

CURRICULUM VITAE

KAREN JODAS (nee KÜCK)

SAVANNAH ENVIRONMENTAL (PTY) LTD

Profession : Environmental Consultant

Specialisation : Strategic environmental assessment and advice; project management and co-ordination of environmental projects; environmental compliance monitoring; Environmental Impact Assessment; environmental management; peer review; policy, strategy and guideline formulation; renewable energy projects, hydrology and water management

Work experience : Twelve (12) years in the environmental field

VOCATIONAL EXPERIENCE

Provide technical input for projects in the environmental management field, specialising in strategic evaluation, Environmental Impact Assessment studies, Environmental Management Plans, integrated environmental management, environmental compliance monitoring (ECO role); peer review of EIA reports and processes, strategy and guideline development, and public participation. Key focus on overall Project Management, integration of environmental studies and environmental processes into larger engineering-based projects, strategic assessment, and the identification of environmental management solutions and mitigation/risk minimising measures.

Undertaking studies requiring all environmental-related disciplines has allowed for considerable experience to be gained in the environmental assessment and management fields. A specialist area of focus is on management and assessment of multi-faceted projects, including electricity generation and transmission projects (with a strong focus in renewable energies), linear developments (roads and powerlines), bulk infrastructure and supply (e.g. WTWs, pipelines, landfills), the mining industry, urban, rural and township developments, environmental aspects of IDPs, EMFs, SoERs, as well as environmental planning, development and management.

Working knowledge of environmental legislation, strategies, guidelines and policies. Compilation of the reports for environmental studies are in accordance with the all relevant environmental legislation, including the National Environmental Management Act, EIA Regulations and the Minerals and Petroleum Resources Development Act.

SKILLS BASE AND CORE COMPETENCIES

- Eleven years experience in the environmental management and impact assessment field
- Nine years experience in Project Management - Project management of large environmental assessment and management projects
- Strategic and compliance advise for all aspects of environmental assessment and management
- External and peer review of EIA reporting and EIA process
- Working knowledge of environmental planning processes, policies, regulatory frameworks and legislation
- Experienced in the identification and assessment of potential environmental impacts & benefits
- Experienced in the development of practical and achievable mitigation measures and management plans and evaluation of risk
- Experienced in environmental compliance monitoring and reporting for construction projects
- Compilation and review of the reports in accordance with all relevant environmental legislation
- Public participation/involvement and stakeholder consultation
- Environmental strategy, policy and guidelines development
- Experienced in assessments for both linear developments and nodal developments
- Key experience in the assessment of impacts associated with renewable energy projects
- Wide range of experience for public and private sector projects - completed more than 70 environmental projects for a wide variety of Clients
- Completed projects in all nine Provinces of South Africa, as well as Zambia and Lesotho

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Sc Earth Sciences, majoring in Geography and Zoology, *Rhodes University, Grahamstown*, 1993
- B.Sc Honours in Geography (in Environmental Water Management), *Rhodes University, Grahamstown*, 1994. Major subjects included Water Resources Management, Streams Ecology, Fluvial Geomorphology and Geographic Information Systems.
- M.Sc in Geography (Geomorphology), *Rhodes University, Grahamstown*, 1996

Short Courses:

Water Quality Management, *Potchefstroom University*, 1998

Environmental Law Course, *Aldo Leopold Institute*, 2002

WindFarmer Wind Farm Design course , *Garrad Hassan*, 2009

Professional Society Affiliations:

Registered with the South African Council for Natural Scientific Professions as a Professional

Natural Scientist: *Environmental Scientist (400106/99)*

Other Relevant Skills:

Xtrack Extreme – Advanced Off-Road Driving Course (2003)

EMPLOYMENT

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

Jan 1997 – September 2005: Associate of *Bohlweki Environmental (Pty) Ltd.* Environmental Management Unit: Manager; Principle Environmental Scientist focussing on Environmental Management and Project Management.

PROJECT EXPERIENCE

Experience includes projects associated with property development, electricity generation and transmission, wastewater treatment facilities, mining and prospecting activities, and national roads, as well as strategy and guidelines development. Current and recently concluded projects include:

Strategic Advice

- Review the effectiveness and efficiency of the environmental impact management (EIA) system in South Africa, and formulate an environmental impact management strategy and action plan for National DEAT
- Drafting a Position Paper: Project Financing and Environmental Risk Management (considering IFC Performance Standards & Equator Principles) for Standard Bank Group Limited
- Advice regarding environmental compliance of existing and future development at Tiffindell Ski, Eastern Cape Province (for Tiffindell Ski (Pty) Ltd)
- Advice regarding environmental compliance for operations at Salberg Concrete Products factory, Gauteng (for Salberg Concrete Products)

Peer/external EIA review

- Review of 13 EIAs submitted in terms of the ECA for the Northern Cape Department of Tourism, Environment and Conservation (for DEAT) – acting as an agent for Northern Cape DTEC
- Peer Review of EIA process and reporting for the Malelane Substation and Komatipoort-Marathon 275kV Transmission Line turn-in (for SiVEST / Eskom Transmission)

Environmental Management Tools

- Compilation of a comprehensive site-specific Environmental Management Plan (EMP) for the

construction and operation of the Eskom Braamhoek Integration Project, Free State and KwaZulu-Natal Provinces (for Eskom Transmission)

- Development of an Environmental Impact Management System for Water Services-related projects for Limpopo Province (for DWAF Limpopo Province)
- Environmental Risk Analysis for Salbro-owned properties, Gauteng (for Salbro Property Holdings)
- Compilation of Provincial Guidelines for off-road routes in the Western Cape (for WC DEA&DP)
- Project integration and compilation of a Strategy for Sustainable Development for Gauteng Province (for GDACE)

Energy Sector Projects

Renewable power generation projects

- Environmental Impact Assessment and Environmental Management Plan for the proposed Wind Energy Facility in the Western Cape (for Eskom Generation)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Wind Energy Facility at Hopefield, Western Cape (for Umoya Energy)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Wind Energy Facility at Cookhouse, Eastern Cape (for African Clean Energy Developments)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Flagging Trees Wind Energy Facility at Middelburg, Eastern Cape (for African Clean Energy Developments)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Wind Energy Facility on the West Coast, Western Cape (for Moyeng Energy)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Wind Energy Facility near Sutherland, Northern and Western Cape (for Moyeng Energy)
- Basic Assessments for wind monitoring masts at various sites and locations in the Western and Northern Cape Provinces (for AIIM and Investec Bank Limited)
- Regional Assessments for several wind energy Developers across the Western and Northern Cape
- Regional Assessment as a siting tool for CSP projects in Limpopo Province

Power generation projects

- Environmental Impact Assessment and Environmental Management Plan for the proposed Ankerlig OCGT to CCGT Conversion project, and the associated 400 kV transmission power line between Ankerlig and the Omega Substation, Western Cape (for Eskom Generation)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Gourikwa OCGT to CCGT Conversion project, and the associated 400 kV transmission power line between Gourikwa and the Proteus Substation, Mossel Bay (for Eskom Generation)
- Basic Assessment for a new raw water reservoir and pipeline for the Medupi Power Station, Limpopo Province (for Eskom Generation)

Transmission line projects

- Environmental Impact Assessment and Environmental Management Plan for the proposed Steelpoort Integration Project, Limpopo Province (for Eskom Transmission)
- Environmental Impact Assessment and Environmental Management Plan for the proposed Kyalami/Midrand Substation and 3 Transmission lines, Gauteng (for Eskom Transmission)

Site Development and Construction Projects

- Environmental Impact Assessment and Environmental Management Plan for the proposed Groot Letaba River Water Resource Development Project (EIA drafting team for Iliso Consulting)
- Basic Assessment for the proposed Stormwater Outfall from Zones 1 and 2 of the Coega IDZ, Eastern Cape Province (for Coega Development Corporation)
- Environmental risk analysis and compliance advice for Leopard's View guest lodge, Mpumalanga

Compliance Monitoring

- ECO compliance monitoring for the construction of the De Hoop Dam (ORWRDP) as well as the diversion of the R555, Limpopo Province (5-year contract for DWAF)
- Environmental Management Plan and ECO for existing and future development at Tiffindell Ski, Eastern Cape Province (for Tiffindell Ski (Pty) Ltd)
- Environmental Management Plan and ECO for construction for the upgrade of Prince Alfred Park Stadium, Nelson Mandela Bay, Eastern Cape (for Nelson Mandela Metropolitan Municipality)

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 (for Elitheni Coal)

Projects listed below include those projects undertaken at when employed at *Bohlweki Environmental*.

Electricity Sector projects

Power Generation Projects

- Project Manager for the environmental impact assessment for the site selection for a new coal-fired power station (Matimba B) in the Limpopo Province
- Project Manager for the Public Participation Process for the proposed Return-to-Service of the Komati Power Station, Mpumalanga Province
- Project Manager for the Public Participation Process for the proposed Return-to-Service of the Grootvlei Power Station, Mpumalanga Province
- Project Manager for the Detailed Environmental Scoping Study for the proposed Capacity Increase Project at Arnot Power Station, Mpumalanga Province

- Project Manager for the Public Participation Process for the proposed Return-to-Service of the Camden Power Station, Mpumalanga Province
- Project Manager for the Environmental Pre-Scoping Study for the proposed Solar Thermal Power Plant, in the Northern Cape Province

Electricity Transmission Projects

- Project Director for the EIA for the proposed 765kV Transmission Powerline between Hydra Substation (near De Aar) and the proposed Gamma Substation (near Victoria West), Northern Cape Province
- Project Manager for the Environmental Impact Assessment for the 3rd 400 kV Transmission line between the Poseidon and Grassridge Substations in the Eastern Cape Province
- Project Manager for the Environmental Impact Assessment for the proposed new 400 kV Transmission line between Matimba and Witkop Substations, Limpopo Province
- Project Manager for the Environmental Impact Assessment for the proposed new Ikaros Substation and associated 400 kV Transmission line infrastructure, North West Province
- Project Manager for the Detailed Environmental Scoping Study for the Redhill Strengthening Project: proposed new Redhill Substation and associated new 132 kV Distribution line
- Project Manager for the Detailed Environmental Scoping Study for the Breyten Strengthening Project: proposed new Breyten Substation and associated 88 kV Distribution line
- Project Manager for the Environmental Impact Assessment for nine new 132 kV powerlines between the Grassridge Substation and the Coega Industrial Development Zone, Eastern Cape
- Project Manager for the Environmental Impact Assessment and Environmental Management Plan for the proposed Eiland Rural Substation, and the associated 132 kV distribution line, North West Province
- Project Manager for the detailed Environmental Scoping Study and EMP for the proposed Everest Substation, and the 132 kV powerline between Simplon and Everest Substations, Mpumalanga
- Environmental scoping study and environmental management plan for the proposed establishment of Eskom infrastructure for the C-Cut Project at Premier Mine, Cullinan
- Project Manager for the Environmental Impact Assessment for the proposed Eskom 2nd 400 kV Transmission line between Grassridge and Poseidon Substations, Eastern Cape

Specialist projects

- Development of an Integrated Environmental Policy for the City of Tshwane Metropolitan Municipality (CTMM)
- Ad hoc advice to ERWAT regarding the implementation of Module 4 at the Waterval Wastewater Treatment Works, Gauteng Province.
- Review of the State of the Environment Report for the North West Province
- Development of a Flood Warning System and Flood Notification Procedures for No 7 Dam at Premier Mine, Cullinan for De Beers.

- Detailed specialist environmental impact assessment of water supply and liquid waste disposal infrastructure options associated with a proposed hotel development site at the Victoria Falls, Zambia for Sun International
- Contributing to the drafting of the draft White Paper on Integrated Pollution Control and Waste Management for the Department of Environment Affairs and Tourism (DEAT) and the Department of Water Affairs and Forestry (DWAF), as well as being Project Committee Secretary for the project
- Acting as Project Committee Secretary for the inception phase of the formulation of the National Waste Management Strategy funded by DANCED
- Preparation of a summary document for a Ministerial Briefing for the rehabilitation of the Pomfret Military Base areas polluted by Asbestos
- Monitoring landfill gas at Pretoria-North landfill for final rehabilitation of the site

Environmental Management Plans

- Environmental Management Plan for the proposed N2 Wild Coast Toll Road between East London (Eastern Cape) and Durban (KwaZulu-Natal)
- Environmental Management Plan for repairs of portions of the N3 and N1, Gauteng
- Environmental Management Plan for the Proposed C-Cut Development at Premier Mine, Cullinan
- Environmental Management Plans for various Eskom Distribution powerlines within South Africa

Property development projects

- Environmental Scoping Study for upgrading and extensions at Tiffindell Ski Resort, Eastern Cape
- Exemption application for the establishment of a township development at Eden Park, for Alberton Town Council
- Detailed Environmental Scoping Study for the Thaba ya Batswana Development on portions of the Farm Rietvlei 101 IR, Gauteng

EIAs for Technology projects

- Project Manager for the Environmental Impact Assessment for the proposed Alternative Fuels and Resources Project at the Holcim South Africa Plant in Dudfield, North West Province
- Project Manager for the Environmental Impact Assessment for the establishment of a Waste Blending Platform within the Gauteng Province to produce alternative fuels for use by cement kilns (a Holcim South Africa and EnviroServ Joint Venture)
- Project Manager for the Environmental Impact Assessment for the proposed Alternative Fuels and Resources Project at the Holcim South Africa Ulco Plant near Kimberley in the Northern Cape Province

Water Resources projects

- Project Manager for the Environmental Impact Assessment for the establishment of three new DWAF gauging weirs at 1 site on the Vaal River and 2 sites on the Orange River, Northern Cape Province
- Environmental exemption application for the construction of an emergency water supply pipeline from Mamelodi to Ekandustria via Cullinan, Gauteng Province for Rand Water
- Environmental Scoping Report for the construction of a water reclamation plant at Southern Wastewater Treatment Works, Durban for OTV France
- 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)
- Environmental impact assessment of the old Klipspruit and Goudkoppies Wastewater Treatment Works and the Goudkoppies Landfill Site for the Greater Johannesburg Metropolitan Council
- Environmental evaluation of six preferred wastewater disposal options for Durban Metropolitan Council Wastewater Management Department, as well as contributing to the integrated assessment of these preferred options
- Department of Water Affairs & Forestry Water License Applications for operations at the Holcim South Africa Dudfield Plant, North West Province
- Preparation of a Water Quality Management Report (WQMR) and an Environmental Scoping Assessment for the proposed extension to Dassenhoek Wastewater Treatment Works, Durban
- Assisting in the final preparation of the Water Management Plan for the Free State Goldfields and Lower Vet River Catchment for DWAF

Mining sector projects

- Mining license application and EMPR for the Majuba Power Station underground coal gasification site, Mpumalanga Province for Eskom TSI
- Project Manager for a Social Impact Assessment for Kimberley Mines, for De Beers
- Environmental Management Programme Report (EMPR) for the proposed formalisation of small-scale clay mining for a brick-making enterprise pilot project in QwaQwa, Free State Province for Mintek
- Environmental Management Programme Reports (EMPR) for the proposed formalisation of seven small-scale sandstone mining sites in QwaQwa, Free State Province for Mintek
- Environmental Management Programme Report (EMPR) for prospecting activities within the Premier Mine Game Farm, Cullinan for De Beers Consolidated Mines Limited
- Project Manager for the environmental studies for the C-Cut Development at Premier Mine, Cullinan for De Beers Consolidated Mines Limited: Environmental Scoping Report (ESS); Environmental Impact Assessment (EIA); Environmental Management Plan (EMP); and Environmental Management Programme Report (EMPR)

Transportation projects

- Project Manager for the Environmental Impact Assessment and Environmental Management Plan for the proposed N2 Wild Coast Toll Road between East London (Eastern Cape) and Durban (KwaZulu-Natal) (approximately 550km)
- Environmental Impact Assessment for the proposed Platinum Highway from Warmbaths via Pretoria to Skilpadhek (on the South Africa-Botswana border), including the application for all relevant permits, for the Bakwena Consortium
- Environmental Management Plan for repairs of portions of the N3 and N1, Gauteng
- Environmental Opportunities and Constraints Assessment for the Wonderboom Airport
- Considerations of environmental aspects for the Denneboom Local Integrated Transport Plan

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 : Eleven (11) 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 monitoring
- Formulation of environmental policies, strategies and guidelines
- 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).

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*

PROJECT EXPERIENCE

Current projects include:

Electricity Sector Projects

- 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)
- 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)

- 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)
- 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)

Compliance Monitoring

- Audit of environmental compliance for Salberg Concrete Products
- ECO compliance monitoring for the construction of the De Hoop Dam and the diversion of the R555, Limpopo Province
- ECO compliance monitoring for the Mine Water Recovery Project at Duvha Power Station, Mpumalanga Province
- Compilation of an Environmental Management Plan and ECO compliance monitoring for existing and future development at Tiffindell Ski, Eastern Cape Province
- ECO compliance monitoring for construction of the Nelson Mandela Bay 2010 Soccer Stadium

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
- 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

- 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
- 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 3rd 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
- Detailed Environmental Scoping Study and public participation for the Breyten Strengthening Project: proposed new Breyten Substation and associated 88 kV Distribution line, Mpumalanga Province
- Public Participation Process for the proposed Return-to-Service of the Camden Power Station, Mpumalanga Province
- Environmental Impact Study and public participation for the proposed 2nd 400 kV Transmission line between the Grassridge Substation and the Poseidon Substation in the Eastern Cape.
- 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)

CURRICULUM VITAE
RAVISHA AJODHAPERSADH

Profession : Environmental Consultant
Specialisation : Environmental Management
Years experience : Three

KEY RESPONSIBILITIES

- Providing consulting services to clients for Environmental-related matters.
- Conducting Environmental Impact Assessment (EIA) processes.
- Preparation of EIA reports.

SKILLS BASE AND CORE COMPETENCIES

- Report Writing
- Site Investigation
- Environmental Auditing
- Co-ordination and management of project teams
- Co-ordinating and conducting Public Involvement processes.
- Preparing maps (using GIS)
- Administrative tasks (minutes of meetings)
- Research

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B Soc Sci (Environmental Management) obtained from the University of Natal in 2005.
- (Hons) (BSc) (Environmental Management) obtained from the University of South Africa in 2010.

Courses:

- Attended an EIA training course conducted by Dekra Norisko in 2008.
- Attended a Wetlands Course by the WESSA and the Department of Water Affairs and Forestry in 2008.

Professional Society Affiliations:

None

EMPLOYMENT

1. June 2007 – April 2009

Name of Employer: Nemai Consulting

Position: Environmental Consultant

2. May 2009 – August 2009

Name of Employer: Environmental Impact Management Services

Position: Environmental Control Officer

3. September 2009 – Present

Name of Employer: Savannah Environmental

Position: Environmental Consultant

PROJECT EXPERIENCE

1. Undertook the Basic Assessment Process for the Proposed Wind Monitoring Mast, near Britannia Bay, Western Cape Province.
2. Undertook the Basic Assessment Process for the Proposed Amakhala Emoyeni Wind Monitoring Masts, between Bedford and Cookhouse, Eastern Cape Province.
3. Undertook the Basic Assessment Process for the Proposed Wind Monitoring Masts, near Vredenburg, Western Cape Province.
4. Prepared **Scoping Report** for the Proposed Flagging Trees Wind Energy Facility, near Middelburg, Eastern Cape Province.
5. Prepared **Scoping Report** for the Proposed Suurplaat Wind Energy Facility, near Sutherland Western and Northern Cape Provinces.
6. **Environmental Control Officer** undertaking environmental monitoring for the Waterval Water Care Works on behalf of ERWAT.
7. **Environmental Control Officer** for Transnet's New Multi-Product Pipeline, duties include environmental auditing, preparing daily reports, weekly reports and monthly reports.
8. Prepared EIA reports on the Bus Rapid Transit System, for the City of Johannesburg (2008-2009).
3. Prepared **Environmental Management Plans** (EMP) for road upgrades in the Inner City and Soweto, for the Johannesburg Development Agency (2008 – 2009).
4. Assisted in conducting the EIA for the Neptune-Poseidon 300KV Transmission Lines, for Eskom (2008-2009).
5. Conducted the **public participation process** for the Fischer-Tropsch Wax Expansion Project, for Sasol (Ltd) (2007-2008).
6. Implemented and managed the Klipspruit River and Wetlands Cleanup, for the Gauteng Department of Agriculture Conservation and Environment. Responsibilities included managing 87 employees, preparation of annual, quarterly and monthly reports, and hosting monthly community and stakeholder meetings (2007 – 2008).
7. Implemented and managed the Bertrams Environmental Education Programme, for the

Johannesburg Development Agency. Responsible for the project operations, report writing, event co-ordination, training and capacity building of employees, conducting waste audits and stakeholder engagement (2007- 2008).

8. Implemented and managed the Rehabilitation of illegal dumpsites: **Waste Education Programme** in Soweto, for Pikitup. Duties entailed training and managing the waste awareness team, conducting site visits, dumpsite rehabilitation monitoring and mapping on GIS (2009).
9. Conducted a **feasibility study** for the development of a recycling centre in Alexandra, Jhb for Pikitup. Duties entailed extensive research, conducting a survey, waste audit, analyzing social and environmental dimension of the proposed project and compiling the report. (2008-2009).
10. Assisted in the **Development and Implementation of the Integrated Environmental Management Series**, for the Department of Water Affairs and Forestry (DWAF). Project included developing training manuals, user friendly documents, presentations and launching an environmental decision support system for DWAF (2007- 2009).
11. Undertook the **public participation** for the Sasol's Integrated Waste Management Programme (2008). Key responsibilities included co-ordination of an Open day event, preparation of presentations, invitations, minute taking and technical aspects of the events and compiling a Public Participation report (2007).

CURRICULUM VITAE
LOURENS MARTINUS DU PLESSIS

MetroGIS (Pty) Ltd

Visual Assessment and Geographic Information Systems Specialist

SKILLS BASE AND CORE COMPETENCIES

- More than 17 years experience in the application of Geographical Information Systems (GIS) in Environmental Planning and Management.
- Extensive practical knowledge in spatial analysis, environmental modelling and digital mapping.
- Experience in applying GIS in EIAs, State of the Environment Reports and Environmental Management Plans.

TERTIARY EDUCATION

- BA (University of Pretoria) Geography and Anthropology (Malors), 1993

EMPLOYMENT HISTORY

1999-present: MetroGIS, Director

1997-1999: GISBS, Project Manager

1990-1997: GisLAB c, Project Manager / Member

SELECTED RELAVANT PROJECT EXPERIENCE

- Visual Impact Assessments and Viewshed Analysis for various types of developments, including telecommunications structures, mining activities and tourism accommodation in National Parks and other environmentally sensitive areas. Some recent and current projects include:
 - * Proposed Altantis Open Cycle Gas Turbine power station.
 - * Matimba B proposed coal-fired power station.
 - * Zues to Mercury transmission line (comparative viewshed analysis)
 - *Mercury-Ferrum-Garone transmission line intergration
 - *Mmamambula (Botswana) transmission line and power station viewshed analysis Kynoch Gypsum Tailings dam extension
 - *N1 Western Bypass Shell service station
 - *Coega regional hazardous waste processing facility.
 - *Robinson Deep landfill extension
 - Concentrating Solar Power (CSP) plant
- EIAs for the utilisation of GIS based systems to determine and manage environmental impacts. Various projects in South Africa.

CURRICULUM VITAE

TIMOTHY JG HART

Archaeological Contracts Office (ACO) cc

Partner

SKILLS BASE AND CORE COMPETENCIES

- Assessment, excavation or conservation of pre-colonial sites such as shell middens, stone artefact scatters, rock art, cave deposits dating to the Early, Middle and Late Stone Age as well as late Pleistocene fossil bone accumulations.
- Exhumation of cemeteries.
- Analysis of building sequences, industrial structures, historic landscapes and features.
- Development of conservation and management plans for historic features and areas.
- Working on EIA projects as a specialist member of multi-disciplinary teams.

TERTIARY EDUCATION

- MA (Archaeology), University of Cape Town

EMPLOYMENT HISTORY

- 1984: RSA, Spatial Archaeology Research Unit, UCT, Field Archaeologist
- 1884-1985: RSA, Zeekoe Valley Archaeological Project, Southern Methodist University. Field Archaeologist. World's largest archaeological survey.
- 1986-1987: RSA, UCT Archaeology. Part-time teachings while a student.
- 1987-1991: RSA, ACO Project Manager, archaeological rescue work, course tutor.
- 1991- present: RSA, ACO UCT co-director, heritage management, contracted research both local, international, academic and commercial.

SELECTED RELAVANT PROJECT EXPERIENCE

1991-2008: Survey and mitigation of heritage resources – mining operations of De Beers.

1993: Survey and mitigation of heritage resources – Namakwa Sands mining, Brandsebaai

2004: Eskom Cape Strengthening Project

2004: Eskom: Bacchus sub-station expansion, Omega sub-station EIA project

2005: Eskom: Kudu Integration project (Namaqualand)

2005-2006: Atlantis Open Cycle Gas Turbine project, Mossel Bay OCGT project

2007-2008: EskomNuclear 1 EIA programme (ongoing)

2007: Eskom Proposed Wind Energy Facility (WEF) and Transmission Line, Vredendaal

2009: Hopefield WEF

2009: Cookhouse WEF

CURRICULUM VITAE

TONY BARBOUR

Environmental Consultant and Researcher

SKILLS BASE AND CORE COMPETENCIES

- More than 18 years experience in the field of environmental management.
- Undertaken 20 Social Impact Assessments (SIA) for EIAs commissioned by the Department of Environmental Affairs and Development Planning (DEA&DP).
- Developed SIA guidelines for DWAF.
- Worked experience in South Africa, Botswana, Namibia, Zambia, Lesotho and Swaziland.

TERTIARY EDUCATION

- BSc (Geology and Economics) Rhodes, 1984
- BEcon (Hons) Rhodes, 1985
- MSc (Environmental Science) University of Cape Town, 1992

EMPLOYMENT HISTORY

Private consultant: November 2004 – present

UCT: August 1996- October 2004. Environmental Evaluation Unit, Senior Environmental Consultant and Researcher.

1991-1996: Ninham Shand Consulting, Cape Town. Senior Environmental Scientist

1996-2000; SRK Consulting, Associate Director, Cape Town

1990- Current: Lecturer, UCT and Cape Technikon, Environmental Economics, SIA, SEA, EIA and Waste Management.

SELECTED RELEVANT PROJECT EXPERIENCE

- SIA for the Darling Wind Farm, Western Capr (2001-2002).
- Portnet Saldanha, EIA for the expansion of a bulk iron ore exporting facility at the Port of Saldhana (2000).
- SIA for road upgrade between Gansbaai and Bredadorp (2005)
- SIA for Zeekoevlei Golf Estate, Somerset West (2005)
- SIA for Silwersand Golf and Resort Estate, Robertson, Western Cape (2003)
- Internal Review consultant for Golder Associates on Namakwa Sands Heavy Mineral Mining EIA (current).
- Review of EIA for Zeekoevlei Golf Course Estate, Somerset West (2005)
- Review of EIA for Oostenberg Waste Transfer Station, Brackenfell, Western Cape (2004)
- Review of EIA for N7 Road upgrade, Clanwilliam, Western Cape (2002).

CURRICULUM VITAE

SHAWN JOHNSTON

Sustainable Futures ZA

Process Facilitator

SKILLS BASE AND CORE COMPETENCIES

- Facilitator, Mediator and Trainer
- Planning, Process Design and Conceptualising
- Facilitation, Public and Stakeholder Liaison
- Process co-ordination, problem-solving and negotiation skills.

TERTIARY EDUCATION

- B.Tech Environmental Management – Cape Peninsula University of Technology, Cape Town
- National Diploma in Horticulture, Cape Technikon, Cape Town
- Certificate in Conflict Resolution and Environmental Mediation, Partnership Lifeskills Centre/ Global Future Links- Washington DC, USA

EMPLOYMENT HISTORY

- Leadership South Programme
- FutureLinks South Africa
- Common Ground Consulting
- Sustainable Futures ZA

SELECTED RELEVANT PROJECT EXPERIENCE

- LEAD FACILITATOR, OLIFANTS/ DORING RIVER WATER USER ASSOCIATION CAPACITY BUILDING PROJECT. (Current). Facilitation and co-ordinator of the Olifant/ Doring Water User Association Capacity Building for commercial farmers and emerging black farmers.
- ESKOM PROCESS FACILITATOR. ESKOM ANKERLIG CLOSED CYCLE GAS TURBINE CONVERSATION PROJECT AND ASSOCIATED PROJECT, ATLANTIS, CAPE TOWN. (Current) Responsible for facilitating the public participation process for the Eskom Ankerlig gas turbine conversion from OCTG to CCGT and associated EIA studies.
- ESKOM PUBLIC PARTICIPATION PROCESS, ESKOM WIND ENERGY FACILITY, WEST COAST OF SOUTH AFRICA (Current) Responsible for facilitating the public participation process for the EIA process near Koekenaap in the Matzikama Municipality, Cape West Coast.
- PART TIME LECTURER, WATER AND CONFLICT, INTERGRATED WATER RESOURCES MANAGEMENT PROGRAMME AT THE UNIVERISTY OF THE WESTERN CAPE (2006-current). Assisted with establishing the first water and conflict resolution module in the MSc Integrated Water Resource Management degree course.

CURRICULUM VITAE

MORNE DE JAGER

M2 Environmental Connections cc

Founding member of the Closed Corporation

SKILLS BASE AND CORE COMPETENCIES

- Water monitoring programme design
- Water Quality Analysis and Modelling
- Environmental Auditing,
- Noise Monitoring, Modelling and Control
- Biological Monitoring
- Environmental Impact Assessment and Management
- IT skills (software as well as hardware)
- Conflict resolution and stakeholder facilitation.

TERTIARY EDUCATION

B.Eng (Chem) (University of Pretoria)

EMPLOYMENT HISTORY

- Department of Water Affairs and Forestry (1998 – 2001; Pollution Control Officer)
- EcoSat (2001 – 2002; Environmental Monitoring, Control and Management)
- Menco (2002 – current; See above)
-

SELECTED RELEVANT PROJECT EXPERIENCE

- Noise Impact Assessment for Skychrome (Pty) Ltd (A Ferro-chrome mine)
- Noise Impact Assessment for Mooinooi Chrome Mine (Western Chrome Mines)
- Noise Impact Assessment for Buffelsfontein East and West (Western Chrome Mines)
- Noise Impact Assessment for Elandsdrift (Sylvania)
- Noise Impact Assessment for Jagdlust Chrome Mine (Eastern Chrome Mines),
- Noise Impact Assessment Apollo Brick (Pty) Ltd (Clay mine and brick manufacturer).

CURRICULUM VITAE

IAIN PATON

Geologist

SKILLS BASE AND CORE COMPETENCIES

Engineering and Geology.

TERTIARY EDUCATION

Rhodes University, Grahamstown, South Africa

- 1993: Bachelor of Science Degree in Geology and Economics
- 1994: Bachelor of Science with Honours Degree in Geology

WORK EXPERIENCE

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

CURRICULUM VITAE
ANDREW ROBERT JENKINS

Researcher and Scientist

SKILLS BASE AND CORE COMPETENCIES

- Over 20 years experience in the field of avian impact assessment in South Africa.

TERTIARY EDUCATION

- **1989-1998:** MSc upgraded to PhD, Percy FitzPatrick Institute, University of Cape Town. Thesis title: Behavioural ecology of Peregrine and Lanner Falcons in South Africa.
- **1988:** BSc Hons in Zoology, University of Natal, Pietermaritzburg (with distinction). Project title: Bill morphology, feeding ecology and niche partitioning in six sympatric species of granivorous birds.
- **1984-1987:** BSc, University of Natal, Pietermaritzburg, majoring in Zoology and African & Experimental Zoology.
- **1983:** Matriculated at St. Stithian's College, Randburg.

EMPLOYMENT HISTORY

- **September 2007-March 2009:** Employed as a research scientist by the Wildlife & Energy Interaction Group of the Endangered Wildlife Trust, tasked with (i) consolidating and strengthening existing research, and initiating new research initiatives, in the field of wildlife/power line interactions, and particularly in the mitigation of bird mortalities associated with electrical infrastructure, and (ii) doing in-depth EIA assessments for major proposed developments in energy infrastructure. Designed the WEIG research programme for 2008-2011, focusing on the mitigation of bird:power line collisions.
- **March 2002-February 2007:** Employed as research scientist at FitzPatrick Institute, UCT from March 2002, managing the *Western Cape Raptor Research Programme*, and overseeing various raptor-based projects, including a collaboration with electricity supplier Eskom to reduce the incidence of line faults associated with large eagle nests on electricity transmission pylons in the Karoo, and a collaboration with the Critical Ecosystem Partnership Fund to investigate the value of the Black Harrier as a surrogate species in the conservation of lowland Fynbos and Renosterveld. Also conducted work on the suitability of Barn Owls as bio-control agents for rodents in a wheat-farming area, and the role of African Fish Eagles and other raptors as indicators of agrochemical contamination in an area of intensive viticulture, and organized and led a survey of the Taita Falcon population of the Mpumalanga escarpment. During this period, co-supervised one MSc thesis, three MSc Conservation Biology mini-theses, and two BSc Hons projects.
- **January 2003-Present:** Retained by various agencies to do EIA work as an avian specialist for development projects in the Greater Cape Town area, and more broadly in the Western Cape. Set up *AVISENSE* Consulting in April 2009.
- **January 1989-Present:** Conducted long-term field study of Peregrine Falcons on the Cape Peninsula, including monitoring of breeding performance and demography of a colour-marked population. Still ongoing.
- **January 2003-2004:** Retained to design and oversee monitoring of impacts on avifauna of the Eskom Demonstration Wind Farm facility at Klipheuwel, W Cape.
- **April 2001-2004:** Produced initial scoping report and conducted subsequent monitoring of

the potential impact of the proposed Darling National Demonstration Wind Farm facility on the local avifauna.

- **November 1998–December 2000:** Employed as a postgraduate research fellow at the FitzPatrick Institute, UCT, working on various projects concerning the biology of predation. Also co-supervised the two Masters mini-theses in Conservation Biology, and oversaw the experiential training year of a Cape Technikon Nature Conservation student.
- **November 1998:** Subcontracted by the Environmental Evaluation Unit, UCT, to conduct the avian component of a site evaluation for the proposed extension of the Namakwa Sands heavy mineral sands mine area near Lutzville on the Cape west coast.
- **September 1996, August 1997, August 2000:** Part of ornithological team subcontracted by Afridev Consultants to survey the birds of the Katse Basin, Lesotho: phase 1A of the Lesotho Highlands Water Scheme.
- **August 1995:** Part of ornithological team subcontracted by Afridev Consultants to survey the birds of the Mohale Basin, Lesotho: phase 1B of the Lesotho Highlands Water Scheme.
- **July 1992 & December/January 1993:** Contributor to "Environmental survey to determine priority areas for conservation, community use and development in the West Coast urban structure plan". Assessed avian diversity in proposed priority areas in a study coordinated by the National Botanical Institute.
- **June 1991:** Assisted with bird component of "Baseline biological study of phase 1a of the Lesotho Highlands water scheme", coordinated by Loxton Venn environmental consultants.
- **December 1989:** Assisted with environmental impact assessment of the West Coast Heavy Mineral Sands Project at *Brand se Baai*, subcontracted by UCT's Environmental Evaluation Unit.

SELECTED RELAVANT PROJECT EXPERIENCE

- Major EIA contracts completed during this time include a contribution to the Strategic Environmental Assessment for energy development in the western Cape Peninsula, and avifaunal studies of Eskom Generation's proposed Wind Energy Facility in the Vredendal area, Western Cape, and Macquarie's proposed Hopefield Wind Energy Facility, Hopefield, Western Cape.
- Involved in all the bird impact studies completed to date for proposed wind farms in South Africa, from the Darling and Eskom Klipheuwel facilities in 2003, to the Hopefield facility in 2009.
- Established track record as a published research ornithologist, spanning >20 years, including the development of a management plan for large eagles nesting on transmission pylons, and recent pioneering work on the affects of power line collisions on populations of threatened large terrestrial birds.

CURRICULUM VITAE

NICK HELME

SKILLS BASE AND CORE COMPETENCIES

Botanist

HIGHER EDUCATION

BSc (Honours) - Botany. 1990. UCT, South Africa.

Dean's Merit List & distinction – 1988; Class Medal & distinction – 1989

PROFESSIONAL REGISTRATION

Pri.Sci.Nat # 400045/08

BEE COMPLIANCE

Level Four Contributor BE # 1915

EMPLOYMENT HISTORY

Since 1997 I have been based in Cape Town, and have been working as a specialist botanical consultant, specialising in the diverse flora of the south-western Cape. Since the end of 2001 I have been working on my own and trade as Nick Helme Botanical Surveys.

SELECTED RELAVANT PROJECT EXPERIENCE

A selection of work undertaken in the general area over the last few years is as follows:

- Botanical Scoping and Impact Assessment of proposed St Helena Hills development (DJ Environmental 2009)
- Botanical Impact Assessment of Portion 4 of Farm 560, Yzerfontein (EnviroLogic 2009)
- Botanical Impact Assessment of Portion 9 of Farm 957, Saldanha (EnviroLogic 2008)
- Botanical Sensitivity study of Portion 4 of Farm Yzerfontein 560 (De Villiers family 2008)
- Botanical Scoping and Impact Assessment of proposed overnight sites in the West Coast National Park (SANParks 2008 & 2010)
- Botanical Scoping and Impact Assessment of proposed Wind Energy Facility near Hopefield (Savannah Environmental 2008 & 2009)
- Botanical Impact Assessment of proposed development on Portion 87 of the Farm Witteklip 123, Vredenburg (CCA Environmental 2008)
- Fine Scale Vegetation Mapping and Conservation Planning for Saldanha Municipality (CapeNature & SANBI, 2006 - 2007)
- Botanical Assessment of Rem. Erf 460 Ptn A, St Helena (Envirodinamik 2007)
- Baseline botanical assessment of Portion 5 of the Farm Duyker Eiland 6, St Helena (Johan Neethling Environmental Services 2006)
- Specialist Botanical input for the proposed expansion of the St Helena Urban Edge (CK Rumboll 2006)
- Botanical Assessment of Phases 4-9, Sandy Pt Heights, St Helena (EnviroLogic 2006)
- Botanical Scoping and Impact Assessment of proposed Blaauzicht Estate, St Helena (CCA 2004 and Glasshouse Consultants 2005)
- Botanical Assessment of Erf 24, St Helena (Envirodinamik 2005)

CURRICULUM VITAE

DAVID HOARE

Ecologist

SKILLS BASE AND CORE COMPETENCIES

Ecological consultant since 1995. Author of over 200 specialist ecological consulting reports. Wide experience in botanical studies within grassland, savanna and fynbos, as well as riparian, coastal and wetland vegetation.

Main areas of specialization:

- Vegetation ecology, primarily in grasslands, thicket, coastal systems, wetlands
- Plant biodiversity and threatened species specialist
- Remote sensing, analysis and mapping of vegetation
- Specialist consultant for environmental management projects

TERTIARY EDUCATION

- Matric - Graeme College, Grahamstown, 1984
- B.Sc (majors: Botany, Zoology) - Rhodes University, 1991-1993
- B.Sc (Hons) (Botany) - Rhodes University, 1994 with distinction
- M.Sc (Botany) - University of Pretoria, 1995-1997 with distinction
- PhD (in progress) – Nelson Mandela Metropolitan University, Port Elizabeth, "Patterns and determinants of plant biodiversity in temperate, mesic grasslands of South Africa" under supervision of Prof. Richard Cowling

EMPLOYMENT HISTORY

- 1 February 1998 – 30 November 2004, Researcher, Agricultural Research Council, Range and Forage Institute, Private Bag X05, Lynn East, 0039. Duties: project management, general vegetation ecology, remote sensing image processing.
- 1 December 2004 – present, Member, David Hoare Consulting cc no. 2001/034446/23. Consultant, specialist consultant contracted to a number of existing companies and organisations.
- 1 January 2009 – 30 June 2009, Lecturer, University of Pretoria, Botany Dept.

SELECTED RELAVANT PROJECT EXPERIENCE

- Vegetation pattern in Pilanesberg National Park using digital photogrammetric data preparation techniques, 1 August – present.
- VegMap digital mapping and description of vegetation units of Eastern Cape for new national vegetation map (Dept. of Environmental Affairs and Tourism/National Botanical Institute) and contributions to text and vegetation descriptions in accompanying booklet.
- Classification and mapping of the savanna biome of South Africa using remote sensing techniques, 1 February 1998 – 20 November 1999.

- Natural resource survey of nodes O R Tambo and Maputoland, using remote sensing techniques, 1 November 2001 – December 2003.
- Field data collection for National Land Cover Change Project, Dec 2003 – March 2004.
- Vegetation survey of KwaMhlanaga Landcare site, March 2004.
- Scale physiognomic survey of Suikerbosrand Nature Reserve, 1 March 1998 – 1 April 1998.
- Natural resource survey of Mpumalanga, South Africa, using remote sensing techniques, 1 November 1998 – 2000.
- Vegetation of the corridor of the proposed ESKOM powerline from Port Elizabeth to Bedford. September 2000.

National land cover change mapping and monitoring – development of guidelines, protocols and recommendations for a national mapping project, 1 June 2000 – 30 November 2000.

CURRICULUM VITAE: D G Paterson

ACADEMIC QUALIFICATIONS:

- Matriculated: 1976, Dalziel High School, Motherwell, Scotland
- BSc (Hons) Geography, 1980, University of Strathclyde, Glasgow, Scotland
- MSc (Soil Science) *cum laude*, 1998, University of Pretoria

PROFESSIONAL CAREER:

- 1981-1987: Soil Scientist: Soil and Irrigation Research Institute, Pretoria
- 1987-1992: Senior Soil Scientist: Soil and Irrigation Research Institute, Pretoria
- 1992-present: Senior Soil Scientist: ARC-Institute for Soil, Climate & Water

FIELDS OF SPECIALITY AND COMPETENCE:

- Soil classification and mapping
- Soil interpretations
- Soil survey project management
- Environmental assessment
- Soil survey and land capability course presentation
- Ground penetrating radar

PUBLICATIONS (see attached list):

- Three refereed articles (S.A. Journal of Plant and Soil)
- Nine Congress papers/posters
- S.A. Soil Classification (1991) (Member of working group)
- Seven 1:250 000 Land Type Maps
- Three Land Type Memoirs
- More than 100 soil survey reports and/or maps

COURSES COMPLETED:

- Course in Project Management (University of Stellenbosch)
- Course in Junior Personnel Management (Dept of Agriculture)
- Course in Handling of Grievances and Complaints (Dept of Agriculture)
- Course in Marketing (ARC-ISCW)
- Course in National Qualifications Framework Assessment, ARC-CO
- Training Course in Ground Penetrating Radar (GSSI, USA)
- Introduction to ArcGIS 8, GIMS, 2004

PROFESSIONAL STATUS:

- Registered Natural Scientist (SA National Council for Natural Scientific Professions)
- Member of South African Soil Classification Working Group
- Member of Soil Science Society of South Africa (1982-present)
- President of Soil Science Society of South Africa (2005-2007)
- Council Member of South African Soil Survey Association (2002-2003)
- Scientific Referee, S.A. Journal for Plant and Soil
- External Examiner, University of Pretoria and University of Witwatersrand

MISCELLANEOUS:

Editor, Soil Science Society newsletter, 1993-present

Member, Clapham High School (Pretoria) Governing Body 1998-2002

Member, Northern Gauteng Football Referee's Association

Member, Rosslyn Golf Club (Club Champion 2002)

PUBLICATIONS LIST:

Refereed Articles:

BÜHMANN, C., KIRSTEN, W.F.A., PATERSON, D.G. & SOBCZYK, M.E., 1993. Pedogenic differences between two adjacent basalt-derived profiles. 1. Textural and chemical characteristics. *S. Afr. J. Plant & Soil*, 10: 155-161

BÜHMANN, C., KIRSTEN, W.F.A., PATERSON, D.G. & SOBCZYK, M.E., 1994. Pedogenic differences between two adjacent basalt-derived profiles. 2. Mineralogical characteristics. *S. Afr. J. Plant & Soil*, 11: 5-11

PATERSON, D.G. & LAKER, M.C., 1999. Using ground penetrating radar to investigate spoil layers in rehabilitated mine soils. *S. Afr. J. Plant & Soil*, 16:131-134.

Book:

SOIL CLASSIFICATION WORKING GROUP*, 1991. Soil classification. A taxonomic system for South Africa. Institute for Soil, Climate & Water, Pretoria.

* Co-author as member of Working Group

Thesis:

PATERSON, D.G., 1998. The use of ground penetrating radar to investigate subsurface

features in selected South African soils. Unpublished M Sc Thesis, University of Pretoria.

Congress Papers:

PATERSON, D.G., 1987. The relationship between geology and soil type in the northern Kruger National Park. 14th Congress of the Soil Science Society of S.A. Nelspruit, 14-17 July 1987.

PATERSON, D.G., 1990. A study of black and red clay soils on basalt in the northern Kruger National Park. 16th Congress of the Soil Science Society of S.A. Pretoria, 9-12 July 1990.

PATERSON, D.G., 1992. The potential of ground penetrating radar as an aid to soil investigation. 17th Congress of the Soil Science Society of S.A. Stellenbosch, 28-30 Jan.1992.

PATERSON, D.G., 1995. The complex soil mantle of South Africa. ARC Wise Land Use Symposium, Pretoria, 26-27 Oct. 1995

PATERSON, D.G. & LAKER, M.C., 1998. Locating subsoil features with ground penetrating radar. 21st Congress of the Soil Science Society of S.A. Alpine Heath, 20-22 Jan. 1998.

PATERSON, D.G., 2000. Mapping rehabilitated coal mine soils in South Africa using ground penetrating radar. Eighth International Conference on Ground Penetrating Radar, Gold Coast, Australia, 23-26 May 2000.

PATERSON, D.G. & VAN DER WALT, M., 2003. The soils of South Africa from the Land Type Survey. 24th Congress of the Soil Science Society of S.A., Stellenbosch, 20-24 Jan. 2003

Land Type Maps:

PATERSON, D.G., 1990. 1:250 000 scale land type map 2230 Messina. Dept. Agriculture, Pretoria.

PATERSON, D.G. & HAARHOFF, D., 1989. 1:250 000 scale land type map 2326 Ellisras. Dept. Agriculture, Pretoria.

PATERSON, D.G., PLATH, B.L. & SMITH, H.W., 1987. 1:250 000 scale land type map 2428 Nylstroom. Dept. Agriculture, Pretoria.

PATERSON, D.G. & ROSS, P.G., 1989. 1:250 000 scale land type map 2330 Tzaneen. Dept. Agriculture, Pretoria.

PLATH, B.L. & PATERSON, D.G., 1987. 1:250 000 scale land type map 2426 Thabazimbi. Dept. Agriculture, Pretoria.

Land Type Memoirs:

PATERSON, D.G., PLATH, B.L. & SMITH, H.W., 1988. Field Investigation. In: *Land types of the maps 2426 Thabazimbi & 2428 Nylstroom. Mem. Agric. Nat. Res. S. Afr.* No. 10. Dept. Agriculture, Pretoria.

PATERSON, D.G., SCHOEMAN, J.L., TURNER, D.P., GEERS, B.C. & ROSS, P.G., 1989. Field Investigation. In: *Land types of the maps 2330 Tzaneen & 2430 Pilgrim's Rest. Mem. Agric. Nat. Res. S. Afr.* No. 12. Dept. Agriculture, Pretoria.

PATERSON, D.G., 1999. 1:250 000 land type survey of the former Ciskei (Unpublished). ISCW Report GW/A/99/24.

PATERSON, D.G., 1992. Ground penetrating radar applications in USA and South Africa. Report on an official study tour to USA, 13-29 July, 1991. ISCW Report GW/A/92/8

PATERSON, D.G., 2000. Report on official overseas visit to GPR2000 Conference, Broadbeach, Australia, 23-26 May, 2000. ISCW Report GW/A/2000/40

ARC-ISCW Reports on:

- Ground penetrating radar investigations in: Kruger National Park; Enseleni, Natal; Weatherly, Maclear; Kleinkopje Mine
- Soil survey investigations at: Roodeplaat, Kathu, Steelpoort River, Palala River, Zeekoegat (Roodeplaat), Limpopo River, Lydenburg, Kendal, Clewer Sand (Witbank), Botha Sand (Witbank), Balmoral Colliery, Bafokeng (Rustenburg), Towoomba (Warmbaths), Hoefeld Stene (Middelburg), Quality Bricks (Witbank), Visagie Sand (Middelburg), Rosslyn, Coalbrook (Sasolburg), Stewart Coal (Delmas), Forzando Coal (Hendrina), Vaalgro (Vereeniging), Ratanda (Heidelberg), Elspark (Boksburg), Thorncliffe Mine (Steelpoort), Jan Smuts Quarry (Boksburg), Ennerdale (Phase I & II), Thokoza, North Riding, Natalspruit (Alberton), Arnot, Kroondal (Phase I & II), Ga-Rankuwa, Hartebeespoort Dam, Kosmos, Assen, Grasmere, Magalies Moot (Pretoria), Valpre (Paulpietersburg), Cargo Carriers (Sasolburg), Waterval (Rustenburg), Rayton, Bronkhorstspuit, Zwavelpoort (Pretoria), Pietersburg, Trojan Mine (Steelpoort), Platinum Highway (Rustenburg), Moutse, Centurion, Salique (Klaserie), Northam, Greenside Colliery (Witbank), South Deep Mine (Westonaria), Bank Colliery, Steelpoort Platinum, Gautrain Route (Pta/Jbg), Rietspruit Mine (Ogies), Potgietersrus Platinum, Atok Mine (Lebowa), Blue Ridge Mine (Groblersdal), Ngodwana, Estancia (Breyton), Twickenham Mine (Steelpoort), Marikana

CURRICULUM VITAE

Mr John Pether, M.Sc., Pr. Sci. Nat. (Earth Science)

Geological and Palaeontological Consultant

P. O. Box 48318, Kommetjie, 7976.

Tel./Fax: (021) 7833023. Cellphone: 083 744 6295. Email: jpether@iafrica.com. Faxmail: 0866 890 732

September 2009

CURRENT STATUS

Independent Consultant/Researcher.

EXPERTISE

- Shallow marine sedimentology.
- Coastal plain and shelf stratigraphy (interpretation of open-pit exposures and cores).
- Marine macrofossil taxonomy (molluscs, barnacles, brachiopods).
- Marine macrofossil taphonomy.
- Sedimentological and palaeontological field techniques in open-cast mines (including finding and excavation of vertebrate fossils (bones)).
- Analysis of the shelly macrofauna of modern samples e.g. for environmental surveys.

Is a recognized authority in the field of coastal-plain and continental-shelf palaeoenvironments and is consulted by exploration and mining companies, by the Council for Geoscience, the Geological Survey of Namibia and by colleagues/students in academia pursuing coastal-plain/shelf projects.

Has intimate knowledge of the West Coast geohistorical model w.r.t. exploration for gem diamond resources. Currently a member of the Afri-Can Marine Minerals Corp. exploration team.

Has served as a representative for the interests of palaeontology in early discussions on developing strategies to mitigate loss of data and fossils in coastal mines and developments, in terms of Heritage Resource Management.

At present, an important involvement is in palaeontological impact assessments (PIAs) and mitigation projects in terms of the National Heritage Resources Act 25 (1999).

MEMBERSHIP OF PROFESSIONAL BODIES

- South African Council of Natural Scientific Professions. Earth Science. Reg. No. 400094/95.
- Geological Society of South Africa.
- Palaeontological Society of Southern Africa.
- Southern African Society for Quaternary Research.
- Member, Permit Committee for Archaeology, Palaeontology and Meteorites, Council of Heritage, Western Cape.
- Accredited member, Association of Heritage Assessment Practitioners, Western Cape.

HERITAGE IMPACT ASSESSMENT INVOLVEMENTS

1995. Draft procedures for the mitigation of mining impacts on palaeontological resources at the proposed Anglo-Alpha Saldanha Cement Project. For Mark Wood Consultants, Environmental Management. (Jun)
1995. Specialist Palaeontological Study. Assessment of the potential palaeontological impacts of the shale and limestone mining, Anglo-Alpha Saldanha Cement Project. For Mark Wood Consultants, Environmental Management. (Jun).
1995. The Impact of Mining on Fossiliferous Sediments. Submitted to the Mining Environment Forum, Western Cape Regional office of the Department of Mineral and Energy Affairs. (27 Oct).
2003. Palaeontological Mitigation Report, Development on Velddrif Fossil Shell Bar. Noordhoek Phase 2, Velddrif Housing, Berg River Municipality. For Ninham Shand (Pty) Ltd. (Oct).
2004. Initial Palaeontological Mitigation Report, Last Interglacial Deposits Verlorevlei South Bank. Re-alignment of Main Road Mr 535, Elandsbaai, Provincial Administration Western Cape. For Megan Anderson, Landscape Architect. February 2005. (May).
2004. Palaeontological Mitigation Report, Coastal Marine Deposits Dwarskersbos. Dwarskersbos Erf 276 Housing Development. For BKS (Pty) Ltd. (Sept).
2005. Final Palaeontological Mitigation Report, Last Interglacial Deposits Verlorevlei South Bank. Re-alignment of Main Road Mr 535, Elandsbaai, Provincial Administration Western Cape. For Megan Anderson, Landscape Architect. (Feb).
2005. Brief assessment for palaeontological mitigation, sites on Witteklip, Vredenburg. For Heritage Resources Authority, Western Cape. (2 Sept).
2006. Western Macassar Dunes Eco-trails Project. Heritage specialist input for Draft Scoping Report: Palaeontological assessment of the Western Macassar Dunes. For UCT Environmental Evaluation Unit. (Feb)
2006. Western Macassar Dunes Eco-trails Project. Palaeontological assessment of the Western Macassar Dunes: General Information Document. For UCT Environmental Evaluation Unit. (Feb).
2006. Palaeontological and scientific mitigation of shoreline deposits during works at Dwarskersbos, Erf 149, Dwarskersbos North and Farm 109, Dwarskersbos South. For Western Cape Environmental Consultants (Pty) Ltd, t/a ENVIRO DINAMIK. Mar.
2006. Palaeontological and scientific mitigation of shoreline deposits during works at Erf 470, Velddrif. For Western Cape Environmental Consultants (Pty) Ltd, t/a ENVIRO DINAMIK. Mar.
2006. Palaeontological investigation and mitigatory actions for proposed hazardous waste disposal site, Saldanha Bay municipal area. For Resource Management Services. May.
2006. Palaeontological Mitigatory Actions - Development of Erf 578, Velddrif (Laaiplek). For Western Cape Environmental Consultants (Pty) Ltd, t/a ENVIRO DINAMIK. Aug.
2006. Palaeontological investigation and mitigatory actions for proposed residue dam, Namakwa Sands smelter, Saldanha Bay municipal area. For Resource Management Services. Aug.
2006. Palaeontological Mitigatory Actions - Development of Erf 377, Jacobs Bay. For Matflor (Pty) Ltd. Sept.
2006. Palaeontological Mitigatory Actions - Developments of Portion 7 of Jacobs Baay 108 and Portion 3 of Trekossen Kraal 104. Prepared for Mr Tim Hart, Heritage Assessor, UCT Archaeology Contracts Office (ACO). Sept.
2006. Palaeontological Mitigatory Actions - Development of Erf 460, St. Helena Bay. For CK Rumboll & Partners. Sept.
2006. Palaeontological Mitigation Report, Coastal Marine Deposits, Bloubergstrand. For Cape Archaeology, Dr Mary Patrick. Sept.
2006. Palaeontological Mitigatory Actions - Development of Philipskraal, Centrepoint Development, Saldanha Small Holdings. For BKS (Pty) Ltd Engineering and Management. Dec.
2007. Brief palaeontological impact assessment and proposed mitigatory actions. Construction of a pebble-bed modular reactor, Koeberg. For Archaeology Contracts Office, Dept Archaeology, UCT. (Nov).

- 2007. Palaeontological Impact Assessment. Desktop scoping report. Developments of Duinekroon 591/ remainder (Still Bay), district Riversdale. For Perception Environmental Planning. (Oct).
- 2008. EIA Phase 2 expansion of the Saldanha iron ore handling facility. Heritage: Palaeontological Assessment. Stratigraphic review and recommendations for palaeontological mitigation. For PD Naidoo & Associates (Pty) Ltd, consultants to Transnet. (Feb).
- 2008. Palaeontological Mitigation and Geoheritage: De Beers Namaqualand Mines. Initial Draft Report. 28pp, with 4 maps and 49 images. Unpub. (May).
- 2008. Palaeontological potential at Baboon Point. A brief palaeontological assessment of erven 65, 66 and Portion 4 of Verlorenvlei Farm no. 8, Baboon Point/Cape Deseada, Elandsbaai. For Agency for Cultural Resource Management. (June).
- 2008. Palaeontological Impact Assessment. Development Of Erven 231 And 478, Velddrif (Laaipek). For Robin Ellis, Heritage Impact Assessor. (July).
- 2009. Draft Palaeontological Impact Assessment. New Borrow Pits For Roadworks, Port Nolloth – Richtersveld Municipality. For Van Zyl Environmental Consultants, Upington. (Jan).
- 2009. Palaeontological Impact Assessment. Proposed Phosphate Prospecting, Langebaanweg. Langeberg 185 Portions 7 & 12 and Farm 1043, Vredenburg Magisterial District, Saldanha Bay Municipality. For Site Plan Consulting (Pty) Ltd. (Feb).
- 2009. Palaeontological Impact Assessment (Desktop Scoping Study). Proposed Construction of an Hotel on Ganse Vallei 444/38, Plettenberg Bay, District Knysna, Western Cape. For PERCEPTION Environmental Planning. (May).
- 2009. Palaeontological Impact Assessment (Desktop Scoping Study). Proposed Housing Development on Besters Kraal 38, Portion 37, Vredenburg, Western Cape. For Agency for Cultural Resource Management. (June).
- 2009. Palaeontological Impact Assessment (Desktop Scoping Study) and Chance Find Management Plan. Establishment of a Metal Recovery Plant At Arcelor Mittal Saldanha Works, Saldanha Bay, Western Cape. For Environmental Resources Management SA (ERM). (June).
- 2009. Palaeontological Monitoring Report. Establishment Of A Metal Recovery Plant At Arcelor Mittal Saldanha Works, Saldanha Bay, Western Cape. For Environmental Resources Management SA (ERM). (Aug).
- 2009. Palaeontological Impact Assessment (Desktop Scoping Study). Proposed Construction of an Hotel on Erf 12529, Beacon Island Estate, Plettenberg Bay, District Knysna, Western Cape. For PERCEPTION Environmental Planning. (June).
- 2009. Palaeontological Impact Assessment (Desktop Scoping Study). Proposed New Waste Water Treatment Works, Paternoster. Remainder Besters Kraal 38, Portion 3 And Erf 1519, Vredenburg District, Saldanha Bay Municipality, Western Cape. For Agency for Cultural Resource Management. (July).
- 2009. Draft Palaeontological Mitigation Procedures. Initial Phase 2a Phosphate Prospecting. Langeberg 185 Ptns 7 & 12 and Farm 1043, Langebaanweg, Vredenburg Magisterial District, Saldanha Bay Municipality. For Site Plan Consulting (Pty) Ltd. (Sept).

RECENT GENERAL CONSULTATION

- 2005. Note on calcareous tubes etc. from Mossel Bay, sample 46842. For Dr. Curtis W. Marean, Institute of Human Origins, School of Human Evolution and Social Change, Arizona State University. (5 May).
- 2005. Marine deposits and sea-level history in the Mossel Bay area. With Dave Roberts, CGS. For SACP4 Project led by Dr. Curtis W. Marean, Institute of Human Origins, School of Human Evolution and Social Change, Arizona State University. Ongoing.
- 2005. Geology of the Velddrif area and desktop assessment of the potential for ***** deposits. For CNdV Africa. (22 Jun).
- 2005. Notes on a visit to Namakwa Sands, 14 March 2005. For Namakwa Sands (Pty) Ltd. (19 Apr).
- 2005. Namakwa Sands West Mine: stratigraphy, depositional environments and palaeontology. 1st Report. For Namakwa Sands. (Dec.).

2005. The West Coast – a brief history. For Mr Joss Lean, Exec. Producer, Project Coordination, Our Coast for Life. (Jul).
2005. Initial examination of the macrofaunal fossil content of paraconglomerates from SASA 2C. For De Beers Marine (SA) Pty Ltd. (Aug).
2006. Stratigraphic contexts of palaeoseismicity, Namaqualand coast. Field consultation. For the Council for Geoscience. (Feb).
2006. Namakwa Sands West Mine: stratigraphy, depositional environments and palaeontology. 2nd Phase. For Namakwa Sands. (Oct. - ongoing).
2006. Stratigraphy, depositional environments and palaeontology of Marine EPL 2499, off Namibia. For Afri-Can Marine Minerals Corp. (Nov. - ongoing).
2007. Epl 2499, Namibia. Report On The Vibracores. Features 6, 8, 17 & 18. Voyage Mv Mare Oceano, October-November 2006. Parts I & II. For Afri-Can Marine Minerals Corp. (Aug).
2008. Due Diligence Report. Concession Area EPL 3484, Namibia. For Afri-Can Marine Minerals Corp. Co-authors M. Mittelmeyer, J Pether, L Gardner. (Nov).

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- Kensley, B. & Pether, J. 1986. Late Tertiary and Early Quaternary Mollusca of the Hondeklip area, Cape Province, South Africa. *Annals of the South African Museum* 97 (6): 141-225.
- Pether, J. 1986. Late Tertiary and Early Quaternary marine deposits of the Namaqualand coast, Cape Province: new perspectives. *South African Journal of Science* 82 (9): 464-470.
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- Pether, J. 1990. A new *Austromegabalanus* (Cirripedia, Balanidae) from the Pliocene of Namaqualand, Cape Province, South Africa. *Annals of the South African Museum* 99 (1): 1-13.
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- Pether, J. 1994. The sedimentology, palaeontology and stratigraphy of coastal-plain deposits at Hondeklip Bay, Namaqualand, South Africa. *Unpub. M.Sc. thesis, University of Cape Town*, 313 pp.
- Pether, J. 1995. *Belichnus* new ichnogenus, a ballistic trace on mollusc shells from the Holocene of the Benguela region, South Africa. *Journal of Paleontology* 69: 171-181.
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- Roberts, D.L., Botha, G.A., Maud, R.R. and Pether, J. 2006. Coastal Cenozoic Deposits (Chapter 30). In: Johnson, M. R., Anhaeusser, C. R. and Thomas, R. J. (eds.), *The Geology of South Africa. Geological Society of South Africa, Johannesburg/Council for Geoscience, Pretoria: 605-628.*

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1986. The Late Tertiary and Early Quaternary marine deposits of the coast of Namaqualand, Cape Province. Institute of Coastal Research, University of Port Elisabeth, Report No. 12: 50-60.
1986. Fossil molluscs from Hondeklipbaai. Fourth Conference of the Palaeontological Society of South Africa, Abstracts.

- 1987. Shallow marine deposition in the Pliocene of Namaqualand. Sixth National Oceanographic Symposium, Stellenbosch. Handbook: B-27.
- 1989. Relict to Recent Mollusca: a potential for Benguela history. Conference on Geosphere-Biosphere change in Southern Africa, Cape Town, Programme and Abstracts: 35.
- 1989. Summary of western shelf malacological evidence. Proceedings of the Workshop on later Quaternary fluctuations of sea-level 13th March, 1989, University of Cape Town.
- 1989. The malacofauna of late Quaternary transgressions. Proceedings of the Workshop on later Quaternary fluctuations of sea-level 13th March, 1989, University of Cape Town..
- 1995. Molluscan evidence of climatic change from the western shelf. XII Biennial Conference of the Southern African Society for Quaternary Research, Abstracts, 9-10.

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- 1987. Curious conches from bygone beaches. *Sagittarius* 2 (1): 7-9.
- 1988. Provinces past and present. *Sagittarius* 3: 2- 4.
- 1990. West Coast Excursion. *Geobulletin*, The Geological Society of South Africa 33(3): 24-26.

SUMMARY HISTORY

- 1956. Born in Cape Town on the 19th June.
- 1973. Matriculated First Grade, Westerford High School, Newlands.
- 1974. Research technical assistant, Division of Sea Fisheries, Walvis Bay. Involved in monitoring of pelagic fishing and in oceanographic and biological research cruises.
- 1977. B.Sc. student, Geology major, University of Cape Town.
- 1980. Geologist, Trans-Hex Group (Buffelsbank Diamante, Terra Marina). Diamond exploration onshore and offshore, including ore-body delineation at Hondeklip Bay, prospecting of modern beaches and shoreface, including side-scan sonar mapping. Mapping of south bank Orange River terraces (Baken).
- 1981. B.Sc., Geology major, University of Cape Town.
- 1983. B.Sc. Honours, University of Cape Town.
- 1984. Joined the South African Museum as Professional Officer in the Department of Cenozoic Palaeontology. Researcher of the palaeontology, sedimentology and palaeoenvironments of coastal-plain deposits and deposits of the continental shelf. Duties also involved field collection of invertebrate and vertebrate fossils, their conservation and curation. Honourary curator of the modern Mollusca collection. Participated in educational programmes by giving lectures, courses and preparing displays.
- 1994. M.Sc. degree awarded with distinction (UCT).
- 1996. Senior Project Geologist, De Beers Marine. Data acquisition, management, analysis, synthesis and report compilation involving inter alia: field observations, logging and sampling; development of routine field logging criteria, recording procedures and training for operational personnel; sample analysis and interpretation; geological and geophysical interpretation; seabed geotechnical characterization; consultation to peers within the company; project planning; input to local and regional geological models, including within the wider De Beers Group companies.
- 2004 - Present. Independent Consultant/Researcher.
 - Currently an independent consultant to Afri-Can Marine Minerals Corp. as a member of the exploration team.
 - Consultant to EIA/HIA projects, contributing palaeontological impact assessments (PIAs) and mitigation recommendations in terms of the National Heritage Resources Act 25 (1999).

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