeting Specialist Facilitation, Cape Town, Western Cape, South Africa
2003	Specialist Facilitator	International Symposium on Integrated Water Resource Management. Stellenbosch Statement Workshop, South Africa
2003	Specialist Facilitator	Department of Water Affairs & Forestry Restructuring Workshops-Southern Cluster and Working for Water, South Africa
2002-2003	Project Manager-Public Facilitation	Signal Hill-Kloof Nek-Tafelberg Road Development Framework & Precinct Plan Public Participation, Cape Town, Western Cape, South Africa
2002	Project Manager / Specialist Facilitator	L'Aubade Mountain Resort Public Meeting Facilitation, Franschoek, Western Cape, South Africa
2002 to date	Project Manager / Specialist Facilitator	Table Mountain Aquifer Feasibility Study and Pilot Project: Public Participation, Cape Town, Western Cape, South Africa

6) Environmental Planning:

2004	Project Manager	Proposed Upgrade of Trunk Road 2 (TR2) between the De Beers Interchange and the Foot of Sir Lowry's Pass, Western Cape South Africa
2002	Project Manager	Monwabisi Coastal Development, Khayelitsha, Western Cape, South Africa
1997	Project Manager	Environmental Baseline Study for the Airport Master Plan Study, Cape Town, South Africa

7) Business/Corporate Environmental Services:

2002 – 2004	Project Manager	South African Rainfall Enhancement Project Completion Phase, Limpopo, South Africa
1998	Project Manager	Metrorail Salt River Depot Wastewater Investigation and Monitoring, Cape Town, Western Cape, South Africa
1999 - 2000	Environmental Scientist	Environment Compliance Assessment of Colas SA, South Africa and Namibia

8) Project Management:

2003-2006	Project Manager	Southern High Confidence Reserve Determination: Project Management, Western and Eastern Cape, South Africa
-----------	-----------------	--

Countries of Work Experience: South Africa, Namibia

Education:	- BSc (Geology and Environmental & Geographical Science), University of Cape Town, South Africa, 1995
	- BSc (Hons) (Environmental and Geographical Science, University of Cape Town, South Africa, 1997
	- MSc (Environmental and Geographical Science), University of Cape Town, South Africa, 2001

Employment Record :

2005 to date	Associate, Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
2001 to 2005	Principal Environmental Scientist, Ninham Shand Consulting Engineers, Cape Town, South Africa
1998 - 2000	Managing Environmental Scientist, Knight Hall Hendry (Pty) Ltd, South Africa
1995 - 1997	Part-time Environmental Scientist, Knight Hall Hendry (Pty) Ltd, South Africa

Languages: English (first), Afrikaans (second)

Shippey K NS WB Abb 0905





L GAIKA

CURRICULUM VITAE

Name of Firm :	Ninham Shand (Pty) Ltd	Name of Staff :	Lindiwe Gaika
Profession :	Candidate Environmental Practitioner	Year of Birth :	1975
Years with Firm :	1	Nationality :	South African

Key Qualifications:

Ms Gaika is a Candidate Environmental Practitioner. She completed a Masters Degree at the University of Western Cape. Her research studies considered conservation status of the biodiversity in protected areas in relation to socio-economic conditions. Her command of Xhosa is a distinct advantage for public participation, translation and for community consultation in the Western and Eastern Cape. Her involvement in various projects has developed her interest in water resource management and community-based natural resources management.

Experience Record:**1) Regulatory Processes and Environmental Impact Assessment:**

2005 to date	Project Staff	Environmental Impact Assessment: Proposed installation of a Hydroclave medical waste treatment plant in Butterworth, Eastern Cape.
2005 to date	Project Staff	Environmental Impact Assessment: Realignment of Baden Powell Drive between the Eisleben and Swartklip Roads in Mitchells Plain.

2) Specialist Facilitation, Public Processes, Training and Social Surveys:

2006 to date	Public Participation Coordinator	Environmental Impact Assessment for the proposed coal fired power station and the associated infrastructure in the Witbank area, Mpumalanga.
2006 to date	Public Participation Coordinator	Environmental Impact Assessment for the proposed coal fired power station and the associated infrastructure in the Northern Free State.
2005 to date	Project Staff	Western Cape Reconciliation study and Berg CMA Process
2005 to date	Project Core Staff	Develop and Test methodologies for Determining resource specific General Authorisations under the National Water Act.
2005 to date	Project team	Feasibility Study for the Raising of Clanwilliam Dam, Western Cape, South Africa.
2005 to date	Project team	Chapman's Peak EIA for the Proposed Toll Road Plazas and Road Realignment, Cape Town, Western Cape, South Africa.
2005 to date	Project team	Paarl Water Treatment Works, Paarl, Western Cape, South Africa:
2005 to date	Project team	Proposed Upgrading of Paarl Wastewater Treatment Works, construction of a new gravity outfall sewer and the siting of a Regional Wastewater Treatment Works for Paarl South, Paarl, Western Cape, South Africa.
2005 to date	Project team	Proposal to undertake a revised Environmental Assessment process for Blaauwberg City East bulk water and wastewater infrastructure.

3) Business/Corporate Environmental Services:

2005 to date	Project Staff	Drakenstein Pig Farm Relocation, Paarl, Western Cape, South Africa
--------------	---------------	--

4) Environmental Planning:

L GAIKA

2003 - 2004	Agricultural Research Scientist	South African National Botanic Institute, South Africa: assisted in compiling a National Protected Areas Database, species information database and attending workshops.
----------------	---------------------------------------	---

Countries of Work Experience: South Africa

Education: - BSc (Botany Department) University of the Western Cape, South Africa, 1999.
 BSc (Hons) (Botany Department) University of the Western Cape, South Africa, 2000.
 Masters (Botany Department) University of the Western Cape, South Africa (pending)

Employment Record :

2005 to date	Candidate Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
2005	Tutorial Assistant, University of the Western Cape, Bellville, South Africa
2005	GIS assistant, De beers Marine, Cape Town, South Africa
2004	Tutorial Assistant and Computer Lab administrator, University of the Western Cape, Bellville, South Africa.
2003 - 2004	Agricultural Scientist Intern, South African National Biodiversity Institute, Kirstenbosch, South Africa
2003	Tutorial Assistant and a Practical Demonstrator, University of the Western Cape, Bellville South Africa
2000 – 2001	Research Assistant, Botany Department, University of the Western Cape, Bellville, South Africa

Languages: English (second), Xhosa (first)



AC SPINKS Pr Sci Nat

CURRICULUM VITAE

Name of Firm : Ninham Shand (Pty) Ltd Name of Staff : Andrew Charles Spinks
 Profession : Associate Year of Birth : 1970
 Years with Firm : 7 Nationality : South African

Membership in Professional Societies:

- South African Council for Natural Science Professions (400098/02)
- Environmental Assessment Practitioners of South Africa
- Southern African Institute of Ecologists and Environmental Scientists
- Association of Heritage Assessment Practitioners
- International Association for Impact Assessment South Africa

Key Qualifications:

Dr Spinks, an Associate in the Cape Town Office, has a Doctorate in Zoology and undergraduate training in Botany. He has over seven years of experience in the environmental field and has compiled and managed numerous environmental investigations; including Environmental Impact Assessments, Environmental Management Plans (EMP), Environmental Management Programme Reports and environmental constraints and opportunities reports. Andrew has a particular interest in EMPs for civil construction activities, and has been intimately involved in integrating the EMP into the Tender Documentation

Experience Record**1a) Regulatory Processes and Environmental Impact Assessment: Impact Assessment**

2005 to date	Project Manager for environmental components	Upgrade of Capacity of Malmesbury WWTW, Malmesbury, Western Cape, South Africa
2005 to date	Project Manager for environmental components	Needs Camp Bulk Water Supply, Mdanstane, Eastern Cape, South Africa
2005 to date	Project Manager	Donadio Sand Mine, Philippi, Western Cape, South Africa
2005 to date	Project Manager	Upgrading of Mayfield WWTW, Grahamstown, Eastern Cape, South Africa
2005 to date	Project Manager	Contermanskloof Water Reservoir, Table View, Western Cape, South Africa
2005 to date	Project Manager	Development of Portion 75 of Farm 205, Rugte Valley, Lake Pleasant, Southern Cape, South Africa
2005 to date	Project Manager	Bradis Crushing, Cape Town, Western Cape, South Africa
2005 to date	Environmental Specialist	Berg Water Project Supplement Scheme, Franschhoek, Western Cape
2004 to date	Project Manager	Treated Effluent Pipeline between the La Motte and Wemmershoek Wastewater Treatment Works', Franschhoek, Western Cape, South Africa
2004 to date	Project Manager	Construction of Saxdowns Road between Hindle Road and Stellenbosch Arterial, Blue Downs, Western Cape, South Africa
2004 to date	Project Manager	Paarl Strategic Wastewater Treatment, Paarl, Western Cape, South Africa
2004 to date	Project Manager for environmental components	Upgrading of the Darling Wastewater Treatment Works, Darling, Western Cape, South Africa
2004 to date	Project Manager for environmental components	Main Road 23, Wellington, Western Cape, South Africa
2004 to date	Project Manager	Melkbosstrand R27 Sewer Main, Table View, Western Cape, South Africa
2003 to date	Project Manager for environmental components	Paarl Water Treatment Works, Paarl, Western Cape, South Africa
2003 to date	Project Manager	Chapman's Peak Drive Toll Plazas and Road Realignment, Hout Bay, Western Cape, South Africa
2004 - 2005	Project Manager	Construction of Four Flow Gauging Weirs on the Berg River and its Tributaries, Western Cape, South Africa
2004 - 2005	Project Manager	Establishment of a Broadband Network for Wireless Internet Access, Western Cape, South Africa
2004 - 2005	Project Manager	Bosmansdam Road Pedestrian Bridge and Bus Embayments, Montague Gardens, Western Cape, South Africa



A C Spinks

2004 - 2005	Project Manager for environmental components	Elandsjagt Water Treatment Works, Humansdorp, Eastern Cape, South Africa
2004	Project Manager for environmental components	Mier Groundwater Utilisation, Groot and Klein Mier, Northern Cape, South Africa
2004	Project Manager	Pinnacle Point Resort Treated Effluent Dam, Mossel Bay, Western Cape, South Africa
2004	Project Manager	Garden Route Casino, Mossel Bay, Western Cape, South Africa
2004	Project Manager for environmental components	Laing Water Treatment Works, King Williams Town, Eastern Cape, South Africa
2003 - 2004	Project Manager for environmental components	Upgrading of the Bulk Water Supply, Vanderkloof, Northern Cape, South Africa
2003 - 2004	Project Manager for environmental components	Van Wyksvlei Groundwater Abstraction, Van Wyksvlei, Northern Cape, South Africa
2003 - 2004	Project Manager for environmental components	Strydenburg Groundwater Abstraction, Strydenburg, Northern Cape, South Africa
2003	Project Manager for environmental components	Diep River Bridge Detailed Design, Table View, Western Cape, South Africa
2002 - 2003	Project Manager for environmental components	Noordhoek Social Housing Development, Velddrif, Western Cape, South Africa
2002 - 2003	Project Manager	Milkwood Rise Housing Development, Kommetjie, Western Cape, South Africa
2002 - 2003	Specialist input and guidance on environmental process	Athlone Wastewater Treatment Works Extension, Cape Town, Western Cape, South Africa
2002 - 2003	Project Manager for environmental components	Pniel Wastewater Treatment Works Upgarde, Pniel, Western Cape, South Africa
2002 - 2003	Project Manager for environmental components	Hout Bay Fishing Harbour Refurbishment, Hout Bay, Western Cape, South Africa
2002 - 2003	Project Manager	M12/ N7 Interchange, Table View, Western Cape, South Africa
2002 - 2003	Project Manager	Potsdam Road Revised Alignment, Table View, Western Cape, South Africa
2000 - 2003	Project Manager for environmental components	Athlone Wastewater Treatment Works Refurbishments, Cape Town, Western Cape, South Africa
2000 - 2003	Project Manager	Charcoal Pilot Project, Wilderness & Riviersonderend, Western Cape, South Africa
2002	Project Manager for environmental components	Laaipek Fishing Harbour Refurbishment, Velddrif, Western Cape, South Africa
2002	Project Manager	Eversdal Informal Trading Area, Durbanville, Western Cape, South Africa
2002	Project Manager	Velddrif Waterfront Development, Velddrif, Western Cape, South Africa
2002	Project Manager	Maroela Road Extension, Kraaifontein, Western Cape, South Africa
2001 - 2002	Project Manager	Tygerfalls Mixed Use Development, Bellville, Western Cape, South Africa
2001 - 2002	Project Manager for environmental components	Upgrading of Trunk Road 19, Mt Fletcher, Eastern Cape, South Africa
2001	Project Manager	Mossgas Lighting, Mossel Bay, Western Cape, South Africa
2000 - 2001	Project Manager	Wouter Engelbrecht Ad Hoc Environmental Inputs, Western and Northern Cape, South Africa
2000 - 2002	Project Manager for environmental components	Potsdam Wastewater Treatment Works Extension, Table View, Western Cape, South Africa
2000 - 2001	Project Manager	N1/N10 Realignment Application for Exemption, Hanover, Northern Cape, South Africa

A C Spinks

2000	Project Manager	Blaauwberg City East Bulk Infrastructure, Table View, Western Cape, South Africa
2000	Project Manager	Charcoal Pilot Project, Villiersdorp, Western Cape, South Africa
2000	Project Manager for environmental components	Milnerton Golf Course Treated Effluent Pipeline, Table View, Western Cape, South Africa
2000	Project Manager for environmental components	Borcherds Quarry Wastewater Treatment Works, Cape Town, Western Cape, South Africa
1999 - 2000	Project Manager	M12 Road Extension and Realignment of Potsdam Road, Table View, Western Cape, South Africa
1999 - 2000	Project Manager for environmental components	Wellington Potable Water Pipeline, Wellington, Western Cape, South Africa
1999 - 2000	Project Manager for environmental components	Hermitage Potable Water Pipeline, Swellendam, Western Cape, South Africa
1999 - 2000	Project Manager for environmental components	Meerlust Social Housing Development, Franschhoek, Western Cape, South Africa
1999 - 2000	Project Staff	Gaikou Lodge Development, Swellendam, Western Cape, South Africa
1999	Project Staff	Ruiterbos Social Housing Development, Mosselbay, Western Cape, South Africa
1999	Project Staff	Granada Flats Area Stormwater Management, Brenton-on-Sea, Western Cape, South Africa
1999	Project Staff	Westlake Gravity Outfall Sewer, Lakeside, Western Cape, South Africa
1999	Project Staff	Westlake Water Reservoir, Lakeside, Western Cape, South Africa
1998	Specialist	Robben Island Terrestrial Vertebrates, Cape Town, Western Cape, South Africa

1b) Regulatory Processes and Environmental Impact Assessment: Mining and Industrial Applications

2005 to date	Project Manager	Prospecting permit for Ciolli Brothers Quarry, Vissershok, Western Cape, South Africa
2005 to date	Project Manager	M12/ N7 Interchange, Table View, Western Cape, South Africa
2005 to date	Project Manager	Gaikou Development, Swellendam, Western Cape, South Africa
2005 to date	Project Manager	Rehabilitation of N1/4, Touwsrivier, Western Cape, South Africa, South Africa
2005 to date	Project Manager	Proposed Commercial Gravel Quarry, Mt Ayliff, Eastern Cape, South Africa
2005 to date	Project Manager for environmental components	Strategic Plan for the Operation of Re-gravelling Borrow Pits, Western Cape, South Africa
2005 to date	Project Manager	Rehabilitation of N1/6 and N1/7, Leeu-Gamka, Western Cape, South Africa, South Africa
2005 to date	Project Manager	Donadio Sand Mine, Philippi, Western Cape, South Africa
2004 to date	Project Manager for environmental components	Upgrading of Main Road 23, Wellington, Western Cape, South Africa
2004 to date	Project Manager for environmental components	Re-gravelling of portions of Main and Divisional Roads, Ladismith, Western Cape, South Africa
2001 & 2004 to date	Project Manager for environmental components	The Glebe Borrow Pit Closure Report, Southern Cape, South Africa
2000 to date	Project Manager for environmental components	South Cape and Klein Karoo Gravel Roads, Southern Cape and Karoo, South Africa
2004 - 2005	Project Manager for environmental components	Orange River Bridge, Riemvasmaak, Northern Cape, South Africa
2004	Project Manager for environmental components	Madwaleni EMPR, Umtata, Eastern Cape, South Africa
2002 - 2004	Project Manager	George Urban Dumping, George, Western Cape, South Africa

A C Spinks

2001 - 2004	Project Manager for environmental components	N1 Colesberg to Orange River, Colesberg, Northern Cape, South Africa
2003	Project Manager for environmental components	Akkerkloof Dam Closure report, Knysna, Western Cape, South Africa
2001 - 2002	Project Manager for environmental components	Upgrading of Trunk Road 19, Mt Fletcher, Eastern Cape, South Africa
2001	Project Manager	Richmond Alternative Quarry Site, Richmond, Northern Cape, South Africa
2000 - 2001	Project Manager	Wouter Engelbrecht Ad Hoc Environmental Inputs, Western Cape, South Africa
2000 - 2001	Project Manager	N1/N10 Environmental Management Programme Report, Hanover, Northern Cape, South Africa
2000	Project Manager	N2 Kleinberg Quarry, Mosselbay, Western Cape, South Africa
1999	Project Staff	Environmental Management Programme Report for the N1, Western and Northern Cape, South Africa
1999	Project Staff	Remediation of Zandvliet Wetlands, Macassar, Western Cape, South Africa

2) Environmental Management Plans:

2005 to date	Documentation Specialist	Vaal River Eastern Subsystem Augmentation Project, Vaal Dam to Knoppiesfontein, Gauteng and Mpumalanga, South Africa
2004 to date	Project Manager	Tuscan Waters EMP, parklands, Cape Town, South Africa
2004 to date	Project Manager for environmental components	Elandsjagt Water Treatment Works, Humansdorp, Eastern Cape, South Africa
2003 to date	Project Manager for environmental components	Potsdam Wastewater Treatment Works Upgrade and Extension, Table View, Western Cape, South Africa
2003 to date	Project Manager	Diep River Sewer Main, Table View, Western Cape, South Africa
2003 to date	Documentation Specialist, Environmental Specialist and Environmental Auditor	Berg Water Project Environmental Specifications and Monitoring, Franschhoek, Western Cape, South Africa
2002 to date	Project Manager	Parklands Mixed Use Development, Table View, Western Cape, South Africa
2001 to date	Project Manager	Tygerfalls Mixed Use Development, Bellville, Western Cape, South Africa
2005	Project Staff	Open Cycle Gas Turbine power plant, fuel supply pipeline, substation and transmission lines, Mossel Bay, Western Cape, South Africa
2004 - 2005	Project Manager for environmental components	Construction of Water Reticulation at Augrabies, Northern Cape, South Africa
2004 - 2005	Project Manager for environmental components	Upgrading of the Bulk Water Supply in Mier, Northern Cape, South Africa
2003 - 2005	Project Manager for environmental components	Mossel River Dam Refurbishment, Hermanus, Western Cape, South Africa
2003 - 2005	Project Manager for environmental components	Upgrading of the Bulk Water Supply, Vanderkloof, Northern Cape, South Africa
2003 - 2005	Project Manager for environmental components	Van Wyksvlei Groundwater Abstraction, Van Wyksvlei, Northern Cape, South Africa
2004	Project Manager for environmental components	Laing Water Treatment Works, King Williams Town, Eastern Cape, South Africa
2004	Project Staff	Klein Constantia Dam, Constantia, Western Cape, South Africa
2004	Project Staff	Unit P Bulk Water, Mdantsane, Eastern Cape, South Africa
2004	Project Staff	Unit P Bulk Wastewater, Mdantsane, Eastern Cape, South Africa

A C Spinks

2004	Project Manager for environmental components	Umtata Northern Sewers, Umtata, Eastern Cape, South Africa
2003 - 2004	Project Manager for environmental components	Strydenburg Groundwater Abstraction, Strydenburg, Northern Cape, South Africa
2003 - 2004	Project Manager	Sunningdale Mixed Use Development, Table View, Western Cape, South Africa
2003 - 2004	Project Manager for environmental components	Noordhoek Social Housing Development, Velddrif, Western Cape, South Africa
2003 - 2004	Project Manager for environmental components	Pniel Wastewater Treatment Works, Franschhoek, Western Cape, South Africa
2003	Project Manager for environmental components	Laaiplek Fishing Harbour Refurbishment, Velddrif, Western Cape, South Africa
2003	Project Manager	Sunset Village Residential Development, Table View, Western Cape, South Africa
2003	Project Manager for environmental components	M12 Road Extension and Diep River Bridge, Table View, Western Cape, South Africa
2003	Environmental Auditor	Coega: Main Road 435, Port Elizabeth, Eastern Cape, South Africa
2003	Environmental Control Officer	Carinus Scour Protection, Velddrif, Western Cape, South Africa
2003	Project Manager for environmental components	Laingsburg Social Housing, Laingsburg, Western Cape, South Africa
2003	Project Manager for environmental components	Murraysberg Road Rehabilitation, Murraysberg, Western Cape, South Africa
2002 - 2003	Project Manager	N1/3 Railway Infrastructure, Glenheatlie, Western Cape, South Africa
2000 - 2003	Project Manager for environmental components	Athlone Wastewater Treatment Works Refurbishment, Cape Town, Western Cape, South Africa
2002	Project Manager for environmental components	Fairbreeze Water Pipeline, Kwazulu Natal, South Africa
2002	Environmental Auditor	George Road Rehabilitation, George, Western Cape, South Africa
2002	Project Staff	Berg Water Project Scope of Services, Franshoek, Western Cape, South Africa
2002	Project Manager for environmental components	Red Hill Reservoir, Simonstown, Western Cape, South Africa
2002	Project Manager	Maroela Road Extension, Kraaifontein, Western Cape, South Africa
2001 - 2002	Project Manager for environmental components	Upgrading of Trunk Road 19, Mt Fletcher, Eastern Cape, South Africa
2001	Project Manager	Jacobsbaai Access Road, West Coast, Western Cape, South Africa
2001	Project Staff	Welgemoed Golf Course, Durbanville, Western Cape, South Africa
2001	Project Manager for environmental components	Table Mountain Access Road, Cape Town, Western Cape, South Africa
2000 - 2001	Project Manager for environmental components	South Cape and Klein Karoo Roads, Western Cape, Western Cape, South Africa
2000 - 2001	Project Manager for environmental components	Consolidate Municipal Infrastructure Programme, Western Cape, South Africa
2000 - 2001	Environmental Auditor	Table Mountain Dams, Cape Town, Western Cape, South Africa

A C Spinks

2000 - 2001	Project Staff	Engelhard Catalytic Converter Plant, Port Elizabeth, Eastern Cape, South Africa
2000	Project Manager for environmental components	CMC Generic Environmental Management Plan, Cape Town, Western Cape, South Africa
2000	Project Manager for environmental components	Milnerton Golf Course Treated Effluent Pipeline, Table View, Western Cape, South Africa
2000	Project Staff	Khayelitsha Wetlands, Cape Town, Western Cape, South Africa: Appointed by the Cape Metropolitan Council to compile an EMP for construction
2000	Project Manager for environmental components	Borcherds Quarry Wastewater Treatment Works, Cape Town, Western Cape, South Africa
1999 - 2000	Project Manager for environmental components	Wellington Potable Water Pipeline, Wellington, Western Cape, South Africa
1999 - 2000	Project Staff	Hermitage Potable Water Pipeline, Swellendam, Western Cape, South Africa
1999	Project Staff	Reservoir Revegetation, Montague, Western Cape, South Africa
1999	Project Staff	Generic Environmental Management Plan, Cape Town, Western Cape, South Africa
1999	Project Staff	Granada Flats Area Re-vegetation, Brenton-on-Sea, Western Cape, South Africa
1999	Project Staff	Simonstown Road Failure, Simonstown, Western Cape, South Africa

3) Institutional and Policy Development and Professional Review Services:

2003 to date	Project Staff	Implementing the NEMA Control of Vehicles in the Coastal Zone, South Africa
2005	Independent Reviewer	Environmental Authority Guideline Document, Environmental Management Plans, South Africa
2005	Independent Reviewer	Langebaan Country Estate ~ Phase 3, Langebaan, Western Cape, South Africa
2005	Independent Reviewer	Arabella Country Estate ~ Phase 2, Kleinmond, Western Cape, South Africa
2003 - 2005	Project Manager	Western Coast Gas Development Project, Western Cape, South Africa
2003 - 2004	Project Manager and Author	IEM Guideline Document, Environmental Management Plans, South Africa
2003 - 2004	Independent Reviewer	Pinnacle Point Development, Western Cape, South Africa
2003	Independent Reviewer	Pinnacle Point Beach and Golf Club, Mossel Bay, Western Cape, South Africa
2003	Project Staff	IUCN Greening Technical Review, South Africa
2002	Project Staff	PAWC Road Materials Manual, Legal Review, Western Cape, South Africa
2001	Project Manager for environmental components	George Consolidated Municipal Infrastructure Programme, George, Western Cape, South Africa
2001	Reviewer	Zandvliet Environmental Management Plan Review, Macassar, Western Cape, South Africa
2000 - 2001	Project Manager	Consolidate Municipal Infrastructure Programme, Western Cape, South Africa
2000	Project Manager and Reviewer	Record of Decision Compilation for Department of Environmental and Cultural Affairs and Sport, Western Cape, South Africa
1999	Project Staff	Road Maintenance Guide, Western Cape, South Africa

4) Assessment of Water Resource Developments and Catchment Management:

2001	Project Manager	Panarama Canal, Stellenberg, Western Cape, South Africa
1999 - 2000	Project Staff	Provincial Situation Assessment, Western, Eastern and Northern Cape, South Africa
1999 - 2000	Project Staff	Amatole Terms of Reference, East London, Eastern Cape, South Africa
1999	Project Staff	Diep River Management Study, Table View, Western Cape, South Africa
1999	Project Staff	Black/Vygekraal River Cleaning, Cape Town, Western Cape, South Africa
1999	Project Staff	Cape Town Castle Moat Water Quality, Cape Town, Western Cape, South Africa

A C Spinks

5) Specialist Facilitation, Public Processes, Training and Social Surveys:

2004 to date	Project Manager for Environmental Components	Potsdam Wastewater Treatment Works Upgrade and Extension, Table View, Western Cape, South Africa
2002 to date	Project Manager	Parklands Mixed Use Development, Table View, Western Cape, South Africa
2004	Project Manager	Legal Requirements for Regravelling Activities, Western Cape, South Africa
2002	Project Manager	South African Road Federation Environmental Course, Bellville, Western Cape, South Africa
2000 – 2001	Project Manager	Environmental Control Officer Training Courses, Cape Town, Western Cape, South Africa
2000 – 2001	Project Manager	Consolidate Municipal Infrastructure Programme, Western Cape, South Africa

6) Environmental Planning:

2005 to date	Project Manager	Proposed Lamloch Mixed Use Development, Kleinmond, Western Cape, South Africa
2005 to date	Project Manager	Proposed Commercial Gravel Quarry, Mt Ayliff, Eastern Cape, South Africa
2005 to date	Project Manager	Proposed Development of Portion 75 of Farm 205, Rugte Valley, Lake Pleasant, Southern Cape, South Africa
2005	Project Manager	Drakenstein Pig Farm, Paarl, Western Cape, South Africa
2002	Project Manager for Environmental Components	M5/ Wetton Road Interchange, Wynberg, Western Cape, South Africa
2001 - 2002	Project Staff	Upgrading of Trunk Road 19, Mt Fletcher, Eastern Cape, South Africa
2001	Project Manager	Saxdowns Road, Cape Town, Western Cape, South Africa
2000	Project Staff	Military Base Conversions to Civilian Use, West Coast, Western Cape, South Africa
2000	Project Manager for Environmental Components	Goede Verwachting Development, Somerset West, Western Cape, South Africa
1999	Project Staff	Driftsands Feasibility Study, Cape Town, Western Cape, South Africa
1999	Project Staff	Hex River Tourism, Hex River, Western Cape, South Africa
1999	Project Staff	Sanddrif Development, Stellenbosch, Western Cape, South Africa

Countries of Work Experience: South Africa**Education:**

- BSc (Botany and Zoology), University of Cape Town, South Africa, 1991.
- BSc (Hons) (Zoology), University of Natal (Pietemariitzburg), South Africa, 1992.
- PhD (Zoology), University of Cape Town, South Africa, 1998.

Employment Record:

2003 to date	Associate, Environmental Department, Ninham Shand Consulting Engineers, Cape Town, South Africa
2001 to 2003	Principal Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
2000 - 2001	Senior Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
1999 - 2000	Environmental Practitioner, Ninham Shand Consulting Engineers, Cape Town, South Africa
1998 – 1999	Postdoctoral Research Fellow, Department of Physiological Sciences, University of the Western Cape, Bellville, South Africa
1997 – 1998	Doctoral student and Junior Lecturer, Department of Zoology, University of Cape Town, Cape Town, South Africa
1993 – 1997	Doctoral student and Senior Demonstrator, Department of Zoology, University of Cape Town, Cape Town, South Africa

Languages: English (first), Afrikaans (second)

CURRICULUM VITAE

Mark Wood, Mark Wood Environmental Consultants

Name: MD Wood
Profession: Environmental Consultant
Date of Birth: 1 May 1954
Parent Firm: Mark Wood Environmental Consultants cc
Position in Firm: Sole Member
Nationality: South African

Education:

- B.Sc (Geog) University of the Witwatersrand, South Africa, 1979.
- BA (Psych) University of the Witwatersrand, South Africa, 1983.

Professional Qualifications:

- Member, South African affiliate of International Association for Impact Assessment

Languages:

	Speaking	Reading	Writing
English (first)	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good

Countries of work experience:

South Africa
Mozambique
Lesotho
Swaziland

Proposed position on team:

Strategic review

Key qualifications:

Mark Wood has spent most of the past 18 years leading EIAs for major development projects. Of these projects, many have involved installations that are hazardous and controversial in the absence of careful and effective environmental planning. Mr Wood has, for example, recently led the EIA team for all of the upstream EIAs (three separate projects) of Sasol's Natural Gas Project (NGP), including exploration, the development of the onshore gas fields and the transport of the gas from Mozambique to South Africa in an 860 km underground pipeline. The total estimated value of the NGP is approximately \$1 billion.

Mr Wood has been responsible for coordinating an extensive list of other EIAs for hazardous oil and gas pipeline installations, major development and infrastructure projects. He is currently a review consultant to the South African National Roads Agency and the provincial (Gauteng) Department of Agriculture, Conservation and Environment for the three largest transportation infrastructure project proposals in South Africa (N2 Wild Coast Toll Road, Superhighways and Gautrain). He is the project auditor for the Bakwena Platinum Highway Project, which extends from

Pretoria in Gauteng Province to Mafikeng in the North-western Province near the Botswana border. He has extensive experience in both urban and rural environmental and social evaluation.

Mr Wood has worked extensively with World Bank, IFC and other European financiers and is familiar with the policy guidelines and requirements of the international finance community.

Relevant projects include the following:

2003 to date	Project Manager, Regional Environmental and Social Assessment of the Sasol Natural Gas Project in Mozambique and South Africa.
2002	Project Manager, Environmental Impact Assessment of a Proposed Hydrogen Pipeline to Supply Impala Platinum in Springs, Gauteng.
2002 to 2001	Project Manager, Environmental Impact Assessment of the Sasol Gas Field Development at Temane and Pande in Mozambique.
1999 to date	Project Manager, Environmental Impact Assessment, Environmental Management Plan and Construction Monitoring of a Natural Gas Pipeline between Temane in Inhambane Province in Mozambique and Secunda in Mpumalanga Province in South Africa.
2000 to 2001	Project Manager, Environmental Scoping Assessment for a Methane-rich Gas Pipeline to supply the Engen refinery in Durban South.
1999 to 2000	Project Manager, Environmental Impact Assessment of a Proposed Low Income Settlement at Brandvlei near Tarlton, Gauteng.
2001 to date	Environmental Review Consultant for South African National Roads Agency projects. The work includes (a) The Superhighways Project, involving the upgrading and tolling of the N1 to Pretoria and other highway infrastructure around Johannesburg and Pretoria (b) The Platinum Toll Highway Project and (c) The Transkei Toll Highway Project.
1997 to date	Project Manager, Environmental Impact Assessment and EMPR of the Alpha Saldanha Cement Plant and Limestone Mine.
1999 to 2001	Project Manager for the EIA/CMP, Environmental Impact Assessment, Comprehensive Mitigation Planning (CMP) and Implementation Monitoring of the Maguga Dam in Swaziland.
1996 to 1997	Project Manager, Environmental Impact Assessment of the Proposed Mazonod to Mohale 132kV Transmission Line in Lesotho.
1998 to 1999	Project coordinator, Environmental Impact Assessment of Bulk Infrastructure for Magaliesburg Rural Council Area.
1997 to 1999	Project Manager, Environmental Impact Assessment of a Proposal to build a Crude Oil Pipeline between Durban and Vrede in the KwaZulu-Natal and Free State Provinces of South Africa.
1989 to 1990	Project Manager, Environmental Impact Assessment, Impact Management and Construction Supervision of a 400 kV line through the Gauteng, Orange Free State and Natal. (RSA).

1993 to 1998	Project Manager, Social and Environmental Planning Study for the Lesotho Highlands Feed Roads and Reservoir Crossing Project. Contract LHDA 78.
1990 to 1998	Project Manager, Environmental Impact Management Plans for eight major quarries.
1994	Project Manager, Environmental Impact Assessment of a Proposed Sewage Treatment Works for Graskop in the Eastern Gauteng.
1994 to 1995	Project Manager, Environmental Impact Assessment, Management Plan and Special Conditions of Contract for a proposed gas pipeline between Tembisa and Roslyn in Gauteng.
1993 to 1994	Project Manager, Environmental Impact Assessment of the National Road 3, Harrismith bypass alternatives.
1991 to 1992	Project Manager, Environmental Impact Assessment and Impact Management of a 400kV-transmission line and construction of access roads between Newcastle and Richards Bay.
1986 to 1987	Project Manager, Environmental Impact Assessment, management and construction monitoring of the N17 expressway south of Johannesburg.

Relevant experience:

1987 to date	Sole Member, Mark Wood Environmental Consultants Integrated Environmental Management (IEM). Coordination of all aspects of IEM including preliminary (scoping) studies, environmental impact assessments, management plans, monitoring, auditing and review of a diverse range of development projects. Work includes policy and project levels. Specialist expertise in leading environmental teams, public involvement/conflict resolution and aesthetic impact studies. Extensive experience of World Bank and other financier requirements for projects in developing countries.
1986 - 1987	Partner, Knight, Dames & Moore
1985 - 1986	Associate, Dames & Moore, South Africa
1980 – 1985	Project Scientist, Dames & Moore, South Africa

Declaration

I confirm that the above CV is an accurate description of my experience and qualifications and I agree to serve in the position indicated for me in the Study for the duration/s and the location/s proposed.



Signature of staff member

Date 12 June 2006



Curriculum Vitae – Yvonne Scorgie

Yvonne Scorgie has over ten years of experience in the field of air pollution impact assessment and air quality management. Prior to becoming involved in private consultation, she was a member of the Atmospheric Research Group based at the Schonland Research Centre for Nuclear Sciences at Wits University and actively involved in the development of atmospheric emissions inventory methodologies. Since joining the air pollution consulting field and subsequently starting Airshed Planning Professionals, she has undertaken numerous baseline characterisation studies and air pollution impact assessment and has provided extensive guidance to both industry and government on air quality management practices.

GENDER AND LANGUAGE:

Female
 Proficient in English and Afrikaans

1. QUALIFICATIONS AND TRAINING

1.1 Post-graduate Qualifications

Currently reading for a PhD in the field of Air Quality Management & Planning at the University of Johannesburg

MSc (1999) - *Cum Laude*, University of the Witwatersrand
 (Focus: air pollution impact assessment and air quality management)

BA Hon (1994) - University of the Witwatersrand
 (Focus: air pollution meteorology, meso-scale climatology, ocean-atmosphere interactions, geomorphology)

1.2 Training Courses Undertaken

2005	ADMS – Urban Atmospheric Dispersion Modelling Course, Cambridge Environmental Research Consultants and Climatology Research Group, Wits University, held 16 – 20 May 2005, Johannesburg.
2004	Organised and attended a one day workshop entitled "Introduction to Quantitative Health Risk Assessment" presented by Dr Kenneth L. Mitchell, Air Toxics Assessment and Implementation Section, US Environmental Protection Agency, held 6 October 2004 at the Indaba Hotel and Conference Centre, Fourways
2002	HEMA Approved Foundation Environmental Auditor Course, ASPECT International, Presented by Crystal Clear Consulting & Merchants (Pty) Ltd, 18-22 February 2002, Eskom Conference Centre, Midrand
1998	CALPUFF Modeling Course, held at University of the Witwatersrand, 23-25 March, Presented by Earth Tech Inc. (Massachusetts).
1996	Advanced Study/Winterschool on Atmospheric Sciences - SA'ARI Research Alliance, Wits University, FRD, Max Planck Institute for Chemistry (Mainz).



1996	Risk Assessment for Environmental Decision Making - Presented by Harvard University School of Public Health at the CSIR, Pretoria, RSA.
1995	Introduction to Ground Water Course - Ground Water Division of the Geological Society of South Africa.
1994	Geographical Information Systems and Data Management Course - Department of Geography, Rand Afrikaans University, RSA.

2. CAREER HISTORY

Director, Airshed Planning Professionals Pty Ltd	March 2003 onwards
Senior environmental consultant & managing member, Matrix Environmental Consultants cc	January 2000 – March 2003
Guest Lecturer, University of the Witwatersrand	1998 - 2003
Senior environmental consultant, Environmental Management Services cc	July 1997 - December 2000
Co-ordinator; climate change policy development process, Department of Environmental Affairs and Tourism	October 1996 – June 1997
Researcher, Air Pollution Research Group, Schonland Research Centre for Nuclear Sciences, University of the Witwatersrand	1994 - 1998

2.2 Director Airshed Planning Professionals (Pty) Ltd March 2003 onwards
 P O Box 5260, Halfway House, 1685

Services offered by Airshed which are supported by the expertise held by Yvonne Scorgie include:

- Emissions inventory - source identification, emission estimation & modelling
- Source & air quality monitoring management and data analysis
- Meteorological and air quality monitoring network design
- Meteorological analysis & climatic assessments
- Atmospheric dispersion modelling
- Air quality management system design & implementation
- Ambient air quality baseline assessment
- Air quality impact assessment for EIA, SEA and EMPR purposes
- Regulatory analysis and compliance assessments
- Inhalation pathway health risk assessment
- Buffer zone projection and land-use (town-planning) option evaluation
- Emission abatement and air quality management strategy development



- Air quality management skills transfer
 - Air quality policy development & implementation support
- 2.2 Senior Environmental Scientist / Managing Member January 2000 to March 2003**
Matrix Environmental Consultants cc
 P O Box 3100, North Riding, 2162, South Africa
- Air quality impact assessments, including meteorological and air quality data analysis, emission inventory development, atmospheric dispersion modelling and inhalation pathway health risk assessment.
 - Atmospheric dispersion models applied to date include: Industrial Source Complex Short Term model (ISCST3), CALPUFF suite of models, AUSPLUME, various dense gas emission and dispersion models (e.g. ALOHA, CHEMS-PLUS, SLAB), waste water treatment and waste disposal models (e.g. SIMS and US-EPA Landfill Air Emission Estimation Model), and vehicle emission estimation and dispersion models (EMFAC, CALINE, MOBILE).
- 2.3 Training (Guest Lecturer / Private Course Tutor) 1998 - 2003**
University of the Witwatersrand / Private
 P O Wits, 2050, South Africa
- Skills transfer within the air quality management and air pollution control field. Courses lectured include:
- "Physics and Chemistry of Urban Atmospheres", MSc level course presented annually within the Geography and Environmental Department of the University of the Witwatersrand in association with Prof. Harold Annegarn.
- "Air Pollution within the Mining Environment", MSc level course presented within the Mining Engineering Department of Wits University in association with Prof. Harold Annegarn.
- "Air Quality Management and Air Pollution Control in South Africa", 5-day commercial course presented under the auspices of Wits University's Centre for Continuing Engineering Education (courses run to date: August 2001, April 2002).
- Various private courses presented at companies, e.g. Sappi Ngondwana (pulp and paper factory), Anglo Platinum, Impala Platinum (platinum smelters), Eskom TSI (power generation company)
- 2.4 Senior Environmental Consultant July 1997 - Dec 2000**
Environmental Management Services cc
 P O Box 336, Wierda Park, 0149, South Africa
- Air quality impact assessments conducted for a wide range of industries, including: smelter operations, waste disposal facilities and incinerators, mining operations and tailings impoundments, pesticide and herbicide producers (etc.).
 - Provision of guidance with regard to environmental legislation and regulations, particularly pertaining to integrated pollution control, air pollution control and management, risk assessment (hazardous installations), waste minimization and management, Environmental Management Programme Reports and Environmental Impact Assessments.



2.5 Co-ordinator: Climate Change Policy Development Oct 1996 – June 1997
Department of Environmental Affairs and Tourism
 Private Bag X447, Pretoria, 0001, RSA

- Attended international conferences and workshops, viz.:
 - International Climate Change Workshop on Support for National Action Plans, held 2 - 11 January 1997 in Bogor, Indonesia.
 - World Bank African Workshop on Activities Implemented Jointly, held 3 - 7 February 1997 in Ouagadougou, Burkina Faso.
- Compiled several documents including the following:
 - Briefing Paper of the South African Delegation to the United Nations Framework Convention on Climate Change (UNFCCC) Meeting of Subsidiary Bodies, Geneva 9 - 18 December 1996.
 - Interdepartmental Report by the South African Delegation to the UNFCCC Meeting of Subsidiary Bodies, Geneva 9 - 18 December 1996.
 - Briefing Paper of the South African Delegation to the UNFCCC Meeting of Subsidiary Bodies, Bonn, 24 February to 7 March 1997.
 - Report of the UNFCCC Meeting of Subsidiary Bodies, Bonn, 24 February to 7 March 1997.
 - Briefing Paper of the South African Delegation to the UNFCCC Meeting of Subsidiary Bodies, Bonn, 29 July to 9 August 1997.

2.6 Researcher 1994 - 1998
Air Pollution Research Group
Schoonland Research Centre for Nuclear Sciences
 University of the Witwatersrand
 P O Wits, 2050, RSA

- Research undertaken in the following fields: environmental policy, local and international air quality management, air pollution meteorology, atmospheric dispersion modelling, health risk assessment, and particulate monitoring techniques.

3. CONFERENCE PROCEEDINGS AND TECHNICAL REPORTS

Numerous technical air quality and health risk impact assessment reports done on behalf of a wide range of clients including:

industries and mining operations in RSA, Botswana, Zambia, Namibia & DRC - Namakwa Sands Titanium, Anglo Platinum, Impala Platinum, Xstrata (ferrochrome smelter), EnviroServ (waste disposal company), SAPREF (refinery), NATREF (refinery), SASOL (refinery), Van Ommen Tank Terminals, Portnet, various Eskom Power Stations, Kynochem (fertilizer co), AngloCoal, Western Areas Lt (gold mine), Fedmis (fertilizer co), TatiNickel Mine (Botswana), Skorpion



Zinc Mine (Namibia), Gokwe Colliery (Zimbabwe), Zimaseco (ferrochrome smelter, Zimbabwe), Billiton (proposed zinc refinery), Blue Circle Cement, Sappi Kraft (pulp & Paper), Ngezi Platinum (DRC), Bayer (chrome tanning), De Beers (diamond mining).

consultancies - Steffen Robertson & Kirsten Consulting, Metago, Walmsely Environmental Consultants, L & W Environmental, CSIR, Jarrod Ball & Associates, Anglo American Technical Services – Envirolink, Gibb Africa, African Environmental Solutions, Loxton Venn & Associates, Mills & Otten, New Town Landscape Architects, Spoomaker & Partners, KEOPS ISIS, Globecon, SE Solutions, Strategic Environmental Focus, Ground Water Services, Groundwater Consulting Services, Digby Wells & Associates, Loxton Venn & Associates, Mark Wood Consultants, INFOTOX, etc.

RSA government departments - including national government (Department of Environmental Affairs and Tourism, Department of Minerals and Energy), provincial government (Gauteng Department of Agriculture Conservation and Land Affairs, Kwazulu-Natal Department of Environmental Affairs and Tourism) and local government (City of Cape Town, City of Johannesburg, East London Municipality).

international funding organisations - USAID, Danish Ministry of Environment (DANCED)

4. APPLICABLE AWARDS AND MEMBERSHIPS

- National Association for Clean Air (NACA) Silver Medal Award - 1998.
- Member of NACA (1996 onwards), national council member (2001 onwards), vice president (2004 onwards).
- Member of the Environmental Scientific Association (1999 onwards)
- Member of the Low Smoke Fuels Standards Development Committee (2002 ongoing)
- Member of the Technical Committee on Air Quality Standards Setting (2002-3)
- Member of the Working Group on Air Quality Standards Setting for PM, SO₂, NO₂ and O₃ (2003)
- Member of the Basa Njengo Magogo Project Steering Committee (2003)

6. REFEREES

Harold Amegarn
 Department of Geography and Environmental Management
 University of Johannesburg
 tel +27 11 489 3927
 fax +27 11 489 2430
 cell +27 (0) 83 628 4210

Dr Lucian Burger
 Airshed Planning Professionals (Pty) Ltd
 Tel: (011) 254 4929
 Cell: 082 491 0385

Professor Roseanne Diab
 Head of School



School of Environmental Sciences
University of KwaZulu-Natal
Tel: 27 31 2602300
Fax: 27 31 2601391

CURRICULUM VITAE

DEREK COSIJN

Personal Details:

Date of Birth: 13 December 1944

Nationality: South African

ID Number: 441213 5090 085

Contact Details: Telephone/Fax: (012) 460-4481

Cell phone: 082 600 6347

Address: 207 Albert Street, Waterkloof, Pretoria, 0181.

Summary of Key Qualifications and Experience:

I have 37 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. 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 25 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.

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.

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 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

June 2005

(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 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 Development Project (Burgersfort) Noise Impact Assessment.
- Olievenhoutsbosch Noise Impact Assessment.
- Matimba B Power Station Alternative Site Assessment and Scoping.
- Implats 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.

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 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*
 - ORMET Parking and Loading Policy Study.
 - South African Road Traffic Signs Manual, Volume 2 (responsible for six Chapters).
 - Guidelines for Public Participation in the Planning of Civil Engineering Projects (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 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:

- Basic 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)

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:

- *Parking and Loading Policy for ORMET.* Annual Transportation Conference 1988.
- *Road and Traffic Environmental Manual.* Annual Transportation Conference 1991.
- *Growth Management and Transportation Planning - A Means to Restructure Our Urban Areas.* Annual Transportation Conference 1994.
- *Comprehensive Environmental Management of Transportation Projects.* SAICE Environmental Conference 1994.
- *Transportation Demand Management - A Means for Relieving Congestion.* Annual Transportation Conference 1995.
- *Severance as a Factor in Linear Transportation Facility Planning.* SAICE Environmental Conference 1996.
- *Environmental Investigation of the Alternatives for the PWV9 Freeway Crossing of the Daspoortrant.* SAICE Environmental Conference 1999.
- *Summary of the Operational Safety Assessment of the National Route N2 Approaches to Knysna.* South African Transportation Conference, 1999.
- *Transportation: Is the Environmental Message being Driven home Successfully?* IAIAsa2000

Conference.

- *Environmental Noise: A Case for Sound Management.* IAIA2001 Conference.
- *Noise and Vibration Impact Assessment of the Gautrain High Speed Rail Link.* Southern African Transport Conference (SATC) 2003.
- *Gautrain Tunnels: Surface Vibration and Ground-borne Noise.* Journal of the South African Institute of Mining and Metallurgy, Volume 104, No 4, May 2004.

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/ 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 (Pty) Ltd
2000-2001:	Associate	Booz Allen & Hamilton (South Africa) Ltd
2001 to Present	Partner Partner	Jongens Keet Associates Calyx Environmental cc

References:

Name : Ms Elizabeth (Liz) Fourie
 Position Former director of Stanway Edwards Ngomane Associates
 Address: Now with: Africon Engineering International (Pty) Ltd
 PO Box 905
 PRETORIA, 0001
 Tel.: (012) 427-2000
 Fax: (012) 427-2010
 Cell phone 082 600 5225

Name : Mr Mark Freeman
Position: Director
Address: Bohlweki Environmental (Pty) Ltd
PO Box 11784
VORNA VALLEY, 1686
Tel.: (011) 466-3841
Fax: (011) 466-3849
Cell-phone: 082 554 4130

CURRICULUM VITAE

Name:	Eamonn O'Rourke
Name of Firm:	Strategic Environmental Focus (Pty) Ltd
Position:	Unit Manager: Landscape Architecture
Profession:	Landscape Architect and Environmental Manager
Nationality:	South African
Languages:	English (mother tongue), Afrikaans

EDUCATIONAL QUALIFICATIONS

- ① BL University of Pretoria, (March 1992)
- ② Completed training in preparation for NQF level 7 unit standard "Develop and Promote Labour Intensive Construction Strategies" accreditation.
- ③ Completed training in preparation for NQF level 5 unit standard "Manage Labour Intensive Construction Projects" accreditation.

MEMBERSHIP OF PROFESSIONAL BODIES

- ① Registered as a Professional Landscape Architect with the South African Council for the Landscape Architectural Profession (SACLAP) (Number 95076).
- ② Member on the SACLAP Council.
- ③ Professional member of the Institute of Landscape Architects of South Africa.
- ④ Council member on the Council for the Built Environment. (CBE)
- ⑤ Member on the Certification Board for the certification of Environmental Assessment Practitioners

GENERAL WORKING EXPERIENCE

- ① Project management and reporting for the site selection for a Regional Resort in the northern area of the City of Tshwane for the Environmental Management Division, City of Tshwane Metropolitan Municipality, Gauteng.
- ② Senior landscape architect for the design of two community parks, Slovoville and Doornkop for the City of Johannesburg City Parks department, Gauteng.
- ③ Overall Landscape Design and associated project management for the Automotive Supplier Park project and Phase 1 and Phase 2 tenant sites and Park Amenities, Rosslyn Extension 2, Gauteng.

- ① Landscape Site Development Plan for the proposed River Walk Pick & Pay shopping Centre, Hurlingham, Gauteng.
- ② Management Programme for the effective mitigation of Visual Impacts for a Quarry in the Magaliesberg;
- ③ Various visual impact assessments for proposed linear infrastructure, housing estates and mining applications;
- ④ Working knowledge of the Environment Conservation Act, 1989 (Act no. 72 of 1989).
- ⑤ Co-ordination and compilation of scoping reports for road construction projects in Ekurhuleni Metropolitan Municipality, Gauteng;
- ⑥ Compilation of environmental management plans and rehabilitation plans for storm water management projects;
- ⑦ Preparation and submission of specialised environmental impact assessments and visual assessment for outdoor signage applications within the City of Tshwane, Gauteng;
- ⑧ Recommendation of mitigation measures to reduce the visual impact of a 3rd party advertising billboard in Hillcrest, Tshwane Metropolitan Municipality, without reducing visibility of the display area;
- ⑨ Design framework for a tourist facility on Lookout Hill and for the Gateway Node, Khayelitsha. Assessment of the constraints and potential opportunities of the dune and the proposed tourist facilities for a Tourist Centre in Khayelitsha.
- ⑩ Design framework for the City Park in new Khayelitsha Central Business District. Assessment of the biophysical and social constraints and potential opportunities of a 4.2 hectare open space provided for public gathering in the new Khayelitsha CBD. City of Tygerberg. Directorate Economic Development & Planning - Coastal Service Area.

DESIGN EXPERIENCE

Landscape Policy Documents, Design Guidelines, Design Frameworks, Master Plans, Concept Development and Detail Design of:

- ① Private Recreational & Leisure Landscapes
- ② Urban Design & Streetscaping
- ③ Public open space and related social infrastructure
- ④ Historical Sites
- ⑤ Commercial
- ⑥ Industrial
- ⑦ Farms & Homesteads
- ⑧ Housing Developments

ENVIRONMENTAL EXPERIENCE

Research, Co-ordination of and Compilation of:

- ⊕ Visual Impact Assessments and Mitigation Recommendations
- ⊕ Open Space Planning and Management
- ⊕ Scoping Reports

VISUAL IMPACT ASSESSMENT EXPERIENCE IN MINING & INDUSTRIAL PROJECTS

- ⊕ Mittal Steel Vanderbijlpark Steel: Closure of Existing Waste Disposal Site and proposed establishment of a new Waste Disposal Site, Vanderbijlpark, Gauteng
- ⊕ Kumba Resources Ltd, Sishen Iron Ore Mine Expansion Project, Northern Cape
- ⊕ Visual Impact Assessment with extensive rehabilitation recommendations for the proposed establishment of a GLB landfill site on the farm Zesfontein 271R, Benoni, Gauteng
- ⊕ Visual Impact Assessment with extensive rehabilitation recommendations for a Ceramic's Industries clay quarry, Steelpark, Vanderbijlpark, Gauteng
- ⊕ Kruidfontein Mine, North West Province

VISUAL IMPACT ASSESSMENT EXPERIENCE IN RESIDENTIAL & BULK SERVICES

Author and lead consultant for the compilation of the following Visual Impact Assessments:

- ⊕ Silverstar Development Limited, West Rand Casino, Mogale City, Gauteng
- ⊕ Trans-Caledon Tunnel Authority, 115 km pipeline from the Vaal Dam near the Vaal Marina to the Knoppiesfontein diversion tank, between Charl Gilliers and Secunda
- ⊕ Township Summerset Ext18, Midrand, Gauteng
- ⊕ Lombardy Estate in Kungwini Local Municipality, Gauteng
- ⊕ Construction of Two Water Reservoirs On Roodekrans Ridge, Feather Brooke Estate, Mogale City, Gauteng
- ⊕ The Orlando Dam Precinct Soweto, Gauteng

EXPERIENCE IN VISUAL IMPACT ASSESSMENTS OF LINEAR APPLICATIONS

- ④ Johannesburg Roads Agency, Ormonde Link Road, Gauteng
- ④ SEB 400kV transmission lines and Sub station's - Integration Phase 2, Swaziland
- ④ ESKOM, Mercury – Perseus Transmission Line Free State Province, Free State
- ④ Gautrain from Johannesburg to Pretoria and Johannesburg International Airport
- ④ N2 Toll road from Durban to East London
- ④ The Muldersdrift 33 kV Distribution Line for the Mogale City Local Municipality, Gauteng.
- ④ Proposed upgrade of district road D781 and construction of sections of the K109, K62 and K27, Kempton Park, Johannesburg.

EMPLOYMENT EXPERIENCE

- | | |
|-------------|--|
| 2001 - | Strategic Environmental Focus |
| 1995 - 2001 | Founder member of Eamonn O'Rourke Landscape Architects |
| 1992 - 1996 | Dennis Moss Partnership Inc. Architects, Urban Planners & Landscape architects (Landscape Architect) |
| 1990 - 1992 | Willem Van Riet Landscape Architects (Student Landscape Architect) |

Please see Project Profile for project specific experience

Johann du Preez Ph.D.

CURRICULUM VITAE

Name of Firm : Makecha Development Associates t/a MDA

Name of Staff : P.J. du Preez

Profession : Ecologist, Environmental Manager

Year of Birth : 1960

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- Professional Member - S.A. Institute of Ecologists & Environmental Scientists (SAIE&ES)
- Member - International Association of Impact Assessments-SA (IAIA-SA)
- Member - International Association of Vegetation Science (IAVS)
- Member: - South African Association of Botanists (SAAB)

KEY QUALIFICATIONS:

- Key competencies and experience include:
 - research in vegetation ecology & data management
 - biomonitoring,
 - impact assessment,
 - environmental management and
 - environmental education

EDUCATION:

- B. Sc. (Zoology and Botany), 1981 University of the Free State, South Africa,
- B. Sc. Honnours (Plant ecology & Taxonomy), 1982 University of the Free State, South Africa,
- Higher Education Diploma 1983 University of the Free State, South Africa,
- M.Sc. (Plant ecology), 1986 University of the Free State, South Africa,
- Ph.D. (Plant ecology), 1991 University of the Free State, South Africa,

ACADEMIC PRIZES:

-

COURSES:

- Environmental Impact Assessment Course - University of the Free State, South Africa, (2001)

EXPERIENCE RECORD:

Researcher: - author of 36 research articles & technical reports,
 Biomonitoring - involved in the Free State River Health Programme,
 Environmental practitioner - conducted 500+ Impact Assessments since 1998
 Environmental manager - conducted 40+ environmental management plans for mines,

Johann du Preez Ph.D.

Environmental education - snr lecturer in ecology and environmental management at UFS
 Since 1995, supervised the following nr. of post graduate students:
 11 Honnours,
 10 M.Sc.,
 20 MEM &
 6 Ph.D.

EIA's, EMP's & specialist studies:

Business and open space developments:

- ❖ Loch Logan Waterfront Development, Bloemfontein
- ❖ Hoffman Square Development, Bloemfontein
- ❖ McDonalds restaurant development, Bloemfontein
- ❖ Pretty Garden Centre (Nursery) development at Preller Square, Bloemfontein
- ❖ Nolan Truck Transport Development, Bloemfontein
- ❖ Viking Transport Development, Bloemfontein
- ❖ Kgalagadi Taxidermy business, Bloemfontein
- ❖ Xhariep District Municipality Offices, Trompsburg, Free State

Cell phone masts:

- ❖ VodaCom's cellular telecommunication masts (220+ sites), in the Free State, Northern Cape and North-West provinces (VodaCom's Central Region). Scoping includes the site, access road and power line to the site
- ❖ Independent Communications Authority of South Africa (ICASA) mast in Hilton, Bloemfontein

Fuel filling stations:

- ❖ Fuel filling station on the corner of Vereeniging & Curie Avenues, Bfn
- ❖ Fuel filling station in Westdene, Bloemfontein
- ❖ Fuel filling station in Christiana
- ❖ Fuel filling station in Willows
- ❖ Fuel filling station between Bloemfontein and Winburg, next to the N1 highway

Guesthouse & caravan park developments:

- ❖ Guesthouse developments along the Vaal and Modder Rivers
- ❖ Wild West caravan park & chalet development, Bloemfontein
- ❖ Wildealskloof chalets and overnight facilities, Bloemfontein

Housing developments:

- ❖ Housing development at Spitskop, Langenhovenpark, Bloemfontein
- ❖ Housing developments in several towns in the Free State.
- ❖ Housing developments at Ekulindeni & Elukwatini, Mpumalanga.
- ❖ Housing developments at Sizenzele, Maphapheni, Maline & Rustplaas, Piet Retief District, Mpumalanga
- ❖ Housing development at Abelstad, Lydenburg, Mpumalanga
- ❖ Housing development at Doornkop, Middelburg, Mpumalanga

Johann du Preez Ph.D.

- ❖ Old age home development, Muddplein, Universitas, Bloemfontein
- ❖ Housing development at Sivukile, Morgenzon, Mpumalanga
- ❖ Housing development at Kathu, Northern Cape Province
- ❖ Housing development at Fleurdal, Bloemfontein
- ❖ Township establishment on the farm Jerusalem 1757, Tierpoort, Free State
- ❖ Township establishment in Ngwathe (Edenville)
- ❖ Township establishment in Mamafubedu (Petrus Steyn)
- ❖ Township establishment at De Beershoogte, in the Barkly West district
- ❖ Sangiro Lodge, Eeufees Road, Bloemfontein
- ❖ Chalets development at:
 - Koppies Dam Nature Reserve
 - Tussen die Riviere Nature Reserve
 - Knellpoort Dam (Caledon Nature Reserve)
- ❖ Bush camp development:
 - Erfeness Dam Nature Reserve
 - Soetdoring Nature Reserve

Pipelines:

- ❖ Water pipeline development to Excelsior, Free State
- ❖ Bloemwater pipeline projects
- ❖ Spitskop water reservoir and pressure tower
- ❖ Bulk water supply pipeline & reservoir in Phuthaditjhaba, QuaQua
- ❖ Pipeline development to supply pivot irrigation system of water, Farm Scheiding, District Luckhoff
- ❖ Bulk water supply to the Stilwater township establishment in the Barkly West district

Power lines:

- ❖ 132kV line & distribution centre in the Penge area, Northern Province
- ❖ 132kV line & distribution centres between Shannon - Meriteng, Bloemfontein
- ❖ 33kV transmission line in Bainsvlei, Bloemfontein
- ❖ 33kV transmission line in Estoire, Bloemfontein
- ❖ 33kV transmission line in Noordstad area, Bloemfontein
- ❖ 33kV transmission line to the top of Aasvoëlberg, Zastron
- ❖ 33kV line & distribution centres, between Rietfontein & Twee Rivieren, (Mier area), Kalahari
- ❖ 22kV transmission line development to supply pivot irrigation system of electricity, Farm Scheiding, District Luckhoff
- ❖ 132kV line & distribution centres Nqabeni area, Port Shepstone District, KwaZulu-Natal
- ❖ 66kV transmission line and substation in Kimberley
- ❖ The construction of the 132kV/22kV Ludeke substation and new power line from the Dumasi-Eros 132kV line to the Ludeke substation

Roads:

- ❖ Northern Cape:
- ❖ Upgrading of the Hanover – De Aar – Britstown road, Northern Cape
- ❖ New bridge across the Orange River linking Blouputs with Riemvasmaak

Johann du Preez Ph.D.

- ❖ Upgrading of the road between Springbok & Kamaggas, Northern Cape
- ❖ Upgrading of the road between Vosburg and Carnarvon, Northern Cape
- ❖ Free State
- ❖ Upgrading of a 40km section of the N8 between Paardeberg & Kimberley
- ❖ Linking of Witherow and McKenzie Streets, Bloemfontein
- ❖ Rehabilitation of the Jammerbergdrift Bridge, Wepener
- ❖ Upgrading of the road between Clocolan & Ficksburg, Free State
- ❖ Upgrading of the road between Bothaville & Vaal River, Free State
- ❖ Upgrading of the road between Bothaville & Vaal River bridge
- ❖ Rehabilitation of an old single lane bridge across the Vals river in Kroonstad

Sewage works:

- ❖ Upgrading of the sewage infrastructure in Mathlemola (Griekwastad)
- ❖ Upgrading of the sewage purification works at Sterkstroom.
- ❖ Construction of new sewerage purification works at Aliwal North
- ❖ Construction of new sewerage purification works at Venterstad, E. Cape
- ❖ Construction of new sewerage purification works at Oviston, E. Cape
- ❖ New sewage purification plant at Trompsburg, Free State
- ❖ Construction of new sewerage evaporation ponds at Ntha (Lindley), Free State
- ❖ Upgrading of the sewage evaporation ponds in Elandsriver (Qwa Qwa)

Reservoirs:

- ❖ Spitskop, Langenhovenpark, Bloemfontein, Free State
- ❖ Winburg, Free State

Sports & recreation developments

- ❖ Woodland Hills Golf and Wildlife Estate, Bloemfontein
- ❖ Oud Studente Sport Club development, Bloemfontein
- ❖ Golf estate development at Clarens, Free State
- ❖ Educational facilities for a Chinese cultural centre on Erf 7361 in Bayswater, Bloemfontein
- ❖ Lodge and chalet development at the Bloemfontein zoo

Other projects:

- ❖ Chicken farm development, Bloemfontein
- ❖ Fish Processing Plant, Sunnyside, Bloemfontein
- ❖ Facilities to culture and process Catfish, Spirulina and Sunflower oil, Bainsvlei, Bloemfontein
- ❖ Construction of a chapel and conference facilities on Plot 86, Spitskop small holdings, Boemfontein
- ❖ The proposed construction of a casino and entertainment complex in Bloemfontein
- ❖ The construction of a new 3 000 bed prison in Kimberley
- ❖ The State of the Environment Report (SOER) for the Mangaung Local Municipality

Environmental Management Programmes (EMP's) and other studies

Johann du Preez Ph.D.

EMP's

- ❖ Rock quarry
- ❖ EMPR for a dolerite rock quarry near Winburg
- ❖ EMPR for rock quarry near Gariep Dam for the proposed upgrading of the N1

- ❖ Borrow pits
- ❖ EMPR for borrow pits – Hanover – Britstown road
- ❖ EMPR for borrow pits – N6 (Jamestown – Aliwal North road)
- ❖ EMPR for borrow pits between Springbok & Kamaggas, Northern Cape
- ❖ EMPR for borrow pits between Vosburg and Carnarvon, Northern Cape

- ❖ Diamond mining
- ❖ EMPR for diamond mine in Tweespruit District, Free State (Kimberlite pipe)
- ❖ EMPR for diamond mine in Aliwal North District, Eastern Cape (Alluvial)

- ❖ Other
- ❖ EMP's for access roads to some cell phone mast base stations of VodaCom (Central Region)

Vegetation studies

- ❖ Baseline study of As / Liebenbergvlei / Wilge River System (Lesotho Highlands Water Scheme) (Biomonitoring)
- ❖ Study on the containing of brine effluent in the ash stack of the Tutuka Power plant, Standerton (Biomonitoring)
- ❖ Scoping: 33kV, 132kV & 220kV supply lines and substations, Schuitdrift, Pofadder, Onseepkans and Aggeneys (Vegetation survey)
- ❖ Scoping: 132kV transmission line and substations, Magopela – Pampierstad, North-west province (Vegetation survey)
- ❖ Southern Sewerage works in Bloemfontein (Vegetation survey)
- ❖ Specialist study on the vegetation of Schuitklipkop, Pofadder (ESKOM telecommunication mast development)
- ❖ Environmental surveys
- ❖ Part of the compilation of the Land Development Objectives (LDO's) of sixteen towns in the Free State.

Review consultants

Members of this firm act as external review consultants for:

ESKOM on EIA's conducted by ESKOM's environmental section.
 Group 4 Correctional Services on the environmental management plan for the new Grootvlei maximum-security prison, Bloemfontein.

COUNTRIES OF WORK EXPERIENCE:

Lesotho, South Africa

EMPLOYMENT RECORD:

1995- to date University of the Free State,

Senior lecturer

Johann du Preez Ph.D.

1992 - 1994 Dept. Environmental Affairs & Tourism, Free State, Senior researcher
 1989 - 1991 National Museum, Bloemfontein, Senior researcher
 1984 - 1988 University of the Free State, Research assistant

As environmental practitioner:

1999 – 31 August 2005 - Director/Partner of CEBO Environmental Consultants CC
 From 1st September 2005 act as environmental practitioner and Head of the environmental section of MDA

LANGUAGES:

	Speaking	Reading	Writing
English	Good	Excellent	Good
Afrikaans	Excellent	Excellent	Excellent

I confirm that the above CV is an accurate description of my experience and qualifications.

Dr. P.J. du Preez

Date: 2005-09-20

abridged Curriculum Vitae

NAME: Johannes Lambertus Rall

DATE & COUNTRY OF BIRTH: 6 July 1966, South Africa

IDENTITY NUMBER: 660607 5057 008

NATIONALITY: South African

QUALIFICATIONS: B.Sc. (Botany and Zoology), Rand Afrikaans University, 1989
 B.Sc. Hons (Zoology), Rand Afrikaans University, 1990
 M.Sc. (Zoology) Cum Laude, Rand Afrikaans University, 1993
 Ph.D. (Zoology) Rand Afrikaans University, 2000

 Reserve Determinations and Procedures, DWAF, 2000

LANGUAGES SPOKEN, WRITTEN AND READ Afrikaans, English & Southern Sotho

SPECIALIZATION: Ichthyology
 River Ecology
 Ecological Situation Analyses and Impact Assessments
 Biological Monitoring Programs
 Aquatic Toxicology

EMPLOYMENT RECORD: 1993 - ECOSUN Environmental Consultants
 Specialist Consultant

DETAILS OF PROJECTS WITH PERSONAL INVOLVEMENT OVER THE PAST Thirteen YEARS

ACTIVITIES	YEARS
Project manager & Specialist: Ecological research on <i>Pseudobarbus quathlambae</i> in the Catchment area of phase 1B of the Lesotho Highlands Water Project.	1991-1993
Project Manager & Specialist: "Development of a conservation program on the Maloti Minnow in the Catchment area of phase 1B of the Lesotho Highlands Water Project (LHWP)".	1994-1998
Fish specialist: Environmental Initial Assessment, Lesotho Highlands Further Phases Pre-feasibility. Fish specialist: Initial Impact Assessment and Instream Flow Requirements for fish in the Matsoku River. Fish specialist: Instream Flow Requirements of fish in the Senqu River. Fish specialist: Baseline Biological Survey and Reserve Development, Phase 1B of the Lesotho Highlands Development Project.	1995-1996
Fish Specialist: Impact assessment of Inter-Basin water transfer - Mohale Tunnel.	1996

<p>Fish Specialist: "Epupa Falls Hydro Power Scheme, Northern Namibia - Impact Assessment: Fish and Fisheries".</p> <p>Project Manager & Fauna Specialist: Environmental Checklist Assessment - Natural Environment at Magudu, Langelooop, Vlakkult and Komati Communities.</p> <p>Fish Specialist: Phase 4 of the Eastern National Water Carrier - Reconnaissance Survey Fish in the Okavango River, Namibia</p> <p>Fish Specialist: Phase 4 of the Eastern National Water Carrier - Reconnaissance Survey Fish in the Okavango Delta, Botswana.</p> <p>Aquatic Ecology Specialist: Haib Mining Development. Aquatic System Study - Baseline assessment and development of a monitoring program</p>	1997
<p>Aquatic Fauna Specialist: Aquatic Biomonitoring at Spitzkop Colliery.</p> <p>Aquatic Fauna Specialist: Swartuggens Diesel Spill. Bioassessment of the Elands River between Swartuggens and Lindleyspoort Dam.</p>	1997-1999
<p>Fish: Biological Monitoring in the Lesotho Highlands Water Project Phase 1A Area. Lesotho Highlands Water Project, LHDA Contract No 615</p>	1997-2000
<p>Aquatic Fauna Specialist: Heidelberg Opencast Colliery – aquatic biota study</p> <p>Fish Specialist: AMCOAL Goedchoop Block 9. Pre-mining baseline survey of fish in the Olifants River.</p> <p>Project Manager: Lomshiyo Trust Redistribution Project: Bio-physical Environment Study</p> <p>Project Manager & Specialist: Situation analyses and development of a biological monitoring programme for the aquatic environment associated with the New Consort mine, Barberton</p>	1998
<p>Fish Specialist: Lesotho Highlands Water Project - IFR Study.</p> <p>Fish Specialist: Steelpoort Hydropower Development EIA with specific reference to the effect of flow alterations on the biological components of the aquatic and riparian environment to be affected.</p> <p>Aquatic Fauna Specialist: Ecological Impact Assessment for SASOL's proposed Sky High Project</p>	1998-1999
<p>Aquatic Fauna Specialist: Ecological Situation analyses and development of a biological monitoring programme for the aquatic environment associated with Target Mine, Free State Goldfields.</p> <p>Project co-ordinator: Characterization of Thulazihleka Pan, Northern Natal, in terms of biological and chemical parameters, for the purpose of providing baseline data for the development of a water quality management objective.</p>	1998
<p>Aquatic Fauna Specialist Baseline Ecological Assessment and Development of a Biological Monitoring Programme for the SASOL Secunda Industrial and Mining Complex.</p> <p>Aquatic Fauna Specialist: Ecological Integrity Assessment of the Waterval River and its tributaries associated with the SASOL Secunda Industrial and Mining Complex</p> <p>Aquatic Fauna Specialist: Ecological Integrity Assessment - aquatic system associated with Hayford Colliery (for the purposes of input into the mine closure EMPR)</p> <p>Aquatic Fauna Specialist: Aquatic Bioassessment - Bliksem Pan and Railway Pan in order to identify possible sensitive issues with regard to polluted pit water storage.</p> <p>Project Manager & Aquatic Fauna Specialist: Qualitative Aquatic and Littoral Bioassessment: Guesthouse Pan, Farm Pan and Bank Pan at Forzando Coal Mine in order to evaluate the impact of once-off water extraction on the ecology of the pans.</p> <p>Aquatic Fauna Specialist: Rapid Biological Assessment on a section of the Sterkspruit (KwaZulu Natal) to assess the possible effect of structural repair activities on a bridge crossing the spruit.</p>	1999
<p>Aquatic Fauna Specialist: Biological Monitoring Programme in Selati and Olifants Rivers, FOSKOR, PMC, Sasol Agri, Phalaborwa</p>	1999 - 2002

<p>Aquatic Fauna Specialist: Biological Monitoring of the Witbank Dam and Middelburg Dam Catchments, upper Olifants River. Project for the Mining and Power Generation Industry in these sub-catchments</p>	1999 - 2002
<p>Project Manager & Specialist: Aquatic Ecological Impact Assessment on the possible effects of a 1:50 year, 1:100 year flood event or failure of the Return Water Dam (RPM Union Section) on the downstream environment. Specialist: Evaluation of a fish kill at the SASOL Secunda Industrial Complex Aquatic Fauna Specialist: Ecological Integrity Assessment - aquatic system to be affected by the proposed pollution control dam at East Driefontein Gold Mine (for the purposes of license application) Fish Specialist: Zaaihoek Dam Intermediate Reserve Determination; Training in RDM process by Delana Louw and Neels Kleynhans. Fish Specialist: Biological monitoring program – upper Waterval River Catchment associated with the SASOL Secunda Industrial and Mining Complex</p>	2000
<p>Fish Specialist: Modder & Riet Catchment Intermediate Reserve Determination Fish Specialist: Evaluation of the FAIL method, conducted during the Crocodile River Intermediate Reserve Determination Aquatic Specialist: Evaluation of the Komati River IFR conducted for Driekoppies and Maguga Dams with the purpose of developing a strategy for IFR monitoring Fish Specialist: Lesotho IFR Compensation Project Aquatic Fauna Specialist: Assessment of freshwater aquatic systems for the Vilancoulos Wildlife Sanctuary Project, Mozambique</p>	2001 - 200
<p>Aquatic Fauna Specialist: Biological Monitoring for the Southern and Northern Wastewater Treatment Works of Johannesburg Water</p>	2001 - present
<p>Fish Specialist & Project Manager: Evaluation of the suitability of the Fish Assemblages Integrity Index (FAIL) for site-specific application and its refinement. Research Project for the Water Research Commission</p>	2001 - 2004
<p>Aquatic Fauna Specialist: Evaluation of the Komati River IFR conducted for Driekoppies Dam and Maguga Dam, Swaziland, with the aim of developing an IFR monitoring strategy Aquatic Fauna Specialist: Baseline Aquatic Fauna Survey, Nylsvlei</p>	2002
<p>Aquatic Fauna Specialist: Biological monitoring programmes for various industries, including Iscor VS, Foskor, PMC, Sasol Agri, Sasol Synfuels, Khutala Mining Services Fish Specialist: Ecological reserve determination studies for the Department of Water Affairs and Forestry, specifically the Waterval catchment and the Modder/Riet catchment</p>	2002 – present
<p>Aquatic Fauna Specialist: Loole Creek Stream Alteration: Assessment of pre- and post alteration Habitat and Biotic Integrity</p>	2002 - 2003
<p>Aquatic Fauna Specialist: Biological Baseline Assessment – Maccaulei Dam</p>	2003
<p>Aquatic Fauna Specialist: Ecological Impact study for the removal of a portion of 05 Blowdown at Sasol</p>	2003 - 2004
<p>Aquatic Fauna Specialist: Baseline aquatic fauna survey and impact assessment for a new mining development in Madagascar</p>	2004
<p>Aquatic Fauna Specialist: Block A Baseline Wetland Assessment at Khutala Colliery Aquatic Fauna Specialist: Ecological Baseline and Impact Assessment – Matla Pan</p>	2004

PROFESSIONAL SOCIETIES:

South African Society of Aquatic Scientists (1995 to date)

COUNTRIES OF WORK EXPERIENCE:

South Africa
Swaziland
Lesotho
Namibia
Angola
Botswana
Mozambique
Madagascar
Mali
Suriname (South America)
Democratic Republic of the Congo (DRC)

"I confirm that the above CV is an accurate description of my experience and qualifications"



Date: 2005-08-25

Curriculum Vitae

Position: Water Unit Manager / Senior Hydrogeologist
GCS (Pty) Ltd

1. **Family name:** Stewart
2. **First names:** Mark
3. **Date and Place of birth:** 15 August 1965
4. **Nationality:** RSA / British
5. **Civil status and number of dependants:** Married, two children
6. **Education:**

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
Rhodes University 1990	B.Sc Geology

7. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English	1	1	1
Afrikaans	1	1	3

8. **Other skills:** (e.g. Computer literacy, etc.) Extensive Computer literacy
9. **Years of professional experience:** 12 years
10. **Years within the firm:** 11 years
11. **Key qualifications:**
 - Hydrochemical / contamination and clean up studies
 - Risk assessments with regard to groundwater contamination
 - Groundwater resource assessments
 - Waste disposal site suitability studies
 - Groundwater monitoring programmes – design and implementation
 - Dewatering and aquifer assessments
 - Hydrocensus and water quality analysis
12. **Professional experience**

Country	Organisation (Client, Financier)	Date:	Position	Description
Angola	Technic Services	Oct 2003	Senior Hydrogeologist	Site suitability study Soyo Hazardous Waste Site
RSA	Kwezi V3	2002	Senior Hydrogeologist	Site suitability study, design and management – Goudkoppies Landfill Site, JHB
Zambia	Kwezi V3	2002	Senior Hydrogeologist	Site selection and feasibility study – Livingstone, Zambia
Swaziland	Jarrold Ball & Associates	2001	Project Hydrogeologist	Site suitability study, permit application for Simunye Sugar landfill site
RSA	Jarrold Ball & Associates	2000 to 2003	Senior Hydrogeologist	Waterval Waste Site – feasibility study, licensing application and permitting – Rustenburg Municipality
RSA	Jarrold Ball & Associates	2001	Senior Hydrogeologist	Impala Platinum Waste Site – Phokeng Site suitability study, design, permitting
RSA	Kwezi V3	2000	Project Hydrogeologist	Closure of Kya Sands Landfill Site Leachate control and prediction modelling
RSA	Kwezi V3	2000	Project Hydrogeologist	Permitting of Ennerdale Landfill Site

RSA	Kwezi V3	1998	Project Hydrogeologist	Site feasibility study – Badplaas landfill site
RSA	Metago	1998	Project Hydrogeologist	Closure of waste rock dumps – Impala Platinum Mine, Rustenburg
RSA	Hawkins, Hawkins & Osborne	1995	Hydrogeologist	Site selection, permitting – Sun City landfill site
RSA	Jarrold Ball & Associates	1994	Hydrogeologist	Sampling and hydrochemical analysis – Northam Waste Disposal Site
RSA	Damant Bostock Inc.	1993	Hydrogeologist	Data collection, hydrocensus – Legal argument against Chloorkop Hazardous Landfill Site

13. Membership of professional bodies:

- The Geological Society of South Africa, Ground Water Division, Member of the Executive Committee, Ground Water Division 1999 – 2003 (Past Chairman)
- South African Council of Natural Scientific Professions, Professional Natural Scientist (Reg. No. 1400072/98)
- Hydrogeological Association of Africa
- Member of the Borehole Water Association
- Member of the Landfill Interest Group – Gauteng RSA

14. Other relevant professional experience

Country	Organisation (Client, Financier)	Date: from/to	Position	Description
RSA	ENSR	2004-5	Senior Hydrogeologist	Site assessment, organic contaminants, shallow groundwater contamination, risk assessments
RSA	Confidential	2002-3	Senior Hydrogeologist	Hydrocarbon plume assessment, assessment of natural attenuation, predictions and monitoring
RSA	Confidential	2000	Project Hydrogeologist	Organic contamination assessment, remediation and monitoring
RSA	JHB Water	2002	Senior Hydrogeologist	Contamination studies for on-site sanitation
RSA	Various	1996 -	Project Hydrogeologist	Drilling supervision Boreholes design Alluvial aquifers Well field design
RSA	BKS Engineers	2000	Project Hydrogeologist	Scientific siting of drilling targets Borehole design and construction Aquifer testing Hydrochemical analysis Management options
RSA	Aquarius Platinum	2002	Senior Hydrogeologist	Mine dewatering and discharge Impact assessment on surrounding groundwater users Hydrochemical monitoring
RSA	Anglo Platinum	2001 to 2002	Senior Hydrogeologist	Mine dewatering and discharge Impact assessment on surrounding groundwater users Hydrochemical monitoring
RSA	Impala Platinum	June 2001 to Feb 2004	Senior Hydrogeologist	Mine dewatering and discharge Impact assessment on surrounding groundwater users Hydrochemical monitoring

CURRICULUM VITAE

NAME: MICHAEL PAUL OBERHOLZER

DATE OF BIRTH: 20 AUGUST 1959

MARITAL STATUS: MARRIED

DEPENDANTS: 2 BOYS (AGE 14 AND 11)

QUALIFICATIONS: PROFESSIONAL ENGINEER,
BSc (CHEMICAL ENGINEER) (RAND)

LANGUAGES: ENGLISH
AFRIKAANS

HOME ADDRESS: 33 BRIGISH DRIVE
NORTHCLIFF
JOHANNESBURG
2195

TELEPHONE: +27 11 678-1138 (H)
+27 82 457 3258(Cell)

OCTOBER 2002- PRESENT
COMPANY: ILITHA RISCOM
POSITION: DIRECTOR

Ilitha Riscom was formed ahead of legislation where companies performing Quantitative Risk Assessments are to be an 'Independent 3rd Party' and prohibited from conducting any other work.

RESPONSIBILITIES

- Hazard and Operability study for Chevron on 4 oil platforms off the coast of Cabinda
- Quantitative Risk assessment for a new petroleum pipeline at Island View, Durban.
- Risk Assessment of air quality of underground mining operations at Phalabora.
- Quantitative Risk Assessments as part of Major Hazardous Installations Regulations for 3 companies in Durban. This involved modeling the installations for potential fire and explosion damage as well as performing gas dispersion modeling for release of toxic gases.
- Hazard and Operability studies for a Grease Plant, Pitch Storage, LPG installation and LPG conversion of existing boilers
- MHI Risk Assessment of a major steel producer at Middelburg.
- Risk Assessment for importation of fuel at proposed berth at Motola, Mozambique.
- Risk Assessment for the realignment of a natural gas line around Badplaas.
- Hazop studies of LPG facilities at Richards Bay
- Hazop studies of LPG facility at Maputo, Mozambique

AUGUST 2001- OCTOBER 2002
COMPANY: PENOC CONSULTING
POSITION: DIRECTOR

Penoc Consulting was formed when Dow sold off previous Sentrachem assets and disbanded the Project Engineering Division.

RESPONSIBILITIES

- Lead Process Engineer for scrubbers to remove excess NOx from a gaseous stream
- Lead Process Engineer for scrubbers to remove excess Ammonia from a gaseous stream.
- Lead Process Engineer for scrubbers to remove excess Chlorine and HCl from a gaseous stream.
- Process and Project Engineer for new industrial gas production facility
- Process Engineer for Risk Assessment at a petroleum storage site
- Project Manager for oil removal plant at Hillside Aluminum
- Lead Process Engineer for preparation of a cost estimate for black liquor at a paper plant.

JANUARY 1999- JULY 2001

COMPANY : DOW

DIVISION: SENTRACHEM -PROJECT ENGINEERING DIVISION

POSITION: MANAGER, PROCESS DEVELOPMENT

RESPONSIBILITIES

- Project Manager for maleic anhydride debottlenecking. This involved, preparation of the cost estimate, environmental impact assessment, installation and commissioning of the project. Value of the project less than R 10 m.
- Project Manager for the scope development, cost estimate, project implementation and commissioning of new insecticide and herbicide packing lines for Dow AgroSciences.
- Project Manager for scope definition and cost estimate for upgrading sodium hypochlorite reactor and scrubbing residual chlorine with caustic soda at Aquachlor
- Attended Dow's Global Project Methodology course.
- Audited plants against Dow's "Loss Prevention Principles"

JANUARY 1995- DECEMBER 1998

COMPANY : SENTRACHEM

DIVISION: NCP-PROJECT ENGINEERING DIVISION

POSITION: MANAGER, PROCESS DEVELOPMENT

RESPONSIBILITIES

- Manager responsible for 5 Chemical Engineers in various aspects of project proposals. This includes technical investigations, process specifications, capital cost estimation, project motivation and project implementation for projects ranging from R 2 million to R 200 million.
- Process Engineering Manager responsible for preparing the basic engineering package and cost estimate for a food acid plant valued at R 100 m.
- Commissioning manager for the ferric chloride plant at Chloorkop.
- Commissioning manager for a food acids plant at Durban.

SEPTEMBER 1993 - JANUARY 1995

COMPANY : SENTRACHEM

DIVISION: NCP (NATAL)

POSITION: TECHNICAL MANAGER

RESPONSIBILITIES

- Manager of a department consisting of 4 Chemical Engineers and 3 Draughtsman. This department was responsible for all technical investigations and equipment modifications and installations. This involves preparing technical specifications, compiling capital cost estimations, preparing income statements, project motivation and rate of returns of the project and preparation of the written motivation for board approval.

APRIL 1987 - SEPTEMBER 1993

COMPANY : SENTRACHEM

DIVISION: NCP-PROJECT ENGINEERING DEVISION

POSITION: SENIOR PROCESS ENGINEER

RESPONSIBILITIES

- Process Engineer for debottlenecking, crotonaldehyde, acetic acid, ethanol, phthalic anhydride plants. All Process Engineering, capital cost estimation, plant consumption data, and variable costs for these plants were calculated and presented for project approval.
- Project Manager and Process Engineer for the capital cost estimate of maleic anhydride and activated carbon projects. This involved compiling a full capital cost estimate on green field sites as well as consumption data, standard variable costs and income statements for these plants.
- Process Engineer for specialized equipment design, including heat exchangers and distillation columns.
- Process Engineer for technical investigations.

MARCH 1986 - APRIL 1987

COMPANY : SENTRACHEM

DIVISION: NCP(TVL)

POSITION: CHEMICAL ENGINEER

RESPONSIBILITIES

- Chemical Engineer responsible for plant trials concerning capacity and efficiency.
- Chemical engineer responsible for all plant modifications
- Operating plants and managerial duties including after hours standby

JANUARY 1985 - MARCH 1986

COMPANY: AMCOAL

DIVISION: SA COAL ESTATES-LANDAU

POSITION: GRADUATE METALLURGIST

RESPONSIBILITIES

- Approximately 6 months was spent on shift as supervisor to plant operations on various sections of the plant. Responsible for a team of approximately 20 People,
- Daily production records, plant efficiencies, and product qualities were calculated, monitored and reported on a daily basis.
- Pilot plant Froth Flotation unit designed, installed and run.

JANUARY 1983 - DECEMBER 1994

COMPANY: SOUTH AFRICAN DEFENCE FORCE

DIVISION: CHIEF OF STAFF LOGISTICS AT CSIR

POSITION : NATIONAL SERVICEMAN

RESPONSIBILITIES:

Approximately 18 months was spent at the CSIR as part of a military research team. This time was spent in the Drawing Office where military equipment was drawn for manufacture

UNIVERSITY OF THE WITWATERSRAND

Graduated B.Sc. (Chemical Engineering), December 1982

PROFESSIONAL SOCIETIES AND INSTUTIONS

- Professional Engineer.
- MSAIChE., MChemE

COMPUTER LITERACY

I am proficient in the following packages

1. Windows
2. MS Word
3. MS Excel
4. MS Project
5. PRO II (Simulation Sciences)

REFERENCES

1. Mr J Annandale
c/o Dow Sentrachem
PO Box 150
Kempton Park
1620
Tel +27 82 446 0800
South Africa
2. Mr G. Tognon
c/o Dow Sentrachem
PO Box 150
Kempton Park
1620
South Africa
Tel +27 11 921 3111

MP OBERHOLZER

CURRICULUM VITAE
Johan Abraham van Schalkwyk

PERSONAL PARTICULARS

Date of birth: 14 April 1952
Identity number: 520414 5099 08 4
Marital status: Married; one daughter
Nationality: South African

CURRENT POSITION

Head of Research: National Cultural History Museum.

CURRENT ADDRESS

Work:
P O Box 28088, Sunnyside, 0132
Tel: (012) 324 6082; Fax: (012) 328 5173; E-mail: johnny@nfi.org.za

Home:
62 Coetzer Ave, Monument Park, Pretoria, 0181
Tel: (012) 347 7270; 082 560 6979

ACADEMIC QUALIFICATIONS

BA. – 1976 (UP)
BA. (Hons.) Archaeology - 1978 - (with distinction) (UP)
Post Graduate Diploma in Museum Science – 1979 (UP)
BA. (Hons.) Anthropology - 1981 - (with distinction) (UP)
MA. Anthropology – 1985 (UP)
D. Lit et Phil (Anthropology) – 1996 (UNISA)

EMPLOYMENT RECORD

1978 - present: National Cultural History Museum, Pretoria
1976 - 1977: Archaeology Department, University of Pretoria

PROFESSIONAL EXPERIENCE

1992 - present: Chief researcher: Head of Department of Research. Manage an average of seven researchers in this department and supervise them in their various research projects. Also do various projects relating to Anthropology and Archaeology in Limpopo Province, Mpumalanga, North West Province and Gauteng. Am also in charge of the Museum's section for Heritage Impact Assessment projects. Have done work in this regard in Limpopo Province, Gauteng, Mpumalanga, North West Province, Botswana, Lesotho and Swaziland. Curated various exhibitions at different museums.

1978 - 1991: Curator of the Anthropological Department of the Museum. Carried out extensive fieldwork in both anthropology and archaeology and HIA projects all over Mpumalanga, Limpopo Province and Gauteng. Curated various exhibitions at different museums.

1976 - 1977: Assistant researcher responsible for excavations at various sites in Limpopo Province and Mpumalanga.

PROFESSIONAL ACCREDITATION

Association for Professional Archaeologist in Southern Africa: Principal Investigator for Iron Age, Colonial Period and Industrial Heritage.

PUBLICATIONS

Published more than fifty papers on topics relating to anthropology, archaeology, history and impact assessment in various scientific journals - a complete list can be supplied on request.

CULTURAL RESOURCE MANAGEMENT PROJECTS

Did more than 200 impact assessments (archaeological, anthropological and social) for various departments and companies. Projects include roads, pipelines, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments. Clients include the following:

Pretoria City Council; AMCOAL; Anglo-Alpha; Africon; CSIR; Conradie, Müller & Associates, Architects; Dept. of Environmental Affairs & Tourism; Akasia City Council; Walmsley Environmental Consultants; HSRC; Rustenburg Platinum Mines; Digby Wells & Associates; Seneque, Maughan-Brown, SWK; Consultburo; BKS Consulting Engineers; Danie Joubert & Associates; Corporate Image; Western Platinum; Environmental Impact Management Services (EIMS); Strategic Environmental Focus; Oryx Environmental; Loxton, Venn & Associates; Ekokonsult Inc.; Afrosearch Index; Gouws Uys & White; Booz-Allen & Hamilton (SA) Ltd; Midrand Metropolitan Council; GLMC; Bohlweki Environmental; Jones and Wagener Consulting Engineers; Kumba Resources, Lephalale, iNtatakusa Africa.

RESUME: A.J.JORDAAN

Name : Andries J. Jordaan
Profession: Agricultural Economist, Lecturer, Director, DiMTEC.
Date of Birth: 27 February 1956
ID Number: 5602275108080
Number of dependents: 4
Nationality: South African

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- International Agricultural Economic Society
- Agricultural Economic Society of Southern Africa (AEASA)
- South African Society for Agricultural Extensionists (SASAE)
- Disaster Management Institute of South Africa (DMISA)

COMPUTER LITERACY

Daily user of MS Office packages: MSAccess, MSExcel, MSOutlook, MSWord and MSOutlook as well as e-mail and internet access.

Business planner
Project management

PRESENT POSITION

Name of firm: University of the Free State
Position: Director: Disaster Risk Management Training and Education Centre for Africa (DiMTEC)
Lecturer:

- Disaster Risk Management.
- Agricultural Economics,
- Environmental Economics,
- Rural Development,
- Agricultural Extension,

Years with the firm: 4 years (Previously, consultant in the same fields of expertise)

SUMMARY OF KEY EXPERTISE

- Commanding and Management of relief operations
- Rural development
- Food security
- Land reform
- Agricultural economics
- Environmental economics
- Disaster Risk Management
- Agricultural Extension
- Farm Management
- Soil & environmental analysis

FORMAL EDUCATION

2005 -	PhD fellow. Impact of rural development on civil strife and disasters.
2002 - 2004	M.Sc Agric (Agricultural Economics) Cum Laude. University of the Free State (Best M thesis)
1980	B.Inst.Agrar.(Hons) University of Pretoria (Best Hons student)
1974 – 1977	B.Sc Agric. University of the Free State
1973	Matriculated at Tweespruit Agricultural School

OTHER FORMAL AND INFORMAL TRAINING

Attend several accredited short courses in the fields of

- Project management
- Agricultural land use and planning
- Computer literacy
- Community facilitation
- Rural development
- Civil – military relations
- Marketing
- Risk management

EXPERIENCE

- CDI promoter; Free State & Northern Cape
- Conduct and report: Economic analysis of Mangaung Local Municipality
- Manage, oversee and present SPHERE course for 37 attendees in Bloemfontein.
- Visit several Universities in the United Kingdom and Belgium regarding disaster risk management and resilience training.
- Complete train the trainer SPHERE course in Oxford, UK
- Complete SPHERE course in minimum standards in Humanitarian Aid in London, UK
- Agricultural Specialist witness for the Richtersveld community vs. Alexcor/SA Government land claims court case.
- Attended International Conference on Disaster Risk Reduction in Kobe, Japan.
- Study tour through Zimbabwe with focus on Land Reform and Disaster Management
- Director: Disaster Risk Management Training and Education Centre for Africa (DiMTEC)
- Lecturer in Agriculture and Environmental Economics, Agric. Extension, Rural Development and Disaster Risk Management
- Plan and Facilitate several workshops regarding land reform with senior agricultural business managers farmers and other stakeholders
- Contribute to and present various papers on National professional Conferences
- Develop and implement various business plans for SMME's
- Advisor for municipalities in development of IDP's and LED's
- Team member of the National Food Monitor Committee (NFMC)
- Conduct financial feasible and land use studies for the Curriescamp/Soverby project near Kakamas (project value R80 m), the Pella project near Pofadder (project value R60 m) and the Sanddrift project near Alexanderbaai (project value R14 m)
- Advisor for the Department of Social Development on the food security program. Responsible for implementation of household food security projects in the Free State

- Member of the planning team for the Riemvasmaak project in the Northern Cape
- Project leader on Mkholo development project in Mpumalanga and KZN. This include financial feasibility study, land use, environmental and social impact study and implementation plan.
- Joint Operations Commander/Chairman during several local and provincial disasters
- Officer Commanding, Reserve Force Unit
- Conduct consulting and management duties for the Free State Rural Strategy Unit on development projects.
- Consultant for various successful emerging farmers in the Free State
- Owner and manager of farm enterprise
- Conduct several agricultural land valuations
- Extension officer at the Department of Agriculture

COMMITTEES

- Chairman: Free State Reserve Forces Council
- Chairman: Agricultural Economics Workgroup of the Free State, Northern Cape and North-West
- Member of Free State Task team coordinating support for Land Reform projects in the Free State Province (2002)
- Chairman: Joint Operations Committee (JOC) during snow disaster in the Eastern Free State, 2001
- Chairman: Free State JOC during Food and Mouth disease in KZN during 2000.
- JOC Chairman for four other major disasters in the Free State, inclusive of floods, veld fires and snow storms.
- Serve as chairman of various other community organizations and committees
- Officer Commanding – Harrismith Commando (1994-2002)
- Executive Member, Harrismith Primary School Governing Body (1989-1991)
- Co-Chairman Local Operational Committee – Harrismith (1994-2002)
- Chairman Kestell farmers Association (1998 – 1999)
- Councillor Kestell Local Government (1997-1998)
- Executive member of Lesotho - South Africa border liaison committee (1997 – 2000)
- Chairman of Swinburne Agricultural study group. (1982 – 1989)
- Executive member on various farmers associations and committees including:
 - Harrismith District soil conservation committee
 - Harrismith District Farmers Association
 - Bethlehem District Farmers Association
 - Aberfeldy farmers association
 - Kestell farmers Association

LANGUAGES

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent
Dutch	Fair	Good	X
South Sotho	Fair	Fair	X
Flamish	Fair	Fair	X



Curriculum Vita

Ben van der Merwe

Personal Details

Surname : van der Merwe
Names : Barend Johannes
Date of Birth : 28 November 1955
Nationality : RSA
Profession : Development Economist

Key Qualifications

Ben van der Merwe has wide-ranging knowledge and experience in economic development analyses. His special field of interest relates to the utilisation and application of the input-output technique in the development milieu. He has conducted various multi-sectoral economic development studies, which incorporated liaison with communities to ensure local involvement. Due to his interest in economic modelling and research, he has extended his expertise in industrial complexes, input/output and impact analyses to address urban management and spatial economic problems. Ben has developed and implemented innovative economic impact modelling techniques to quantify economic development indicators for capital expenditure projects, therefore equipping the firm with forefront modelling techniques. He has successfully managed and coordinated large research, data gathering and strategic development studies in the SADC countries. His management skills have been applied in numerous LED and database development studies.

Academic Qualifications

Institution (Date from – Date to)	Degree(s) or Diploma(s) obtained:
University of Pretoria, 1978	BSc (TRP)
University of Pretoria, 1983	MBA

Employment Record

1986 – Date : Urban-Econ: Development Economists
 1983 – 1986 : Department of Constitutional Development and Planning
 1977 – 1983 : Department of Community Development

Language Proficiency

	<u>Reading</u>	<u>Writing</u>	<u>Speaking</u>
Afrikaans	5	5	5
English	5	5	5



Projects Undertaken

- **Socio-Economic Development:**
 - Household Survey in Centurion
 - Socio-economic analysis and input to the KwamHlanga structure plan
 - Hostel Redevelopment Options: Refilwe and Atteridgeville / Saulsville
 - Vaal Triangle and Sasolburg Survey
- **Metropolitan Economics:**
 - Industrial complex analysis and marketing potential for the East Rand
 - Short Term Action Plan for the West Rand
 - Economic Plan for the Vaal Triangle and Sasolburg
 - Economic Base Study for the North East Rand Forum area
- **Regional Development:**
 - Gauteng Land Reform Pilot Programme for Rust de Winter, Rethabiseng and Onverwacht
 - An assessment of the economic impact of the development of a R2 billion platinum mine in the Bushveld
 - Action Plan for the redevelopment of Leeuwkraal (Mandela Village) – economic and financial analysis
 - Economic Development Potential for the Walvisbay Enclave
- **Economic Sector Analysis:**
 - Industrial sector analysis for the Eastern Transvaal
 - Economic input to the Venda ESKOM Study
 - Small Business Development in Lesotho
- **Strategic Development Planning:**
 - Urban Development Plan for Dobsonville
 - Housing Study on higher densities for the RSA
 - Urban Development plans for various areas around Durban / Pietermaritzburg – Inanda, Ntuzuma, Claremont / kwadabeka, Umlazi
- **Development Facilitation and Planning Data:**
 - Development Information System (DIS) for Mpumalanga
 - Economic Monitoring System for the East Rand
- **Water Related Studies:**
 - Braamhoek Pumped Storage Scheme Impact Analysis
 - Mutale and Nwanedzi River Basins Water Resource Investigation
 - Salinisation in the Middle Vaal River
 - Mpumalanga Water Feasibility Studies
 - Water Price Elasticity
 - Selosesha Fresh Produce Market
 - Orange Vaal Transfer Study
 - Vaal River Augmentation Study
 - Vaal Augmentation
 - Orange River Replanning
 - Mtata Demographic Study
 - Crocodile River
 - Economic Value of Water
 - Mpumalanga Water Resources



Curriculum Vita

Ben van der Merwe

- National Waste Discharge Charge System
 - Klein and Middle Letaba Reconnaissance Study
 - Orange River Regional Comparative Analysis
 - Water Balancing model
 - Nqutu Regional Water Supply
 - Feasibility Study to Augment the Eastern Vaal Sub-system
 - Atteridgeville and Mamelodi Socio-economic Assessment and Water Consumption Preferences
 - Institutional System for the Provision of Water and Sanitation in the Northern Province
 - Greater Pretoria Metropolitan Area
 - Socio-economic and economic modules of the National Water Balance Model
 - Vaal River Augmentation Study Ntuzuma
 - Elandsriver Water Resource Management Study
 - KaNgwane Master Water Plan
 - Western Highveld Water Augmentation
 - Lamontville Tourism Feasibility Study Proposal
- **Impact of World Summit Parallel Events:** Urban-Econ has been appointed to determine the economic impact of 500 parallel events to the World Summit and on sustainable Development on the economy and communities by utilising an impact simulation model that quantifies the direct and spin-off effects of the investment leading up to the events, as well as increased economic activities and financial injections due to the events itself expressed.
 - **Impact of Poverty relief projects:** Urban-Econ was appointed to undertake primary and secondary research to quantify and qualify the economic and welfare impacts of six poverty relief case study projects funded by poverty relief funding to address the sustainability of projects and potential for independent operation.
 - **South African Broadcasting Industry; Economic Modeling:** Urban-Econ was appointed by the Department of Communication to identify and analyse several key policy options within the broadcasting industry in respect of the determination of the preferred pace of licensing, the maximum contribution of the industry to meet national policy objectives and the optimisation of the commercial value broadcasting assets. The project entailed, inter alia, the compilation of an economic model on the industry and the impact of several scenarios on the model.
 - **Job Creation in the Construction Industry; Job Creation Model** The purpose of this study conducted for the Department of Housing (National) had been the creation of a comprehensive economic model that simulates the job creation ability of the construction industry in South Africa. An important outcome of the model is the formulation of job creation indicators, generally acceptable to the housing fraternity, inclusive of the private sector.
 - **Internet Broadcasting:** Urban-Econ formed part of a consortium appointed to develop a discussion document on Internet Broadcasting, for the purpose of establishing a policy framework for this industry in South Africa. This project entails the identification of technical alternatives for the implementation of Internet Broadcasting, determining the backward and forward economic linkages, the assessment of the market demand, as well as the development of a simulation model.
 - **K16 Route Alignment:** This project entailed the identification and evaluation of different route alternatives for the K16 road in Pretoria. This route will form an important transport corridor as a development spine, with significant implications for business development and investment.
 - **Mabopane-Centurion Development Corridor:** Urban-Econ acted as project leaders to formulate an integrated strategic development plan for the MCDC. As such this required an integrated approach



Curriculum Vita

Ben van der Merwe

towards multisectoral research to identify development projects supported by a strategic visioning process. Furthermore, participative planning processes were followed to ensure stakeholder participation and development facilitation to ensure the long term sustainability of the project.

- **Trans-Kgalagadi Corridor:** Urban-Econ and Arcus Gibb have been appointed as part of a specialist team to assess the socio-economic conditions, appraise the development potential and identify key actions required to facilitate development along the Trans-Kgalagadi Highway
- **Road Access:** Urban-Econ and Arcus Gibb have been appointed to undertake a study to prepare National Guidelines and Regulations for Road Access Management in South Africa. The goal of the transport economic analysis is to quantify the impact of accessibility and mobility on road user cost and development potential in terms of the established road classification and land-use planning principles in order to optimise road access arrangements
- **JHB East West Corridor:** The purpose of the study is to undertake the necessary research and feasibility evaluations for the East West Corridor to provide a framework and strategy for focused and effective investment resulting in local economic development and job creation.
- **Congestion Study:** Urban-Econ was appointed to determine options and motivation for congestion management on Gauteng freeways to ensure the optional functioning of the freeway transport network/system.
- **Lethabong Local Economic Development Strategy:** Urban-Econ was consulted to develop an LED strategy for this area. The strategy was based on an economic analysis of the local area, the policy framework, local development issues and consultation with local businesses, business organisations and development agencies.
- **Botswana: Lobatse Trans-Shipping/Industrial Estate:** Urban-Econ has been appointed to undertake research on the development of an export orientated Trans-shipping/Industrial Estate in Botswana. An ideal site has been identified at Lobatse. **Client:** Botswana Development Corporation, LTD.
- **Botswana: Bobonong Master Plan:** Urban-Econ was appointed to undertake an economic analysis in Bobonong. This research was required for the compilation of a Master plan for Bobonong by TTCS Consulting Engineers. **Client:** Central District Council, Botswana.
- **Lesotho: Urban Management Study:** The objective with the study was to investigate the Department of Urban Development Services (UDS) and to evaluate the Infrastructure Development Fund (INFUND) with a view to achieve improved efficiency and effectiveness in the overall urban management System in Lesotho. **Client:** Ministry of Interior, Chieftainship Affairs and Rural Development.
- **Lesotho: Buthe-Buthe:** Participated as development economists on the professional team of the DBSA. The purpose of the project was to assess the urban development programme for Buthe-Buthe as part of the LHWP. **Client:** Development Bank of South Africa.
- **Lesotho: Thetsane urban development:** URBAN-ECON acted as economist on the team of the DBSA that investigated the viability of a low income, labour intensive housing project. For the purpose of this study the economy of Lesotho was analysed to determine the impact of the project on the demand for local goods and services. **Client:** Development Bank of South Africa.
- **Lesotho: Small business development:** URBAN-ECON has recently been appointed by Business Advisory and Promotion Service (BAPS) to undertake a study into the potential of Lesotho based industries to produce products that can be marketed in the adjacent RSA. For the purpose of this study the nature and extent of the Lesotho economy needs to be analysed thoroughly. URBAN-ECON is assisted by a specialist team including a Lesotho-based firm.
- **Windhoek Economic Database:** The development of an up-to-date and comprehensive database is considered as an important move towards the strategic planning and management of development in the City of Windhoek.
- **Nampower Market and Socio-Demographic Study for Off-grid Electrification:** Urban-Econ is part of a



Curriculum Vita Ben van der Merwe

- team to undertake surveys in four regions of Namibia to determine the demand for electrification in rural areas.
- **Trans-Kgalagadi highway economic development opportunities:** Urban-Econ has been appointed as part of a specialist team to assess the socio-economic conditions, appraise the development potential and identify key actions required to facilitate development along the Trans-Kgalagadi Highway.
 - **K-8 Impact Assessment:** Urban-Econ undertook a modelling exercise for the K-8 Route and for this purpose an economic impact modelling technique has been developed. This model is applied to objectively quantify the potential impact in economic terms and translate these in terms of financial and social effects.
 - **K-16 Impact Assessment:** Urban-Econ is in the process of determining the economic impact of K-16 alignment options. The model applied distinguishes between different transport nodes by disaggregating the transport sector in relevant subsectors, such as rail.
 - **Lethabong K58 Local Economic Development Strategy:** Local economic development is a strategy for improving the performance of the economy in a local area using the resources within that area to their fullest potential. The development of Route K58 as an activity spine with resultant economic impacts was determined.
 - **Gauteng Fast Train:** Arcus Gibb is currently involved with one of the major SDI projects, namely the so-called Gauteng Fast Train. This project makes provision for a future station at the expanded JIA terminal as well as the so-called Aero City station at Roadfield. The latter station will have a direct influence on the Kempton Park CBD and is thus an important project to consider as part of the Monument Park Corridor study.
 - **Walvis Bay; Namibia:** In order to stabilise the economy of Walvis Bay, Urban-Econ was appointed to investigate the economy of the area and to make recommendations with respect to diversification of the economy. During this study an Income Flow Matrix of the local economy was compiled to investigate the impact of alternative economic strategies.
 - **Dr J S Moroka LED:** Urban-Econ undertook the necessary economic profiling for Dr J.S. Moroka Municipality to identify opportunities for local economic development and interpret these in terms of a strategic economic development framework with associated anchor projects and implementation guidelines for the Municipality for community empowerment to maximise economic regeneration and job creation in a rural context.
 - **Economic Impact of Road Freight Congestion Regulatory Measures:** The client, Gauteng's Provincial Transport Department, approached Urban-Econ to assess the economic impact of two proposed congestion alleviating policy measures on the Gauteng provincial economy. The two policy measures involved the restriction of heavy trucks from the left-lanes of freeways during peak traffic hours, and the complete restriction of heavy trucks from Gauteng freeways during peak traffic periods. Using an input-output modelling approach together with scenario formulation, various direct and indirect economic impacts could be estimated. These estimates provided the basis from which the Provincial Minister of Transport would decide whether to enforce the proposed policy measures.
 - **Mpumalanga PGDS Review:** Urban-Econ was invited to review, update, align and improve the existing PGDS, which will guide the Province in terms of effective and efficient management and governance to achieve growth and development. An appropriate monitoring framework that is linked to Key Performance Indicators (KPI) will be developed as well as a pro-active and comprehensive information management system that will guide the implementation performance of the PGDS.
 - **Economic Feasibility of Upgrading Wonderboom Airport to International Status:** The client, Tshwane Metropolitan Municipality, appointed Urban-Econ as part of a multi-disciplinary team including environmental scientists airport engineers to quantify the economic feasibility of upgrading Wonderboom airport to international status. This high-profile analysis required the use of Urban-Econ's input-output



Curriculum Vita Ben van der Merwe

- economic model for impact estimates, as well as working together with the US based Economic Development Research Group who specialize in airport economics.
- **Mabopane–Centurion Development Corridor:** Urban-Econ acts as project leaders to formulate an integrated strategic development plan for the MCDC. As such this requires an integrated approach towards multisectoral research to identify development projects supported by a strategic visioning process. Furthermore, participative planning processes are followed to ensure stakeholder participation and development facilitation will ensure the long term, sustainability of the project.
- **GODISA SME Baseline:** Urban-Econ was appointed by GODISA Programme Management Unit to undertake a study to establish baseline information with respect to the technology intensive sub-sector of SMMEs. This will provide insight in the needs, trends and opportunities of the sub-sector, as well as identify key areas for intervention by Godisa. It is understood that there is a long recognised need for supporting the development of the South African Private Sector and in particular Small, Micro and Medium Enterprises (SMMEs). Specifically, a need has been identified to enhance opportunities and capacity of SMMEs to enter the arena of the global economy, which can only be achieved by means of technology improvements and support.
- **Development Information System for the Mpumalanga Province:** URBAN-ECON developed a comprehensive computerised information system for the Mpumalanga Development Corporation. The information system consists of a user-friendly, menu-driven system comprising extensive economic, demographic and socio-economic information for the different magisterial districts of the Mpumalanga Province.
- **Greater Alberton Socio-economic and Demographic Survey:** This survey is a standard five-year survey and the main aim is to determine changes to the demographic and socio-economic profiles and characteristics of the resident population of Greater Alberton. Urban-Econ has had extensive experience in undertaking socio-economic surveys with a view to obtain data and information to be used for planning and development purposes.
- **Centurion socio-economic survey:** The study is being undertaken for the Department of Town Planning of Centurion. Approximately 2 500 socio-economic interviews were conducted and is a standard 5 year survey. Urban-Econ successfully undertook the 1995 survey and on account of the high quality of work done has also subsequently been appointed to do the 2000 study.
- **Tourism Promotion and Development Planning (TPDP) Impact Assessment:** Urban-Econ was appointed to obtain detailed information of the impacts of Tourism developments in four focus areas (Western Cape, North West, Mpumalanga and Limpopo) based on tourism demand, socio-economic capacity of communities and inherent development potential. This required that tourism market potential needs to be translated into conceptual frameworks for each area, reproducing the basis for the impact assessment in terms of Economic impact, Social impact, Job creation, Tourism market penetration potential and sustainability of linkages and independency capacity especially in terms of funding.
- **Impact of Poverty relief projects:** Urban-Econ was appointed to undertake primary and secondary research to quantify and qualify the economic and welfare impacts of six poverty relief case study projects funded by poverty relief funding to address the sustainability of projects and potential for independent operation.
- **CMIP Backlog Study:** Urban-Econ forms part of the CMIP Backlog consortium established for the purpose of investigating the current infrastructure backlog in Gauteng in terms of the government's CMIP programme. This includes the impact modelling of future infrastructure projects in the various areas in Gauteng.
- **South African Broadcasting Industry: Economic Modeling:** Urban-Econ was appointed by the Department of Communication to identify and analyse several key policy options within the broadcasting industry with respect to the preferred pace of licensing, the maximum contribution of the industry to meet



Curriculum Vita

Ben van der Merwe

national policy objectives and the optimisation of the commercial value broadcasting assets. The project entailed, inter alia, the compilation of an economic model on the industry and the impact of several scenarios on the model.

- **Internet Broadcasting:** Urban-Econ formed part of a consortium appointed to develop a discussion document on Internet Broadcasting, for the purpose of establishing a policy framework for this industry in South Africa. This project entails the identification of technical alternatives for the implementation of Internet Broadcasting, determining the backward and forward economic linkages, the assessment of the market demand, as well as the development of a simulation model.
- **Nkangala LED:** Urban-Econ was invited to formulate a District Local Economic Development, Job Creation and Marketing Strategy based on identified development needs, opportunities and comparative advantages to inform and guide the District Municipality to facilitate development, unlocking the latent economic development potential, encourage private sector investment and create economic development and job opportunities for the poor. As such, the economic strategy will purposefully inform the budget of the municipality, and will provide a baseline against which the performance of the budget and government spending can be measured.
- **Industrial Strategy for East London Industrial Development Zone (IDZ):** IDZs are special economic zones with duty-free privileges for export-oriented industries to attract foreign investment, and to increase exports. A strategy for attracting appropriate investors was formulated based on an economic analysis of the comparative advantages of the region, the incentives available and the resulting location factors for the IDZ.
- **Gauteng Province Socio-Economic analysis of the Job Creation Programme:** An analysis done on the socio-economic profiles of the contractors and employees participating in the Gauteng Job Creation Programme.
- **Drakensberg Local Governance:** Urban-Econ forms part of the MUNTRA Consortium, appointed by CREA SA and USAID, which is responsible to provide assistance and support to the Drakensberg District Council (DC14) in realigning and optimising its functions and capacity. The consortium's main task is to develop and establish the appropriate organisational, administrative, financial and technical systems and skills within the DDC member municipalities. This mainly includes the implementation of a normalisation strategy to strengthen existing systems, training of key personnel and the preparation of an institutional transformation framework. Urban-Econ's role is to interpret the current socio-economic and macro-economic reality of the area in order to determine the present and future services requirements of all the relevant user sectors in the local economy. This also includes the identification of the most probable growth scenarios and potential strategies to be implemented.

CURICULUM VITAE

JUDITH HELEN JOHNSTON

CURRICULUM VITAE

NAME Judith Helen Johnston

DATE OF BIRTH 28 April 1957

NATIONALITY South African

IDENTIFICATION NO. 570428 0155 08 8

MARITAL STATUS Single

EDUCATION Bryanston High School - Matric 1974
B.Sc Town and Regional Planning -
University of the Witwatersrand 1978
Oxford Institute Course of Tourism

TELEPHONE Pretoria Knysna
(O) (012) 667-2107 (o) 044 382 0100
(H) (012) 667-4656

FAX (012) 667-2109 (044) 382 2324

E-MAIL seaton@yebo.co.za

ADDRESS P O Box 936
IRENE 0062

INTERESTS Photography, Wildlife Conservation, Sport
Modern Dancing, Writing, Reading

OTHER ABILITIES Word Processing and Basic Computer
Programmes
Drafting
Life Line Councillor
Interaction Management Training

REFERENCES Mr B Peach
Summercon Holco
Property Developers
(O) (011) 462-3815

Mr A Cronk
Shell SA (Pty) Ltd
(011)441-7067

G S Thomson
Seaton Thomson and Associates
Ecotourism Marketing & Development
(O) (012) 667-2107

**KEY PERSONNEL
RESUME****JUDY JOHNSTON**

Qualification:	B Sc (Town & Regional Planning) (Wits University) 1978
Professional Specialisation:	Land use planning and development, policy planning, framework planning; Integrated environmental management policies, environmental impacts; EIA's for all forms of development and infrastructure.
Company:	Director: Seaton, Thomson & Associates CC
Membership:	SA Institute of Town and Regional Planners Civil Society Member of the Gauteng Development Tribunal

PROFESSIONAL BACKGROUND: JUDY JOHNSTON is a registered Town and Regional Planner with 27 years experience. She has a wide experience in all aspects of land use planning in urban and rural environments with particular focus on conservation and environmentally sustainable development & commercial farming feasibilities

LAND USE PLANNING: Land Use planning experience includes:

- rezoning & establishment of holiday resorts, conservation areas;
- preparation for and implementation of Land Development Objectives;
- physical, environmental and socio-economic planning in the land redistribution programme for previously disadvantaged communities.
- feasibility studies for commercial farming for emerging beneficiary farming communities
- tourism development policies, strategies and plans

ENVIRONMENT: Environmental impact assessments, environmental management plans and feasibility studies for ecologically sensitive conservation areas & proposed new developments:

- development of environmental management policies and strategies for the establishment of recreation and conservation areas and private resorts;
- EIA's for existing and proposed low cost housing projects, landfill sites, petrol filling stations, townships, electrical substations & powerlines, etc
- Integrated environmental management strategies: Environmental audits.

PUBLIC PARTICIPATION: The co-ordination of public participation and facilitation programmes in Gauteng, KwaZulu, NGO's, communities & local government administrations.

RECENT ASSIGNMENTS: Recent assignments conducted for local authorities, Metropolitan Councils and private clients include –

- Impact assessments for low cost housing projects & informal settlements at Diepsloot, Tembisa, Moutse, KwaMhlanga, Boksburg, Germiston, Soshanguve & Atteridgeville; for Sebenza, Nylstroom & Pretoria Metro regional landfill sites; Scoping reports for electrical substations & powerlines in Edenvale, Midrand & Kempton Park, numerous public garages Johannesburg & Pretoria; new residential & commercial townships Johannesburg & Pretoria, Secunda, etc
 - development of integrated environmental management policies & strategies for control of development in Midrand; the Johannesburg International Airport: Bartlett vlei Boksburg; Florida Lake Roodepoort;
 - Environmental Management Plans for various new developments in Gauteng Province, Limpopo, North West and Mpumalanga Provinces
-

-
- Environmental audit of sensitive areas Southern Johannesburg
 - assessment of social & leisure facilities for underprivileged communities in Centurion
 - preparation of Land Development Objectives for the Ulundi TLC in KwaZulu KwaZulu Natal
 - Input on preparing the Green Paper on Tourism for the Gauteng Province
 - feasibility studies for commercial farming for beneficiary communities for Dept of Land Affairs, Northern Province and Gauteng.
 - Environmental Impact Assessment for an agri village for Gauteng Dept of Land Affairs
-



NJ JANSE VAN RENSBURG Pr Eng

CURRICULUM VITAE

Name of Firm :	Ninham Shand (Pty) Ltd	Name of Staff :	NJ Janse van Rensburg
Profession :	Civil Engineer	Year of Birth :	1951
Years with Firm :	17	Nationality :	South African

Membership in Professional Societies : Professional Engineer, Engineering Council of South Africa 760372 (1976)
Member of the South African Institution of Civil Engineering

Key Qualifications :

Thirty (30) years of experience in the project management of roads related projects including planning and design of roads, road maintenance management, road construction supervision, bridge construction supervision, traffic engineering, transportation engineering and airport planning and design. Responsible for the overall management of the company's roads and transportation related work in South Africa and abroad. He is also head of the Transport and Roads Business Unit of Ninham Shand.

Experience Record :

- 2004** **Traffic Impact Assessment for Community Development next to Road K46 Fourways, South Africa**
Specialist traffic engineer responsible for the impact assessment of a proposed development comprising various land uses and modes of travel.
- 2003** **Traffic Impact Assessment for Helderfontein Residential Development next to Road K46 Fourways, South Africa**
Specialist traffic engineer responsible for the impact assessment of a proposed residential and golf estate development.
- 2002 – 2004** **Upgrading of Dr Belcher Road, Bloemfontein**
Director responsible for the design and supervision of roads and bridge works with a construction value of R30 m (US \$ 4 m)
- 2002 – 2004** **Sasolburg Interchange, South Africa. Client: Department of Public Works, Roads and Transport, Free State Provincial Government, South Africa**
Director responsible for the design and supervision of the development of a new interchange and approach roads.
- 2002 – 2004** **Koffiefontein – Sasolburg, South Africa. Client: Department of Public Works, Roads and Transport, Free State Provincial Government, South Africa**
Director responsible for the design and supervision of the upgrading to bitumen standards of an existing dirt road between Koffiefontein and Oppermans in the Free State Province over a distance of 45 km.
- 2001** **Road Safety Analysis Trunk Road 13/6, Warrenton, South Africa. Client: Department of Transport, Road and Public Works, Northern Cape Provincial Government, South Africa.**
Specialist assessor of the proposals to improve the safety of motorists and pedestrians on a stretch of arterial road with a high accident history.
- 2001** **Upgrading of Qoaleng Road, Maseru, Lesotho. Client: Maseru City Council, Lesotho.**
Director responsible for the planning, design, upgrading and supervision of an existing gravel collector road to tarred road standards in an existing built up area with limited space and limited material resources.
- 2000** **Accesses to Thetsane Factory, Maseru, Lesotho. Client: FM Associates, Lesotho**
Director responsible for the planning design and supervision of access roads to the new cloth mill. The project included taxi facilities, parking areas, a pedestrian overpass and intersection with a major bypass road.
- 2000** **Road Safety Analysis, Trunk Road 17/8, Upington, South Africa. Client: Department of Transport, Roads and Public Works, Northern Cape Provincial Government, South Africa.**
Specialist responsible for the development of proposals to improve the safety of motorists and pedestrians on a 85 km provincial road, accommodating high volumes of agricultural traffic and provincial traffic.
- 2000** **Arterial Road Improvements, Bloemfontein, South Africa. Client: Mangaung City Council, South Africa**
Director responsible for planning, design and construction supervision of road improvements on a major arterial road, accommodating 20 000 vehicles per day.
- 1999** **Upgrading of Road DR3023 Prieska**
Director responsible for the upgrading to bitumen standards of 20 km section of a provincial road including a bridge and major drainage structures.

NJ Janse van Rensburg

1999 **Traffic Impact Studies, Free State Province, South Africa. Client: Department of Public Works, Roads and Transport, Free State Provincial Government, South Africa**

Director responsible for traffic impact studies for various shopping centres, hospitals, private developments and filling stations.

1998 **Master Plan Pilianesberg Airport, South Africa**

Specialist airport engineer responsible for the development of airside and landside facilities to improve and upgrade an existing airport facility to accommodate national and international passengers and cargo.

1997 **Rehabilitation of Church Street Victoria-Wes, South Africa**

Director responsible for the rehabilitation of 5km of existing tarred streets.

1997 **Rehabilitation of Streets, Virginia, South Africa. Client: Virginia City Council, South Africa**

Project Management of the design and construction supervision of rehabilitation solutions for 20 km of tarred road sections in an existing neighborhood and for a major arterial road linking two medium sized communities.

1996 **Access Road to Seoding, Kuruman, South Africa. Client: North West Provincial Government, South Africa**

Director responsible for the design and construction supervision of the upgrading to tarred road standards of an existing gravel access road.

1991 **Upgrading of 300km of Gravel Streets and Bridge Construction**

Director and Project Manager responsible for all phases of the upgrading of existing 260 dirt roads to gravel road standards and 50 km of tarred roads after the 1988 flooding as well as the reconstruction of bridges damaged in the flood.

1990 **Rehabilitation of Concrete Pavements, De Brug Military Base, Bloemfontein, South Africa**

Project Manager responsible for the design and construction supervision of concrete pavement reconstruction and repairs covering an area of 10 hectares.

1989 **Investigation and Planning of Alternative Airfield Facilities at Lady Brand, South Africa**

Specialist airport engineer responsible for the planning of airside and landside facilities for alternative site locations.

1987 **Planning and Design of Heliport Facilities, Bloemfontein, South Africa**

Specialist airport engineer responsible for the planning and design of heliport facilities for a security building.

1986 **Bypasses, Bethlehem, South Africa**

Project Manager responsible for the design of 50 km of bypass roads, including 6 interchanges and 10 bridges.

1979 **Investigation and Planning of Airfield Facilities at Ermelo, South Africa**

Specialist airport engineer responsible for the planning of airside and landside facilities.

1978 **Johannesburg International Airport**

Engineer responsible for the design of a new runway, taxiways, aprons and arterial access road, including 4 major interchanges.

1977 **Sasol Plant Secunda, South Africa**

Project Manager of roads, bridges and service culverts for the Sasol plant.

1975 **Provincial Road Bridges, Rustenburg, South Africa**

Design of two bridges for river crossings near Rustenburg.

Countries of Work Experience : South Africa, Lesotho, Uganda and Mauritania

Education : BSc (Eng) Civil, University of Pretoria, South Africa (1972)
 BSc (Civil) Hons, University of Pretoria, South Africa (1976)

Employment Record :

2004 to date Business Unit Head, Ninham Shand, Transportation and Roads Business Unit
 2001 - 2004 Director, Ninham Shand, Centurion, Gauteng, South Africa
 1989 - 2001 Director, Ninham Shand, Bloemfontein, Free State, South Africa
 1987 - 1989 Associate, Ninham Shand, Bloemfontein, Free State, South Africa
 1983 - 1987 Associate, Africon, Bloemfontein, Free State, South Africa
 1976 - 1982 Engineer Africon, Pretoria, Gauteng, South Africa
 1973 - 1976 Engineer, Department of Transport, Pretoria, Gauteng, South Africa

LANGUAGES : Afrikaans (first), English

