

## **CURRICULUM VITAE**

### **ALICIA GOVENDER**

*Profession* : *Environmental Consultant*

*Years experience* : *4.5 years in the environmental field*

#### **SKILLS BASE AND CORE COMPETENCIES**

- Basic Assessment Reporting
- Environmental Impact Assessment Reporting
- Public participation processes for a variety of projects

#### **EDUCATION AND PROFESSIONAL STATUS**

- 2004 – 2006: BSc (Social Science, Geography and Environmental Management), University of KwaZulu-Natal
- 2007: BSc Hons (Environmental Management), University of South Africa

#### **EMPLOYMENT**

- 2008 – Present: Savannah Environmental (Pty) Ltd, Environmental Consultant
- 2007 - 2008, Fraser Alexander Tailings, Trainee Environmental Technical Risk Officer
- 2007: Department of Agriculture and Environmental Affairs through the School of Environmental Sciences (Geography) (Durban)

#### **SELECTED RELEVANT PROJECT EXPERIENCE**

- EIA & EMP for the upgrade of the Hartebeestfontein Wastewater Care Works: ERWAT
- EIA & EMP for the extension of the Welgedacht Wastewater Care Works: ERWAT
- Operational EMP for the Medupi Power Station
- Educational Booklet for the Environmental Management Plan for Medupi Power Station construction
- ECO Audit Reports for De Hoop Dam
- Public Participation for the Tshwane Strengthening Project: -Phase1: Eskom Transmission
- Basic Assessment for Wind Farm facility at Brand se Baai: Promethium Carbon
- Basic Assessments for Wind Monitoring Masts for properties-North of Koekenaap: Mulilo
- Basic Assessment, EMP and Water Use Licence for the Proposed Bus and Taxi facility in the Dilokong Area, Limpopo Province: SANRAL
- Basic Assessment for Proposed establishment of wind monitoring masts on two sites East of Cape Town in the Overberg near Boontjieskraal in the Western Cape: BioTherm Energy (Pty) Ltd
- EIA for the proposed wind energy facility near Caledon in the Overberg area in the Western Cape Province: BioTherm Energy (Pty) Ltd
- EIA for the proposed construction of the Ngotwane River Bridge and P224-1 road upgrade between South Africa and Botswana: SANRAL.
- EIA for the proposed Exxaro West Coast Wind Farm Development, north west of Vredendal in the Western Cape Province: Exxaro Resources
- Public Participation for the Aggeneis- Oranjemond Transmission Line in the Northern Cape: Eskom Transmission
- ECO monitoring for the rehabilitation of Blaauwpan and associated storm water channel, Gauteng: Airports Company South Africa (ACSA)

- EIA and Public Participation for the proposed Ilanga Solar Thermal Power Plant as Part of the Future Karoshoek Solar Thermal Park, Northern Cape: Ilangalethu Solar Power (Pty) Ltd
- Public Participation for the new proposed Coal fired power station near Oggies/Phola, Mpumalanga Province: Rukki SA
- EIA for the proposed Photovoltaic Solar Energy Facility on a site southeast of De Aar, Northern Cape Province : INCA De Aar Solar (Pty) Ltd
- Basic Assessment for Wind Energy Facility near Koingnaas, Northern Cape Province: Just Palmtree Power
- Basic Assessment for Project Blue Wind Energy Facility near Kleinsee, Northern Cape Province: WWK Development (Pty) Ltd
- EIA for the proposed Kleinzee 300 MW Wind Energy Facility, Northern Cape Province: Eskom Generation
- Basic Assessment and Public Participation for Remediation of Asbestos Contaminated Land in Limpopo and KZN Provinces: Transnet Freight Rail
- Public Participation for the proposed Biomass Co-Firing Demonstration Facility at Arnot Power Station, Mpumalanga Province: Eskom Generation
- EIA for the proposed Aberdeen 200 MW Wind Energy Facility, Eastern Cape Province: Eskom Generation
- EIA for the proposed Goereesoe, Swellendam Wind Farm, Western Cape Province: INCA Swellendam1 Wind (Pty) Ltd

## **CURRICULUM VITAE**

### **JO-ANNE THOMAS**

Profession : Environmental Consultant  
Specialisation : Environmental Management; Strategic environmental advice;  
Environmental compliance advice & monitoring; Environmental Impact Assessments; Policy, strategy & guideline formulation; Project Management; General Ecology  
Years experience : Fourteen (14) years in the environmental field

#### **KEY RESPONSIBILITIES**

Provide technical input for projects in the environmental management field, specialising in Strategic Environmental Advice, Environmental Impact Assessment studies, environmental permitting, public participation, Environmental Management Plans and Programmes, environmental policy, strategy and guideline formulation, and integrated environmental management. Key focus on integration of the specialist environmental studies and findings into larger engineering-based projects, strategic assessment, and providing practical and achievable environmental management solutions and mitigation measures. Responsibilities for environmental studies include project management; review and manipulation of data; identification and assessment of potential negative environmental impacts and benefits; review of specialist studies; and the identification of mitigation measures. Compilation of the reports for environmental studies is in accordance with all relevant environmental legislation.

Undertaking of numerous environmental management studies has resulted in a good working knowledge of environmental legislation and policy requirements. Recent projects have been undertaken for both the public- and private-sector, including compliance advice and monitoring, electricity generation and transmission projects, various types of linear developments (such as National Road, local roads and power lines), waste management projects (landfills), mining rights and permits, policy, strategy and guideline development, as well as general environmental planning, development and management.

#### **SKILLS BASE AND CORE COMPETENCIES**

- Project management for a range of projects
- Identification and assessment of potential negative environmental impacts and benefits through the review and manipulation of data and specialist studies
- Identification of practical and achievable mitigation and management measures and the development of appropriate management plans
- Compilation of environmental reports in accordance with relevant environmental legislative requirements
- External and peer review of environmental reports & compliance advice and monitoring
- Formulation of environmental policies, strategies and guidelines
- Strategic and regional assessments; pre-feasibility & site selection
- Public participation processes for a variety of projects
- Strategic environmental advice to a wide variety of clients both in the public and private sectors
- Working knowledge of environmental planning processes, policies, regulatory frameworks and legislation

## EDUCATION AND PROFESSIONAL STATUS

### **Degrees:**

B.Sc Earth Sciences, *University of the Witwatersrand, Johannesburg*, 1993

B.Sc Honours in Botany, *University of the Witwatersrand, Johannesburg*, 1994

M.Sc in Botany, *University of the Witwatersrand, Johannesburg*, 1996

### **Courses:**

Environmental Impact Assessment, *Potchefstroom University*, 1998

Environmental Law, *Morgan University*, 2001

### **Professional Society Affiliations:**

Professional Natural Scientist (Registration No 400024/00).

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## EMPLOYMENT

*Current:* Director of Savannah Environmental (Pty) Ltd. Independent specialist environmental consultant

*October 1997-November 2005:* Bohlweki Environmental (Pty) Ltd: Senior Environmental Scientist; Environmental Management and Project Management

*January to July 1997:* Junior Science Teacher, Sutherland High School, Pretoria

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## PROJECT EXPERIENCE

Current projects include:

### **Compliance Monitoring**

- ECO compliance monitoring for the construction of the De Hoop Dam and the deviation of the R555, Limpopo Province
- Project manager – ECO compliance monitoring for the rehabilitation of Blaauwpan Dam, Gauteng Province
- Project manager – ECO compliance monitoring for the expansion of Waterval WCW, Gauteng Province
- Project manager - ECO compliance monitoring for the Mine Water Recovery Project at Duvha Power Station, Mpumalanga Province

### **Electricity Sector Projects: Wind Energy**

- Project manager for the proposed EXXARO West Coast wind energy facility and associated infrastructure at a site within the Western Cape (for EXXARO Resources)
- Project manager for the proposed Oyster Bay wind energy facility, Eastern Cape Province (for Renewable Energy Resources Southern Africa)
- Project manager for the proposed Spitskop Bay wind energy facility, Eastern Cape Province (for Renewable Energy Resources Southern Africa)
- EIA and EMP for the proposed wind energy facility and associated infrastructure at a site within the Western Cape (for Eskom Generation)
- EIA and EMP for the proposed wind energy facility and associated infrastructure at a site near Hopefield, Western Cape Province (for Umoya Energy)

- Project manager for the proposed Klipheuwel/Dassiesfontein wind energy facility and associated infrastructure at a site within the Overberg area of the Western Cape (for BioTherm Energy)
- Project manager for the proposed Suurplaat wind energy facility and associated infrastructure at a site within the Western Cape (for Moyeng Energy)
- Project manager for the proposed West Coast One wind energy facility and associated infrastructure at a site within the Western Cape (for Moyeng Energy)
- Project manager for the proposed Rheboksfontein wind energy facility and associated infrastructure at a site within the Western Cape (for Moyeng Energy)
- Basic Assessment for proposed wind monitoring masts on a site north of Koekenaap, Western Cape Province (for EXXARO Resources)
- Basic Assessment for proposed wind monitoring masts on a site in the Overberg area, Western Cape Province (for BioTherm Energy)
- Basic Assessment for proposed wind monitoring masts on a site near Beaufort West, Western Cape Province (for Umoya Energy)
- Basic Assessment for proposed wind monitoring masts on a site near Laingsburg, Western Cape Province (for Umoya Energy)

***Electricity Sector Projects: Solar Energy***

- Project manager for the EIA and EMP for two PV sites within the Western and Northern Cape Provinces (for INCA Energy)
- Project manager for the Basic Assessment and EMP for PV site within the Northern Cape Province (for INCA Energy)
- Project manager for the EIA and EMP for the proposed Waterberg PV plant, Limpopo Province (for Thupela Energy)
- Project manager for the EIA and EMP for the proposed Project Ilanga (125MW CSP facility) near Upington, Northern Cape Province (for Ilangethu Energy)
- Project manager for the EIA and EMP for two PV sites within the Northern Cape Province (for MedEnergy Global)
- Project manager for the Basic Assessment and EMP for PV sites within 4 ACSA airports within South Africa (for ACSA PV)
- Project manager for the Basic Assessment and EMP for a PV site near Rustenburg, North-West Province (for Momentous Energy)

***Electricity Sector Projects: Eskom***

- Project manager for the EIA and EMP for the proposed Mokopane Integration Project, Limpopo Province (for Eskom Transmission)
- Project manager for the proposed transmission lines from the Koeberg-2 Nuclear Power Station site, Western Cape Province (for Eskom Transmission)
- Project manager for the proposed Tshwane strengthening project, Phase 1, Gauteng Province (for Eskom Transmission)
- Project manager for the EIA and EMP for the proposed Kyalami Strengthening Project, Gauteng Province (for Eskom Transmission)
- Project manager for the EIA and EMP for the proposed Steelpoort Integration Project, Limpopo Province (for Eskom Transmission)
- Project manager for the EIA and EMP for the proposed conversion of the existing Open Cycle Gas Turbine (OCGT) Ankerlig Power Station (located in Atlantis Industria) to a Combined Cycle Gas Turbine (CCGT) power station, and the associated 400 kV transmission power line between Ankerlig Power Station and the Omega Substation (for Eskom Generation)

- Project manager for the EIA and EMP for the proposed conversion of the existing Open Cycle Gas Turbine (OCGT) Gourikwa Power Station (located near Mossel Bay) to a Combined Cycle Gas Turbine (CCGT) power station, and the associated 400 kV transmission power line between Gourikwa Power Station and the Proteus Substation (for Eskom Generation)

### ***Strategic and Regional Assessments***

- Strategic Assessment for the location of wind energy facilities within the Western Cape Province (for Western Cape Department of Environmental Affairs and Development Planning)
- Regional Assessments for wind energy developments within identified areas in the Overberg Area of the Western Cape Province (for BioTherm Energy)
- Regional Assessment for wind energy developments within an identified area in the Sutherland Area of the Northern and Western Cape Province (for Investec Bank Limited)
- Regional Assessment for wind energy developments within an identified area on the West Coast of the Western Cape Province (for Investec Bank Limited)
- Regional Assessment for wind energy developments within an identified area on the West Coast of the Western Cape Province (for Eskom Holdings Limited)

### ***Environmental Management Tools***

- Review the effectiveness and efficiency of the environmental impact management (EIA) system in South Africa on behalf of the Department of Environmental Affairs and Tourism
- Development of a comprehensive site-specific EMP for the construction and operation of the Eskom Braamhoek Integration Project, Free State and KwaZulu-Natal Provinces
- Compilation of Provincial Guidelines for off-road routes within the Western Cape Province
- Water use permit applications for water use at Tiffindell Ski Resort, Eastern Cape Province
- Water use permit applications for various properties within the Olifants West Game Reserve, Limpopo Province
- Environmental Risk Analysis for Salbro Property Holdings, Gauteng Province
- Project integration and compilation of a Strategy for Sustainable Development for Gauteng Province
- Advice regarding environmental compliance of existing and future development at Tiffindell Ski, Eastern Cape Province
- Advice regarding environmental compliance at Salberg factory, Gauteng Province

### ***Peer Review***

- Review of EIAs submitted in terms of the ECA for the Northern Cape Department of Tourism, Environment and Conservation, including:
  - \* EIA for a new wastewater treatment works in Warrenton
  - \* EIA for chicken layer houses in Kimberley
  - \* EIAs for the upgrading of petrol stations in Kimberley
  - \* EIA for a new up-market residential development in Kathu
  - \* EIA for residential development in Kimberley
- Review of EIA and EMP for the proposed Waterfall Wedge development, Gauteng Province

### ***Infrastructure Projects***

- Project manager for the EIA and EMP for the proposed bridge across the Ngotwane River located on the border of South Africa and Botswana

### ***Mining Sector Projects***

- Environmental Impact Assessment and Environmental Management Programme in terms of the MPRDA for the proposed Elitheni Coal Mine near Indwe, Eastern Cape Province
- Environmental Management Programmes for three borrow pits associated with the proposed Groot Letaba River Development Project, Limpopo Province

#### ***Water resources projects***

- Project manager for the EIA and EMP for the proposed modification of the existing Hartebeestfontein Water Care Works, Gauteng Province (for ERWAT)
- Project manager for the EIA and EMP for the proposed expansion of the existing Welgedacht Water Care Works, Gauteng Province (for ERWAT)

#### **Projects undertaken on behalf of Bohlweki Environmental include:**

#### ***Specialist projects***

- Development of an Environmental Policy for the Ekurhuleni Metropolitan Municipality
- Development of an Integrated Environmental Policy for the City of Tshwane Metropolitan Municipality Environmental Opportunities and Constraints Assessment for the Wonderboom Airport
- Review of the State of the Environment Report for the North West Province

#### ***Transport sector projects***

- Environmental Impact Assessment and Environmental Management Plan for the proposed N2 Wild Coast Toll Road between East London (Eastern Cape) and Durban (KwaZulu-Natal)
- Environmental input to the Denneboom Local Integrated Transport Plan
- Environmental input to the Ekurhuleni transportation corridors study
- Environmental Impact Assessment for the proposed Platinum Highway from Warmbaths via Pretoria to Skilpadhek (on the South Africa-Botswana border), including obtaining all environmental permits required.
- Environmental Scoping Study and public participation process for the upgrading of Provincial Main Road 100 between the intersection with Main Road 521 and Ndwedwe
- Environmental Management Plan for repairs of portions of the N3 and N1, Gauteng
- Environmental Scoping Study and public participation process for the Kingsway Relief Road in Maseru, Lesotho

#### ***Electricity Sector projects***

- Project manager for the undertaking of an EIA and compilation of an EMP for the proposed Open Cycle Gas Turbine (OCGT) Power Station and associated 400 kV Transmission lines and substation at Atlantis, Western Cape Province
- Environmental Scoping Study for a new coal-fired power station in the Lephalale area, Limpopo Province
- Project manager for the undertaking of Environmental Scoping Study and compilation of an Environmental Management Plan for various 132 kV Sub-Transmission lines and substations within the Mpumalanga Province
- Detailed Environmental Scoping Study and public participation for the proposed Capacity Increase Project at Arnot Power Station, Mpumalanga Province
- Project manager for the undertaking of an Environmental Scoping Study and EMP for the proposed 132 kV sub-Transmission line between the GaRankuwa and Dinaledi substations, North West Province

- Project manager for the undertaking of an EIA for the proposed 765 kV Transmission line between the existing Hydra Substation (near De Aar) and the proposed Gamma Substation (near Victoria West), Northern Cape Province
- EIA & public participation for the proposed new Ikaros Substation and associated 400 kV Transmission line infrastructure, North West Province
- Environmental Scoping Study public participation for the Establishment of Eskom Infrastructure for Power Supply to the C-Cut Development at Premier Mine, Cullinan, Gauteng Province
- EIA & public participation for the proposed 3<sup>rd</sup> 400 kV Transmission line between the Poseidon and Grassridge Substations in the Eastern Cape Province
- EIA & public participation for the proposed new 400 kV Transmission line between Matimba Substation (near Lephalale) and Witkop Substation (near Polokwane), Limpopo Province
- Environmental Impact Study and public participation for the proposed 2<sup>nd</sup> 400 kV Transmission line between the Grassridge Substation and the Poseidon Substation in the Eastern Cape.
- Public Participation Process for the proposed Return-to-Service of the Camden Power Station, Mpumalanga Province
- Detailed Environmental Scoping Study and public participation for the Breyten Strengthening Project: proposed new Breyten Substation and associated 88 kV Distribution line, Mpumalanga Province
- Environmental Pre-Scoping Study for the proposed Concentrating Solar Plant, in the Northern Cape Province
- Environmental Impact Assessment public participation for the proposed new nine 132 kV power lines between the Grassridge Substation and the Coega Industrial Development Zone, Eastern Cape Province

### ***Pipelines***

- Environmental Impact Assessment for the proposed Petronet New Multi-Products Pipeline (NMPP) between Durban and Gauteng Province
- Exemption application for the construction of a gas pipeline between Majuba Mine and Majuba Power Station, Mpumalanga Province.
- Exemption application for the construction of an emergency water supply pipeline from Mamelodi to Ekandustria via Cullinan, Gauteng Province.
- Environmental Scoping Study for the installation of a new water supply pipeline from Centurion to Diepsloot, Gauteng Province.

### ***EIAs for Technology projects***

- Environmental Impact Assessment for the proposed Alternative Fuels and Resources Project at Alpha's ULCO Plant near Kimberley in the Northern Cape Province
- Environmental Impact Assessment for the proposed Alternative Fuels and Resources Project at Dudfield Plant, North West Province
- Environmental Impact Assessment for the proposed Blending Platform to be established within the Gauteng Province
- Investigation of possible alternative Scrap tyre collection and disposal strategies in Gauteng, South Africa

### ***Mining sector projects***

- Environmental Management Programme Report (EMPR) for the proposed small-scale kaolin clay mine near Ndwedwe, KwaZulu-Natal Province



- Environmental Management Programme Report (EMPR) for prospecting activities within the Premier Mine Game Farm, Cullinan for De Beers Consolidated Mines Limited
- Environmental Management Plan for the Proposed C-Cut Development at Premier Mine, Cullinan
- Environmental Management Programme Report for the Proposed C-Cut Development at Premier Mine, Cullinan
- Environmental Impact Assessment and public participation process for the Proposed C-Cut Development at Premier Mine, Cullinan

***Development projects***

- A detailed Environmental Scoping Study and public participation process for the Thaba ya Batswana Development on portions of the Farm Rietvlei 101 IR, Gauteng
- Environmental Scoping Report and public participation process for the development of a Community Safety Centre in Khutsong-South, Carletonville

***Water resources projects***

- A detailed Environmental Impact Assessment of new regional water care infrastructure in the DD5A sub-drainage district in Eastern Gauteng (adjacent to the Blesbokspruit Ramsar Site) for the East Rand Water Care Company (ERWAT)



## **Simon Todd Consulting**

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8180

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## **SUMMARY OF EXPERTISE: SIMON TODD**

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- Profession: Ecological Consultant
- Specialisation: Plant & Animal Ecology
- Years of Experience: 15 Years

### **Skills & Primary Competencies**

- Research & description of ecological patterns & processes in Fynbos, Succulent Karoo, Nama Karoo, Thicket, Arid Grassland and Savannah Ecosystems.
- Ecological Impacts of land use on biodiversity
- Vegetation surveys & degradation assessment & mapping
- Long-term vegetation monitoring
- Faunal surveys & assessment.
- GIS & remote sensing

### **Tertiary Education:**

- 1992-1994 – BSc (Botany & Zoology), University of Cape Town
- 1995 – BSc Hons, Cum Laude (Zoology) University of Natal
- 1996-1997- MSc, Cum Laude (Conservation Biology) University of Cape Town

## Employment History

- 1997 – 1999 – Research Scientist (Contract) – South African National Biodiversity Institute
- 2000-2004 – Specialist Scientist (Contract ) - South African National Biodiversity Institute
- 2004-2007 – Senior Scientist (Contract) – Plant Conservation Unit, Department of Botany, University of Cape Town
- 2007 Present – Senior Scientist (Associate) – Plant Conservation Unit, Department of Botany, University of Cape Town.

## Experience Specific to the Current Proposal

- Conducted a large number of specialist assessments of wind energy facilities, distributed widely across South Africa and including sites in similar environments to the current study including several sites along the Mossel Bay – Gouritz coastline.
- Provided more than 10 full EIA assessments of wind energy facilities ranging from small developments of less than 20 turbines to very large projects in excess of 500 turbines and 50 000 ha.
- Worked on several wind energy facilities in areas with highly endangered species such as Riverine Rabbits and van Zyl's Golden Mole, which have required specific and specialized attention.
- Extensive experience in renosterveld vegetation types, as occur at the site. Currently supervising a UCT PhD student working on Renosterveld management in the Overberg region.

## General Experience & Expertise

- Conducted a large number of fauna and flora specialist assessments distributed widely across South Africa.
- Extensive experience in the field and exceptional level of technical expertise, particularly with regards to GIS capabilities which is essential with regards to producing high-quality sensitivity maps for use in the design of final project layouts.
- Strong research background which has proved invaluable when working on several ecologically sensitive and potentially controversial sites containing some of the most threatened fauna in South Africa.
- Published numerous research reports as well as two book chapters and a large number of papers in leading scientific journals dealing primarily with human impacts on the vegetation and ecology of South Africa.
- Maintain several long-term vegetation monitoring projects distributed across Namaqualand and the karoo.
- Guest lecturer at two universities and have also served as an external examiner.
- Reviewed papers for more than 10 international ecological journals.
- Past chairman and current committee member of the Arid Zone Ecological Forum.
- SACNASP registered as a Professional Natural Scientist, (Ecology) No. 400425/11.

A selection of recent work is as follows:

*Specialist Assessments:*

Bitterfontein Solar Plant - Fauna & Flora Specialist Assessment. Specialist Report for Cape EAPrac. 2012.

Beaufort West Solar Facility, Erf 7388 - Fauna & Flora Specialist Assessment. Specialist Report for Cape EAPrac. 2012.

Plant Sweeps on Portion 2 of the Farm Demaneng 546, Kuruman District, Northern Cape Province for SA Manganese. 2011.

Proposed Olyven Kolk Solar Power Plant, Northern Cape: Botanical and Faunal Specialist Assessment. Specialist Report for Environmental Resources Management (ERM). 2011.

Klawer Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management. 2011.

Witberg Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management. 2011.

Lambert's Bay Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management. 2011.

Environmental Impact Assessment: Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy Facility near Sutherland, Western and Northern Cape Provinces. Specialist Report for Environmental Resources Management. 2011.

Ecological Scoping & Baseline Study. Vleesbaai Wind Park Development. Vleesbaai Independent Power Producers, ERM 2011.

Environmental Impact Assessment: Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy Facility near Beaufort West, Western Cape Province. Specialist Report for Environmental Resources Management. 2010.

Environmental Impact Assessment: Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy at Konstabel, Western Cape Province. Specialist Report for Environmental Resources Management. 2010.

Environmental Impact Assessment: Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy Facility at Perdekraal, Western Cape Province. Specialist Report for Environmental Resources Management. 2010.

Environmental Impact Assessment: Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy Facility near Victoria West, Western and Northern Cape Provinces. Specialist Report for Environmental Resources Management. 2010.

*Research Reports & Peer Reviewed Publications:*

Todd, S.W. 2010. Vegetation and Plant Communities Associated with the Tillite and Dolerite Renosterveld Types of the Avontuur Conservation Area, Nieuwoudtville, South Africa. DRYNET.

- Todd, S.W., Milton, S.J., Dean, W.R.J. Carrick, P.J. & Meyer, A. 2009. Ecological best Practice Guidelines for the Namakwa District. The Botanical Society of South Africa.
- Todd, S.W. 2009. Field-Based Assessment of Degradation in the Namakwa District. Final Report. Mapping Degradation in the Arid Subregions of the BIOTA South Transect. SANBI.
- Todd, S.W. 2009. A fence-line in time demonstrates grazing-induced vegetation shifts and dynamics in the semi-arid Succulent Karoo. *Ecological Applications*, 19: 1897–1908.
- Todd, S.W. 2007. Characterisation of Riparian Ecosystems. D14 of The WADE Project. Floodwater Recharge of Alluvial Aquifers in Dryland Environments. *GOCE-CT-2003-506680- WADE*. Sixth Framework Programme Priority 1.1.6.3 Global Change and Ecosystems.
- Todd, S.W. 2006. Gradients in vegetation cover, structure and species richness of Nama-Karoo shrublands in relation to distance from livestock watering points. *Journal of Applied Ecology* 43: 293-304.
- Benito, G., Rohde, R., Seely, M., Külls, C., Dahan, O., Enzel, Y., **Todd, S.** Botero, B., Morin, E., Grodek, T., Roberts, C. 2010. Management of Alluvial Aquifers in Two Southern African Ephemeral Rivers: Implications for IWRM. *Water Resources Management*, 24:641–667.
- Hahn, B.D., Richardson, F.D., Hoffman, M.T., Roberts, R., **Todd, S.W.** and Carrick, P.J. 2005. A simulation model of long-term climate, livestock and vegetation interactions on communal rangelands in the semi-arid Succulent Karoo, Namaqualand, South Africa. *Ecological Modelling* 183, 211–230.
- Malgas, R.R., Potts, A.J., Oetl , N.M., Koelle, B., **Todd, S.W.**, Verboom G.A. & Hoffman M.T.. 2010. Distribution, quantitative morphological variation and preliminary molecular analysis of different growth forms of wild rooibos (*Aspalathus linearis*) in the northern Cederberg and on the Bokkeveld Plateau. *South African Journal of Botany*, 76, 72-81.
- Mills, A., Fey, M., Donaldson, J.D., **Todd, S.W.** & Theron, L.J. 2009. Soil infiltrability as a driver of plant cover and species richness in the semi-arid Karoo, South Africa. *Plant and Soil* 320: 321–332.
- Rahlao, J.S., Hoffman M.T., **Todd, S.W.** & McGrath, K. 2008. Long-term vegetation change in the Succulent Karoo, South Africa following 67 years of rest from grazing. *Journal of Arid Environments*, 72, 808-819.
- Hoffman, M.T. & **Todd, S.W.** 2010. Using Fixed-Point Photography, Field Surveys, And Gis To Monitor Environmental Change: An Example From Riemvasmaak, South Africa. Chapter In *Repeat Photography: Methods And Applications In The Natural Sciences*. R.H. Webb, Editor. Island Press. In Press.

**CURRICULUM VITAE**  
**STEPHAN GAIGHER**

*COMPANY* : *G&A Heritage*  
*SPECIALIST* : *Heritage Management Consultants*

**SKILLS BASE AND CORE COMPETENCIES**

- Heritage Impact Assessment
- Archaeological Impact Assessment
- Grave Relocation

**EDUCATION AND PROFESSIONAL STATUS**

1992 - 1994

Town and Regional Planning

Ancient Cities studies

Course on determining *Genius Loci* (Sense of Place)

1994 – 1996

BA – Philosophy (*Cum Laude*) with specialization in *Aesthetics and Ethics*

BA – Archaeology (*Cum Laude*)

1996 – 1998

BA Hons. – Archaeology (*Cum Laude*)

2010 – Present

MA – Archaeology (not awarded yet)

**EMPLOYMENT**

- Junior Lecturer | **University of Venda**

1998 - 2000

Lecturing of pre-graduate courses in Archaeology, Forensic Archaeology and Forensic Anthropology

- Principal Investigator | **Archaeo-Info Northern Province**

1998 - 2005

Managing Director and Principal Investigator

- Over 2000 Heritage Impact Studies performed during this time
- Over 2500 Graves Repatriated

- Principal Investigator | **G&A Heritage**

2005 - Present

Managing Director and Principal Investigator

- Director of Archaeological Research | **Lajuma Research Centre**

2005 – Present

**SELECTED RELEVANT PROJECT EXPERIENCE**

- Eskom Solar Integration Project (Northern Cape)
- Brickvale Solar Park PV Array
- Camden Mbewu 400kVa

# PROFESSIONAL CURRICULUM VITAE IAIN PATON

## PERSONAL INFO

Family name	Paton
First names	Iain Bruce
Date and Place of Birth	28 August 1973- Harare, Zimbabwe
Nationality	South African & British Dual Citizenship
Marital status and dependants	Married, three children
RSA Identification Number	7308286179080
Contact info	PO Box 3186, George Industria, 6536 (044) 3820502 (044) 3820503 (F) (082) 7827793 (Cell) iain@outeniqua.co.za

## QUALIFICATIONS

Qualification	Institution	Date
Matric Exemption	Woodridge College, Port Elizabeth	1990
BSc (Hons) Geology	Rhodes University	1994

## PROFESSIONAL AFFILIATIONS

Institution	Membership Status	Joined
South African Council for Natural Scientific Professions (SACNASP)	Professional Natural Scientist (Pr.Sci.Nat # 400236/07)	2007
South African Institution of Civil Engineering (SAICE)	Associate Member (#2008811)	2008
South African Institute of Engineering & Environmental Geologists (SAIEG)	Member	2009

## EMPLOYMENT HISTORY

2008 to date	Engineering Geologist & Founding Member - Outeniqua Geotechnical Services cc, Knysna
2006 to 2008	Engineering Geologist & Member - Siyakhula Lab cc, Knysna Civil Laboratory
2000 - 2006	Construction Site Manager – Progex, Knysna
1997 to 1998	Logging Geologist - Halliburton Energy Services (Drilling Systems), Aberdeen, Scotland
1996 to 1997	Senior Geologist – Western Areas Gold Mine (JCI Limited), Johannesburg
1995 to 1996	Mine Geologist – Western Areas Gold Mine (JCI Limited), Johannesburg

## CURRICULUM VITAE: INGRID SNYMAN

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<b>Name:</b>	<b>Ingrid Helene Snyman</b>	<b>Name of firm:</b>	Batho Earth
<b>Profession:</b>	Social Development Consultant		
<b>Years of Experience:</b>	15 years		

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### KEY QUALIFICATIONS

- Social Impact Assessment (SIA)
- Public Participation programmes
- Communication, development of community structures and community facilitation
- Community-based training and
- Workshop reports

### EDUCATION

1992:	B A (Political Science) University of Pretoria
1995:	B A (Hons) Anthropology University of Pretoria
1996 - 1997:	Train the Trainers Centre for Development Administration - UNISA

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### EXPERIENCE RECORD

#### 2000 to date **Independent Development Consultant**

- SIA for the proposed Arnot-Gumeni 400 kV Transmission Power Line, Mpumalanga (Lead Consultant: Baagi Environmental) (2011 and ongoing)
- SIA for the proposed 400 kV Transmission Power Line for approximately 10km to the west of the existing Marathon Substation, Nelspruit area, Mpumalanga (Lead Consultant: BKS Environmental) (2012 and ongoing)
- SIA for the proposed Christiana PV facility on the farm Hartebeestpan, North West Province (Lead Consultant: Savannah Environmental) (2011 and ongoing)
- SIA for the proposed Hertzogville PV facility on the farms Albert and Wigt, Free State Province (Lead Consultant: Savannah Environmental) (2011 and ongoing)
- SIA for the proposed Morgenzon PV facility on the farm Morgenzon, Northern Cape Province (Lead Consultant: Savannah Environmental) (2011 and ongoing)
- SIA for the proposed Western Bushveld Joint Venture Project, North West Province (Lead Consultant: QESolutions) (2011)
- Public Participation Process for the proposed Western Bushveld Joint Venture Project, North West Province (Lead Consultant: QESolutions) (2011 and ongoing)
- SIA for the proposed Aggeneis-Oranjemonnd Transmission Line project, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010)
- SIA as part of the Basic Assessment Process for the Exxaro Photovoltaic Facility, Lephalale, Limpopo Province (2011)
- SIA for the Upington Solar Energy Facility, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010-2011)
- SIA for the Kleinbegin Solar Energy Facility, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010-2011)
- SIA for the proposed Ilanga solar thermal power plant facility on a site near Upington, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010 - 2011)
- SIA and public participation for the proposed Karoo Renewable Energy Facility, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010 -2011)
- SIA for the Wag'n'biekiespan Solar Energy Facility, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010 and ongoing)



- SIA for the proposed Kathu and Sishen Solar Energy Facilities, Northern Cape Province (Lead Consultant: Savannah Environmental) (2010)
- Public Participation and SIA for the proposed Thupela Waterberg Photovoltaic Plant, Limpopo Province (2010) (Lead Consultant: Savannah Environmental)
- SIA for the proposed Mitchells Plain-Firgrove-Stikland Transmission Line, Western Cape (2010 - 2011) (Lead Consultant: BKS)
- SIA for the proposed Ariadne-Venus Transmission Line, KwaZulu Natal (2010-2011) (Lead Consultant: Baagi Environmental)
- Socio-Anthropological Study for the proposed Booyendal Mine, Steelpoort area, Mpumalanga (2010) (Client: Northam Platinum)
- SIA for the proposed Dominion Reefs Power Line project, North West Province (2010) (Lead Consultant: Envirolution)
- SIA for the proposed Kannikwa Vlake Wind Farm Project, Northern Cape (2009) (Lead Consultant: BKS/Galago Environmental)
- SIA for the proposed extension of the Wemmershoek Wastewater Treatment Works (WWTW), decommissioning of the Franschoek WWTW and construction of a transfer and outfall sewer between the two works, Franschoek, Western Cape (2009) (Lead Consultant: BKS)
- Public Participation process as part of the EIA for the proposed new Ferrochrome Smelter near Brits in the North West Province (2009 and ongoing) (Lead Consultant: MasterQ Research and Quanto Environmental Solutions)
- SIA for the proposed Lefaragathle, Mogono, Rasimone, Chaneng outfall sewer and Chaneng sewer treatment plant, Rustenburg (Phokeng), North West Province (2009) (Lead Consultant: Naledzi Environmental)
- SIA for the proposed Vlakfontein Residential Development, Brakpan, Gauteng (2009) (Lead Consultant: Envirolution)
- SIA for the proposed Dorstfontein Mine Western Expansion Project, Kriel, Mpumalanga (2008 -2009) (Lead Consultant: Afrosearch)
- SIA for the proposed upgrading of railway stations and railway line in Mamelodi, Gauteng (2008) (Lead Consultant: BKS)
- SIA for the proposed Kyalami Strengthening Project, Kyalami, Gauteng (2008 -2009) (Lead Consultant: Savannah Environmental)
- SIA for the proposed ACSA Remote Aprons Project, O.R. Tambo International Airport, Gauteng (2008) (Lead Consultant: Africon)
- SIA for the proposed Cullinan Estate Development, Cullinan, Gauteng (2008) (Lead Consultant: Eko-Info)
- SIA for the proposed Apollo Lepini 400 kV Transmission Line Project, Tembisa, Gauteng (2008 - 2009) (Lead Consultant: Envirolution)
- SIA for the proposed Grootboom Platinum Mine, Steelpoort, Limpopo Province (2008) (Lead Consultant: Afrosearch)
- SIA for the proposed Dorstfontein Mine Expansion Project, Kriel, Mpumalanga (2008) (Lead Consultant: Afrosearch)
- SIA for the proposed Postmasburg Sishen Rail Link, Postmasburg, Northern Cape (2007) (Lead Consultant: Afrosearch)
- Public participation assistance for the proposed Eskom Johannesburg East Strengthening Project, Kempton Park, Gauteng. (2008) (Lead Consultant: BKS)
- SIA for the proposed new Soweto Integration Project (Etna to Orlando Substation) (2008 and ongoing) (Lead Consultant: Naledzi Environmental)
- Proposed Conroast Platinum Smelter, Rustenburg, North West Province: Public Participation

- assistance (2008) (Lead Consultant: Perisseuo Consulting CC)
- SIA for the proposed township development/eco-estate on the farm Grants Valley, Eastern Cape (2007) (Lead Consultant: Afrosearch)
  - SIA for the proposed new 400 kV Transmission Line between Glockner Substation (near Rothdene) to the Etna Substation (near Ennerdale) (2007) (Lead Consultant: Naledzi Environmental)
  - Public participation assistance for the proposed construction of a brewery and associated industrial activities for Heineken Supply Co (Pty) Ltd, Kempton Park, Gauteng. (2007) (Lead Consultant: BKS)
  - SIA for the existing Buffelsfontein Mine, Stilfontein, North West Province (2007) ((Lead Consultant: Afrosearch)
  - SIA for the proposed Thaba Lesodi Golf and Game Estate, Mabatlane, Limpopo Province (2007) (Lead Consultant: Afrosearch)
  - Mooi-Mngeni Transfer Scheme Phase 2: Spring Grove Dam and Appurtenant Works: Social research as part of SIA (2007) (Lead consultant: Dr. K.U. Brügge / BKS)
  - Proposed Township Development on the Farm Klipfontein 268-JR, Soshanguve Ext 9, Gauteng: SIA (2007) (Lead consultant: Eko-Info)
  - Public Participation assistance: Proposed Wesizwe Platinum Mine: Application for mining rights, North West Province (2007) (Lead Consultant: Perisseuo Consulting CC)
  - Public Participation for various exemption studies for proposed residential developments in the Gauteng area (Raslouw A.H., Rayton, Rooihuiskraal) (2006) (Lead consultant: Eko-Info)
  - Social training for the Bekkersdal Farmer Support Programme (2006) (Lead consultant: Index)
  - Public Participation for the Gautrain variant alignments in the Centurion area as proposed by the Bombela Consortium (2005 – 2006) (Lead consultant: Felehetsa Environmental)
  - Public Participation for the upgrading of the Menlyn Road Network (2005 - 2006) (Lead consultant: Mawatsan)
  - Public Participation for the New Multi-Products Pipeline project for Petronet: Jameson Park-Langlaagte section (2005 - 2006) (Lead consultant: Bohlweki-Sivest Joint Venture)
  - Public Participation for exemption from an Environmental Impact Assessment for the proposed Township Development on Portion 49 of The Farm Rooikopjes 483 JR, Rayton (2005)
  - Public Participation for exemption from an Environmental Impact Assessment for the proposed Residential Development on the remainder of a Portion of Portion 1 Of The Farm Brakfontein 399 JR (2005-2006)
  - Public Participation for the proposed new coal-fired power station in the Lephalale area, Limpopo Province (2005-2006) (Lead Consultant: Bohlweki Environmental)
  - Public Participation for the proposed Open Cycle Gas Turbine (OCGT) plant and associated transmission lines and substation at Atlantis, Western Cape Province (2005) (Lead Consultant: Bohlweki Environmental)
  - Public Participation for the proposed residential and commercial development of the Isidleke region in the western portion of the AECI Modderfontein site (2005) (Lead Consultant: Afrosearch)
  - Public Participation for the upgrading of Boundary Road, Kya Sands area (2004)
  - Marketing for the Eskom Energy Efficient Design Competition (Lead Consultant: Communication Xellence) (2004)
  - Management assistance for the public participation process for the development of the Tshwane Integrated Environmental Policy (Lead Consultant: Bohlweki Environmental) (2004)
  - SIA and public participation for the proposed 765 kV transmission power line between Hydra Substation (near de Aar) and the proposed Gamma Substation (near Victoria West), Northern Cape Province (Lead Consultant: Bohlweki Environmental) (2004)
  - Public Participation as part of the Environmental Scoping Study for the proposed upgrading of the intersection at Road D374 and Road D540 in the Muldersdrift area (2003)

- Public Participation and SIA as part of the Environmental Scoping Study for the proposed upgrading of the Waterval Water Care Works (2003)
- Public Participation for the return-to-service of the Camden Power Station, Mpumalanga (Lead Consultant: Bohlweki Environmental) (2003)
- Public Participation for the development of an Environmental Management Framework for the western part of the Kungwini Local Municipality area (2003) (Lead Consultant: Index)
- Public Participation for the proposed section of the PWV 5 from road K71 to road R21, including interchanges, Gauteng Province (2003) (Lead Consultant: Marchelle de Bruyn Development Consultants)
- Public Participation and SIA for the proposed Poseidon-Grassridge No. 3 400 kV Transmission line and the extension of the Grassridge Substation, Eastern Cape Province (2002) (Lead Consultant: Bohlweki Environmental)
- Public Participation and SIA for the proposed construction of power lines between the Grassridge Substation (near Port Elizabeth) and the Coega Industrial Development Zone, Eastern Cape Province (2002) (Lead Consultant: Bohlweki Environmental)
- Public Participation and SIA for the Matimba-Witkop No. 2 400 kV Transmission line in the Limpopo Province (2001 - 2003) (Lead Consultant: Bohlweki Environmental)
- Public Involvement for the prospecting permit application of De Beers, Premier Mine to the Department of Minerals And Energy (DME) (2002) (Lead Consultant: Bohlweki Environmental)
- Public Participation for the proposed Toboggan Track with related facilities on Portion 155 of the farm De Rust 478 JQ (Kosmos region) (2001 - 2002) (Lead Consultant: Marchelle de Bruyn Development Consultants)
- SIA as part of the Environmental Scoping Study for the proposed Kruidfontein platinum mine in the North West Province (2001) (Lead Consultants: Afrosearch)

**1995 to 2000: Afrosearch (Pty) Ltd. (Director)**

- Public participation and SIA for the proposed Platinum Highway Project from the N1 to the Botswana Border (1999 – 2001) (Lead Consultants: Afrosearch & Bohlweki Environmental)
- Public participation process for the Pretoria East Mobility Study (Menlyn Node): First and Second Phase (1999 – 2000)
- Public participation process and SIA for the proposed C-Cut project in Cullinan (1999 – 2000)
- Public participation process for the proposed N4 Toll Road between Pretoria and the Mpumalanga Border (2000)
- Public Participation and Social Scoping for the development of a regional hazardous landfill site in the western portion of the Lekoa Vaal Metropolitan Area (1998 – 1999)
- Public Participation for the identification of an acceptable end-use for the Garstklouf Landfill Site (1998 – 1999)
- Public participation and Social Scoping for the proposed Soshanguve/Akasia Activity Spine (1998 - 1999)
- Public Involvement and SIA for the development of a landfill site at Hatherley (Mamelodi) (1996 – 1998)
- Facilitation of the public participation process to determine an acceptable closure and end-use of the Eersterust landfill site (1996 – 1998)
- Public participation process for the proposed modal transfer facility in Pretoria North and the linking of Zambesi Drive and Rachel de Beer Street (1998)
- Public participation and establishment of the Akasia and Tswaing Planning Zone Forums as part of the Integrated Development Process (1997 – 1998)
- Public participation process for the Ekangala Cost Recovery Pilot Project (1998 – 1999)
- Public Participation for the identification of a landfill site in the South-western side of Centurion

(1998)

- Public participation process for the extension and upgrading of the Vaalwater landfill site (1997)
- Public Participation process and SIA for the East Rand Water Care Company: DD5A sub-drainage regional outfall sewer and water care works (1996 – 1997)

# CURRICULUM VITAE LOURENS DU PLESSIS

## PERSONAL INFORMATION AND CONTACT DETAILS

Name: Lourens Martinus du Plessis  
Date of birth: 1969-11-13  
Marital status: Married  
Nationality: South African  
Profession (specialisation): Professional GISc Practitioner (Environmental GIS)  
Company: MetroGIS (Pty) Ltd  
Years with firm: 12 years  
Position: Director  
Experience: 21 years  
Postal address: PO Box 384, La Montagne, 0184  
Telephone/fax: 012 349 2884/5 (w) 082 922 9019 (cell) 012 349 2880 (fax)  
E-mail: lourens@metrogis.co.za

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## KEY QUALIFICATIONS AND EXPERIENCE

### Primary function

The application of Geographical Information Systems (GIS) in environmental planning and management, impact assessments and spatial modeling.

### Experience and expertise

- Data sourcing and acquisition
- Data capture
- Data evaluation
- Data conversion and transfer
- GIS database development, implementation and maintenance
- Spatial analysis/modelling (visibility, slope, aspect, shadow, surface, raster, proximity, etc.)
- Digital terrain/elevation modeling
- Terrain evaluation
- Image processing
- Impact assessment and impact management
- Environmental management
- Decision support systems interface development
- Project management
- Map production, display, queries and reporting
- Environmental sciences expertise
- Process development
- Visual impact assessment

### Technological (software) expertise

- Arc/Info and ArcGIS
- ArcView
- PlanetGIS
- Vistapro (virtual landscape rendering software)
- Various GIS support software packages and applications
- Range of Microsoft standard applications (including Microsoft Word/Excel/Access, etc.)

### Awards

Award: Best South African Environmental Technical Paper  
Awarded for: National Environmental Potential Atlas (ENPAT National)  
Awarded by: Environmental Planning Professions Interdisciplinary Committee (EPPIC)  
Date: 1995

Award: Map Gallery Most Analytical Competition - 3rd Place  
Awarded for: Environmental Potential Atlas for South Africa  
Awarded by: Environmental Systems Research Institute (ESRI)  
Date: 1997 International ESRI User Conference

Award: Best Cartographic Map Gallery Competition - 3rd Place  
Awarded for: Environmental Potential Atlas for South Africa (Publication)  
Awarded by: Environmental Systems Research Institute (ESRI)  
Date: 1998 International ESRI User Conference

Award: QDC Performance Award  
Awarded for: ENPAT Development  
Awarded by: Q Data Consulting  
Date: 1998

Award: Best South African Environmental Technical Paper  
Awarded for: Environmental Potential Atlas for South Africa (Publication)  
Awarded by: Environmental Planning Professions Interdisciplinary Committee (EPPIC)  
Date: 1998

### **Publications/maps featured in publications**

Name: Environmental Potential Atlas for South Africa  
Authors: W. van Riet, J. van Rensburg, P. Claassen, L. du Plessis and T. van Viegen  
Publisher: J.L. van Schaik  
Date: 1997

Name: ESRI Map Book (Volume 13)  
Authors: Various  
Publisher: Environmental Systems Research Institute (ESRI)  
Date: 1998

Name: Pilanesberg Official Map and Park Guide  
Authors: North-West Parks & Tourism Board and Jacana  
Publisher: Jacana Media (Pty) Ltd  
Date: 2001

Name: KwaZulu-Natal - A celebration of biodiversity  
Authors: Jacana  
Publisher: Jacana Media (Pty) Ltd  
Date: 2001

Name: Garden Route - Still Bay to Storms River (Discover the Magic)  
Authors: Jacana  
Publisher: Jacana Media (Pty) Ltd  
Date: 2003

Name: Lowveld and Kruger Guide  
Authors: High Branching Team  
Publisher: Jacana Media (Pty) Ltd  
Date: 2004

Name: Heights to Homes to Oceans (H<sub>2</sub>O) Water Wise information poster  
Authors: Rand Water  
Publisher: Rand Water  
Date: 2004

Name: Kruger National Park Map and Photographic Guide  
Authors: Andy Tinker Photography  
Publisher: ATP Publishing  
Date: 2007

Name: Gateway to Kruger Map and Guide  
Authors: Andy Tinker Photography  
Publisher: ATP Publishing  
Date: 2010

## **WORK EXPERIENCE/EMPLOYMENT DETAILS**

**GisLAB CC** (Geographic Information Systems Laboratory - University of Pretoria)

Period: 4/1990 - 9/1997  
Position: Member / Project Manager

**GISBS** (Geographic Information Systems Business Solutions - Q Data Consulting)

Period: 10/1997 - 10/1999  
Position: Project Manager

**MetroGIS (Pty) Ltd**

Period: 11/1999 - to date  
Position: Director

## **EDUCATION/QUALIFICATIONS**

Degree: BA (University of Pretoria) Geography and Anthropology (Majors)  
Other Subjects: Archaeology, Philosophy and Political Science  
Date Received: 1993

## **PROJECTS SUMMARY**

*(A brief description of some prominent and relevant projects)*

### **General projects**

GIS mapping and database for Black Eagle habitats and flight patterns in the Karoo National Park

Environmental planning and development control schemes for the Drakensberg *Babangibone, Cathkin Peak and Garden Castle* development nodes

Goukou River (Stilbaai) Environmental Structure Plan

Conservation and open space proposals for the Umhlanga Forest

Grootvlei mine water pumping operation (Blesbokspruit sub-catchment)

GIS services for the Saldannah steel plant

ENPAT Provincial (1:250,000 scale GIS decision support systems) based on an inventory of environmental and socio-economic geographic data

- ENPAT Northern Province (Limpopo Province)
- ENPAT Mpumalanga
- ENPAT North-West

ENPAT Metropolitan (1:50,000 scale GIS decision support systems) containing environmental and socio-economic geographic data that were evaluated for conservation opportunities, development constraints and agricultural constraints

- ENPAT Gauteng
- ENPAT Cape Town
- ENPAT Durban Functional Region (DFR)
- ENPAT Bloemfontein/Botshabello
- ENPAT Port Elizabeth

ENPAT National (1:1,000,000 scale GIS decision support system) and ENPAT publication

Environmental Management Frameworks (EMF). Frameworks of spatially represented information connected to environmental management parameters designed to aid in the pro-active identification of potential conflict between development proposals and critical and/or sensitive environments

- EMF Northern Province (Limpopo Province)

- EMF Mpumalanga
- EMF North-West

Spatial Development Initiatives (SDI). The fast tracking of the EMF concept for priority SDI's

- Lubombo Corridor SDI
- Coega Industrial Development Zone (IDZ)
- Wild Coast SDI
- West Coast Investment Initiative

Sigma colliery: North-West strip operation

Development masterplan for the Tswaing Crater Museum

Conservation plan for the Rietvlei Nature Reserve

GIS services for the planning and management of the Chobe National Park (Botswana)

GIS services for an environmental overview of South Africa

Demarcation/delineation of regions in South Africa

Orange-Vaal (ORVAAL) transfer scheme - Caledon cascades scheme

ENPAT Provincial (1:250,000 scale GIS decision support systems) based on an inventory of environmental and socio-economic geographic data

- ENPAT Eastern Cape
- ENPAT Free State
- ENPAT Kwa-Zulu Natal

Environmental Management Frameworks (EMF). Frameworks of spatially represented information connected to environmental management parameters designed to aid in the pro-active identification of potential conflict between development proposals and critical and/or sensitive environments

- EMF Eastern Cape
- EMF Free State
- EMF Kwa-Zulu Natal

Hennops River EMF (environmental inventory and management proposals in Centurion)

The Important Bird Areas (IBA) of South Africa map and database

Centurion Metropolitan Substructure Environmental Management Framework (EMF)

Alexandra renewal project EMF

Carbon Sinks and Sequestration - Eastern Cape Wild Coast. Information maps for the "*Carbon Sinks - A Rehabilitation Option for South Africa's Natural Environment*" report

Prince Edward and Marion Islands. Maps for the World Heritage Site (WHS) bid document

Theewaterskloof and Genadendal - Integrated spatial data management system

Gauteng Communication Network Strategy (GAUCONS). Environmental zones for the control of the construction of telecommunication structures

Gauteng Industries Buffer Zones. The mapping of industrial and mining activities, the creation of buffer control zones and the development of a GIS-based decision support system for the Gauteng Province

Limpopo National Park (LNP) Mozambique. Base maps for fieldwork and planning

Schmidtsdrift Environmental Management Program Report (EMPR)

Loch Vaal Environmental Management Framework (EMF)



Rustenburg - Strategic Environmental Assessment (SEA). The creation of environmental control zones, a GIS-based decision support system and information poster

Faerie Glen Nature Reserve Strategic Environmental Assessment (SEA)

Willow Quarries - Environmental Impact Assessment (EIA). Modeling of mining expansion plan and the potential impact on Golden Mole habitats

Ekurhuleni Metropolitan Municipality (EMM) Environmental Management Framework (EMF)

Limpopo - State of the Environment Report (SoER)

Windhoek (Namibia) - Environmental Structure Plan (ESP)

Gauteng Supplementation and Implementation of EIA Regulations Project (EIA SIP)

Siyanda District Municipality Environmental Management Framework (EMF)

Olifants and Letaba River Catchments Environmental Management Framework (EMF)

Barberton Nature Reserve environmental sensitivity mapping and land use zoning plan

### **Regional Strategic Environmental Assessments (Regional Assessments)**

Regional assessment for the Eskom Wind Energy Facility (Sere) in the Western Cape

Regional assessments for the Eskom Wind Integration Project (WIP)

- Area 1: West Coast (Saldanha to Garies)
- Area 2: Overberg Region
- Area 3: Beaufort West region
- Area 4: Eastern Cape (Tsitsikamma to Port Elizabeth)
- Area 5: Northern Cape (Hondeklipbaai to Port Nolloth)

Sandveld wind energy Regional Assessment

West Coast National Park (Saldanha area) Regional Assessment

Regional Assessment for the Theewaterskloof Municipal area

Brand-se-Baai (Exxaro) wind energy regional assessment

Overberg (BioTherm) wind energy regional assessments

- Area 1: Gordons Bay to Pearly Beach)
- Area 2: Napier RA (Agulhas NP/Swellendal region)

Suurplaat/Sutherland (Investec Wind Energy Development) Regional Assessment

Waterberg (Limpopo) Concentrating Solar Power (CSP) Regional Assessment (Exxaro)

Western Cape Province Regional SEA for Wind Energy facility developments

ISS Global Mining Regional SEA for Power Station Developments in Mpumalanga Province

Northern Cape Province Regional SEA for Wind Energy facility developments

### **Visual Impact Assessments (VIA), viewshed analyses and visual assessments**

*Some recent or current projects include:*

- Coal strip mining in Zimbabwe viewshed analyses
- Viewshed analyses and sensitivity mapping for telecommunication masts in the northern provinces (Limpopo, Mpumalanga and North-West)
- Siemens 3<sup>rd</sup> license cellular communications infrastructure EIAs. Viewshed analyses and sensitivity mapping for over 4,000 telecommunication mast sites in all major metropolitan areas of South Africa.

- CSIR high mast viewshed analysis and sensitivity mapping
- Atlantis Open Cycle Gas Turbine power station VIA
- Kynoch Gypsum Tailings dam extension VIA
- N1 Western Bypass Shell service station VIA
- Coega regional hazardous waste processing facility VIA
- Robinson Deep landfill extension VIA
- Hazardous waste blending platform VIA
- Mercury-Ferrum-Garona transmission line integration VIA
- Matimba B (Medupi) coal-fired power station VIA
- Concentrating Solar Power (CSP) plant in Upington VIA
- Zeus to Mercury transmission line (comparative viewshed analyses)
- Mmamabula (Botswana) transmission line and power station viewshed analyses
- Petronet new multi-products pipeline VIA
- Wind energy facility (Sere) in the Western Cape province VIA
- Ankerlig power station conversion and transmission line VIA
- Gourikwa power station conversion and transmission line VIA
- Kyalami strengthening project VIA
- Steelpoort integration project VIA
- Medupi reservoir and telecommunication mast VIA
- VIA's for Basic Assessment Reports (wind monitoring masts)
  - Cookhouse, Hopefield, Amakhala, Caledon, Worcester, Tulbach, Overberg, Britannia Bay, Brand-se-Baai, Deep River, Happy Valley, River Bank, Uiekraal, Beaufort West, Laingsburg, Rhebokfontein, Suurplaat and West Coast
- Cookhouse wind energy facility VIA
- Hopefield wind energy facility VIA
- Mokopane Integration Project VIA
- Cradle of Humankind World Heritage Site (WHS) viewshed protection zone, visual character assessment and visual zonation plan
- Indwe wind energy facility VIA
- Amakhala wind energy facility VIA
- Boontjieskraal wind energy facility VIA
- Britannia Bay wind energy facility VIA
- Brand-se-Baai wind energy facility VIA
- Upington and Pofadder solar thermal facilities VIAs
- Dorper wind energy facility VIA
- Flagging Trees wind energy facility VIA
- Rhebokfontein, Suurplaat and West Coast wind energy facilities VIAs
- Riverbank wind energy facility VIA
- Waterberg photovoltaic plant VIA
- Eskom wind intergration projects VIAs
- Welgedacht water care works VIA
- Aberdeen wind energy facility
- Aggeneis-Oranjemund power line intergration
- Project Blue wind energy facility
- Inca De Aar solar energy facility
- Aced De Aar solar energy facility
- Exxaro Lephalale solar energy facility
- Happy Valley wind energy facility
- Hendrina power station ash dam extension
- Hidden Valley wind energy facility
- Kakamas photovoltaic plant
- Karoo renewable energy facility
- Ilanga (Karoskraal) solar thermal power plant
- Keimoes photovoltaic plants (Sonnenberg, Ofir and Geelkop)
- Kimberley photovoltaic solar plant
- Kleinbegin photovoltaic plant
- Kleinzee wind energy facility
- Koingnaas wind energy facility
- Oyster Bay wind energy facility
- Ilanga Lethemba (Paardevelei) PV solar energy facility
- Upington photovoltaic solar facility

- Ramphele (Ritchie) PV solar energy facility
- Ruukie (Mpumalanga) coal fired power station
- Saldanha Steel wind energy facility
- Spitskop wind energy facility
- Tsitsikamma community wind energy facility
- Uyekraal wind energy facility
- Veldrift and Saldanha wind energy facilities
- Vredendal photovoltaic solar energy facility
- Wag'nBiekiespan solar energy facility
- Walker Bay wind energy facility

**PROFESSIONAL AFFILIATIONS**

*Professional Geo-Information Sciences (GISc) Practitioner* registered with The South African Council for Professional and Technical Surveyors (PLATO). *Membership number: PGP0147*

**LANGUAGES**

	<b>Reading</b>	<b>Writing</b>	<b>Speaking</b>
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

**CURRICULUM VITAE**  
**Amanda van der Westhuizen**  
**Landscape Architect (BL Arch)**

<b>Name</b>	Amanda van der Westhuizen
<b>Name of Firm</b>	V&L Landscape Architects
<b>Profession</b>	Landscape Architect
<b>Date of Birth</b>	25 July 1973
<b>Years with firm</b>	13
<b>Position in the Firm</b>	Project Landscape Architect and Environmental Practitioner
<b>Marital Status</b>	Married
<b>Nationality</b>	South African
<b>Specialisation</b>	Landscape planning Landscape design Recreation Planning Land use Planning Environmental Planning Environmental Assessment Training and Education

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**KEY QUALIFICATIONS**

Amanda van der Westhuizen has been a Landscape Architect and Environmental Practitioner at V&L Landscape Architects CC (previously Van Riet and Louw Landscape Architects) for the past 13 years. She has specialised in the field of landscape and environmental design, environmental assessment and environmental management.

Her technical skills include the following; MsWord (proficient), AutoCAD 2D (proficient), MsExcel (proficient), MS Outlook (proficient), MsPowerPoint (proficient), CorelDraw (proficient), Adobe Photoshop (capable), AutoCAD 3D (limited), Autodesk Inventor (limited), Autodesk Revit (limited).

Amanda has worked in multi-disciplinary teams in a wide range of design, tourism and environmental based projects in South Africa. She has operated in a management capacity in many of them, fulfilling the role of primary client liaison, project planner, landscape designer and team manager. Other skills include meeting facilitation, research, report writing, strategic planning and detail design.

## EDUCATION

- Grade 12: Willowridge High School, Pretoria, 1991
- BL Arch University of Pretoria, 1995

## OTHER QUALIFICATIONS

- Accredited ILS Life Coach:  
Academy of Metaphysics, Johannesburg 2006
- Prometric Certified Technical Trainer (CTT+):  
'Tremendis' Train the Trainer, Pretoria, 2008
- SAQA Accredited Assessor:  
Abasangule Training Solutions, Pretoria, 2008
- SAQA Accredited Assessment Tools Developer:  
Abasangule Training Solutions, Pretoria, 2008
- Accredited Trainer for the Natural Step approach to Environmental Sustainability:  
The Natural Step South Africa, Johannesburg 2009

## PROFESSIONAL MEMBERSHIP

- Professional Member of the South African Council for the Landscape Architectural Profession (SACLAP).

## EMPLOYMENT RECORD

- **V&L Landscape Architects, Pretoria**  
**2009 to present date:** Consulting Landscape Architect
- **CTU Training Solutions, Pretoria**  
**2008:** Head of Programme & Training facilitator: AutoCAD Office Practice
- **V&L Landscape Architects, Pretoria**  
**1996 to 2007:** Consulting Landscape Architect

## LANGUAGES

- English: written and spoken (excellent)
- Afrikaans: written and spoken (excellent)

## EXPERIENCE RECORD

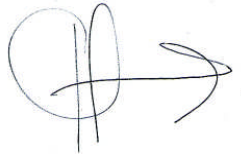
As landscape architect, Amanda has been involved in many of V&L's projects over the last 13 years. A comprehensive list of these projects is included in the Company profile. The following are some of her more notable projects undertaken in the past 5 years:

YEAR	POSITION	PROJECT NAME	COUNTRY	CLIENT	DESCRIPTION OF DUTIES
current	Project leader	Rietvlei Open Cast Mine VIA	RSA	Ezendalo Environmental	Visual Impact Assessment
current	Project leader	Ruukki Power Station VIA	RSA	Savannah Environmental	Visual Impact Assessment in association with MetroGIS
current	Project leader	Hendrina Ash Dam VIA	RSA	Lidwala	Visual Impact Assessment in association with MetroGIS
current	Project leader	Various VIA's for alternative energy facilities (solar and wind) – 3 projects	RSA	Aurecon	Visual Impact Assessment in association with MetroGIS
current	Project leader	Various VIA's for alternative energy facilities (solar and wind) – approx. 40 projects	RSA	Savannah Environmental	Visual Impact Assessment in association with MetroGIS
2009 - 2011	Project leader	Nelson Mandela Bay Wind Farm VIA and VIA addendum	RSA	SRK consulting	Visual Impact Assessment
2010	Landscape Architect	Rhodesfield Urban Design Framework (Landscape)	RSA	Ekhuruleni Local Municipality	Urban and Landscape Design
2010	Landscape Architect	Wonderwerk Cave Site Development	RSA	NCEDA	Landscape and Tourism Planning
2010	Landscape Architect	Seven Priority Reserves: Mpumalanga	RSA	Mpumalanga Tourism Parks Agency	Tourism Planning and Integrated Management Planning
2010	Project leader	Egoli Gas EIA	RSA	Egoli Gas	Environmental Impact Assessment
2009	Landscape Architect	Tourism Pre-feasibility study at Goegap, Doornkloof & Rolfontein Reserves	RSA	Northern Cape DTEC	Tourism Planning
2007	Landscape Architect	Union Buildings: Integrated Services Management Plan and Master plan	RSA	Department of Public Works	Landscape Planning and Integrated Management Planning
2007	Landscape Architect	Buffelspoort Dam Resource Management Plan	RSA	Department of Water Affairs and Forestry	Resource Management Planning
2006	Landscape Architect	Environmental Good Practice Guidelines for the Development of Transfrontier Conservation Areas	RSA	Peace Parks Foundation	Environmental Management Planning
2005	Project leader	EIA for the Upgrading of Various Tourism Infrastructure at the Vaalkop Dam	RSA	North West Parks and Tourism Board	Environmental Impact Assessment
2005	Project leader	EIA for Dullstroom Golf and Country Estate	RSA	Dullstroom Country Estates	Environmental Impact Assessment
2005	Project leader	EIA for the proposed Dullstroom Golf and Country Estate	RSA	Dullstroom Country Estates	Environmental Impact Assessment
2005	Landscape Architect	Tourism Development Opportunities for 6 Limpopo Provincial Reserves	RSA	Limpopo Tourism and Parks Board	Tourism Planning
2005	Landscape Architect	Liliesleaf Heritage Project	RSA	Liliesleaf Trust	Landscape Heritage Survey and Landscape

					Design
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**CERTIFICATION**

I the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.



11/04/2011

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**Amanda van der Westhuizen**

**Date**

**Full Name of Staff Member:** Amanda van der Westhuizen

**Full Name of Authorised Representative:** Johan le Roux Louw



## **CURRICULUM VITAE: DR PATRICIA-ANN SCHERMAN**

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Date of Birth: 21 May 1965  
Citizenship: South African

### **QUALIFICATIONS**

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Rhodes University, Grahamstown, South Africa:  
B. Sc in Microbiology and Zoology (1984-1986)  
B. Sc Hons in Microbiology, specializing in Biotechnology (1987)  
Ph.D in Biotechnology (1993)

### **DISSERTATION**

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The microbial production of polyphenol oxidase enzyme systems and their application in the treatment of phenolic wastewaters.

### **SPECIALIZATION**

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Environmental water quality; riverine ecology; river health (bio)monitoring; ecological Reserve assessments for rivers; management of large environmental interdisciplinary teams; development, implementation and management of environmental monitoring programmes.

### **ASSOCIATIONS**

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- South African Society for Aquatic Sciences
- Undergoing registration with SACNASP and SAIE&ES

### **PROFESSIONAL EXPERIENCE**

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1992 - 1993	Employed as Senior Technical Officer in the Institute for Water Research, Rhodes University, which included involvement on a number of projects. Duties included the maintenance of equipment, bacteriological and water quality analysis, data manipulation and interpretation.
1993	During the period January to February participated in the World Ocean Current Experiment (WOCE) programme to Antarctica as an oceanic nutrient analyst using a Technico III autoanalyzer.
1994 – Feb 2002	Employed as a Research Officer and Project Leader of the IWR, and Manager of the Centre for Aquatic Toxicology (CAT-IWR) since its inception in 1999.
Mar 2002 – Feb 2005	Employed as a Senior Environmental Consultant at Coastal and Environmental Services (CES), Grahamstown.
Mar 2005 – Feb 2006	Promoted to Principal Environmental Consultant at Coastal and Environmental Services, Grahamstown.
Mar 2006 – Dec 2007	Operations Director, Coastal and Environmental Services, Grahamstown.
From Jan 2008	Registered Scherman Consulting as a sole trader
July 2009	Registered Scherman Colloty & Associates cc: Environmental and Aquatic Management Consulting (CK 2009/112403/23)

## FRESHWATER RESEARCH AND CONTRACT EXPERIENCE

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Research and contract experience from 1996 has included the following:

- Aquatic toxicity testing using macroinvertebrates in artificial stream systems, and the analysis and interpretation of these results. This research encompassed monitoring and assessing water quality under natural and experimental conditions, and determining invertebrate tolerances to changing water quality conditions. The aim of this research is to use macroinvertebrates as indicators of water quality and to generate information on tolerances, which can subsequently be used for refining water quality guidelines for aquatic ecosystems. A protocol for toxicity testing using macroinvertebrates was completed for the Department of Water Affairs and Forestry in 2000.

This research programme (1992 - present) resulted in the formation of the *Centre for Aquatic Toxicology of the IWR* in November 1999, and included involvement on a contract for Unilever (UK) on the informal use of detergents in rivers.

Most of my other research interests and consulting experience have involved biological monitoring; the development, implementation and management of environmental monitoring programmes; aquatic specialist studies; managing large environmental projects such as the multi-disciplinary Ecological Reserve studies; water quality studies; and determining the water quality component of the Ecological Reserve, Classification and RQOs for rivers (see contracts and reports below).

- SA River Health Programme (SA National Aquatic Ecosystem Biomonitoring Programme) - national and provincial programmes. I served as the Provincial Champion for the Eastern Cape for a two year-term and served as team leader of the Buffalo and Mthatha River Health Programmes. Two publications came out of this work, i.e. the Buffalo River Technical Report produced in 2004; Mthatha River Technical Report in 2006.
- Assisted with the drafting and revision of Water Quality Guidelines for Aquatic Ecosystems.
- Water Resource Protection and Implementation Task Team: Determination of the Rapid Ecological Reserve - Water Quality.
- Member of a team working on the *Development of a national plan for establishing Ecological Risk Assessment and underpinning technologies in SA*.
- Worked with a team of researchers from Environmentek, CSIR, and IWQS, DWAF (Department of Water Affairs and Forestry), on the development of sediment bioassay techniques for use in SA. Two CSIR reports were the product of this research.
- Participated in the Olifants River Reserve project - Water quality team from 1998 - 2001.
- Worked on the WRC (Water Research Commission)-funded project, entitled *Risk-based approach to setting integrated environmental objectives for protection of water resources: Phases 1 and 2*. WRC reports were the product of both phases.
- Carried out a research contract for Sasol Chemical Industries, entitled *The use of biomonitoring tools - both in-stream bioassessment and laboratory-based toxicity tests - to assess the impact of selected pollutants on the macroinvertebrates of the Leeuspruit*.
- Classification of the Kruger National Park rivers: Phase 1. This research resulted in a WRC report.
- Contract for Unilever UK on the effects of in-stream detergent use, focussing on the Kat River in the Eastern Cape. This research resulted in a confidential report for Unilever.
- Ecological Reserve Assessment for water quality in the Breede River for DWAF (2001).
- Water quality project of the ecological Reserve DSS sub-programme: a WRC project.
- Worked with CES on water quality issues regarding the proposed tannery (Ostrimark) to be developed in Grahamstown, while still employed at the Institute for Water Research.
- Water ecosystems course for development facilitators: a Water Research Commission-funded course and project; in association with the Environmental Science Programme of

Rhodes University.

- Contract for Eskom: Ecotoxicity testing of acid mine effluent (AME) - in association with Department of Ichthyology and Fisheries Science, Rhodes University.
- A project funded by the Joint Research Council of Rhodes University: An investigation of the response of the plankton community to nutrient loading.
- An Environmental Impact Assessment for the development of a tannery (Swazitan) at Matsapha, Swaziland.
- Fatal flaw assessment for the development of a liquid natural gas processing facility.
- The development and management of water quality monitoring programmes, including conducting surface water assessment and managing the water component of the East London Industrial Development Zone (2002-2004: Phase I, 2004-2005: Phase II).
- Manager of the Kasouga Green monitoring programme.
- CES projects at the Coega Industrial Development Zone (2004-2006), i.e. Coega Open Space Management Plan, EIA for the Coega Peaking Power Plant and the EIA for Coega River bridge.
- Hosting and co-ordinating the 2000 and 2003 courses entitled *Aquatic biomonitoring in water resources management* with Dr Muller of CAT-IWR, Rhodes University.
- Revising the national biomonitoring short course for DWA (2006-2008).
- Involvement in the development of a water quality Reserve module for FETWater (Framework for Education and Training in the water sector) (2005).
- Managing and participating in the water studies associated with a number of heavy mineral mining EIAs: Corridor Sands Limitada (CSL) in Mozambique (2002-2007), Tiomin in Kenya (2006), Moma in Mozambique (2006-2007) and Toliara in Madagascar (2006).
- Water quality task leader on the following DWA Reserve contracts: Thukela, Letaba, Mokolo (2008/2010), Inkomati (2008/2010), Kromme / Seekoei (2003-2006) and Knysna / Swartvlei (2006 – 2010).
- Reserve team leader for the Kromme / Seekoei (2003-2006); Knysna / Swartvlei (2007 – 2010); Lusikisiki (2011 – 2013); and Gouritz (2012 – 2014) Reserve studies.
- Water quality specialist on the following Reserve studies: Sout River Reserve (2007-2009), Dwars Intermediate Reserve study (2007-2009), Erasmuskloof Reserve (2007), Orange River Reserve (2010 – 2011), Lusikisiki (2011 – 2013) and Gouritz (2012 – 2014) Reserve studies.
- Team leader and water quality specialist for a Reserve preliminary study for the Elitheni Coal Mine in the Eastern Cape, South Africa.
- Coordinator and lecturer of the technical training programme for the Ecological Reserve: A contract for DWA (2007-2010).
- Member of the Project Management Team for the Vaal Water Quality Reserve Study (2007-2011).
- Professional Service Provider to the Chief Directorate: Resource Directed Measures of DWA, regarding water quality and the Ecological Reserve (2006-2008, 2010, 2011).
- Team leader for the aquatic study for the N2 Wild Coast Toll Road, both in 2003 and in 2007-2008.
- Member of a WRC project team to develop water quality methods for the Rapid level determination of the Ecological Reserve in wetlands (2008-2009).
- Member of the Provincial Task Team for the Eastern Cape River Health Programme (initiated in 2008).
- Aquatic specialist studies for EIAs at the Coega Industrial Development Zone: Exxaro's Manganese Project and Kalagadi's Manganese Smelter (2008-2009).
- Aquatic specialist for the Amanzi Development EIA (2008) and the Nu-Way Housing development EIA in the Eastern Cape (2010), water quality specialist for the Hillcrest Hospital development in KwaZulu-Natal, South Africa (2009, 2011); the Abengoa Concentrating Solar Power (CSP) projects in Upington and Pofadder (2010-2011); and the Ilanga CSP project (2010-2011).
- Water quality specialist for the flows requirement study for the Kafue Lower Gorge Hydropower Dam in Zambia and the Maputo Basin Project in Mozambique/Swaziland/South Africa (2008).

- The Ecological Reserve specialist for the Algoa Bay Phase 1 (2008-2010) and Phase 2 (2011-2012) water resource reconciliation strategies.
- Team member of the development of the Tsitsa Basin Land use and Environmental Management Plan (2009).
- Team member responsible for the development and implementation of a Reserve monitoring programme for the Komati Basin (2009-2010).
- Team leader and water quality specialists for the Ugie Dam Reserve study (2010-2011) and the Lusikisiki Regional Water Supply Study: Reserve module (2010-2013).
- Water quality specialist on the Vaal Water Resources Classification study (2011).
- Water specialist studies and WULAs for numerous solar and wind power projects (2010-2012).
- Scherman Colloty & Associates contracted to undertake the PES/EI/ES (Present Ecological State / Ecological Importance / Ecological Sensitivity) study for rivers and estuaries of WMA 12 and 15, for the Water Research Commission and Department of Water Affairs (2010-2012).
- Water quality specialist for the Lower Orange River Reserve study (2012).