

CURRICULUM VITAE OF JO-ANNE THOMAS

Profession:	Environmental Management and Compliance Consultant; Environmental Assessment Practitioner
Specialisation:	Environmental Management; Strategic environmental advice; Environmental compliance advice & monitoring; Environmental Impact Assessments; Policy, strategy & guideline formulation; Project Management; General Ecology
Work experience:	Twenty one (21) years in the environmental field

VOCATIONAL EXPERIENCE

Provide technical input for projects in the environmental management field, specialising in Strategic Environmental Advice, Environmental Impact Assessment studies, environmental auditing and monitoring, 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 (including client and authority liaison and management of specialist teams); 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)

Short Courses:

- Environmental Impact Assessment, Potchefstroom University (1998)
- Environmental Law, Morgan University (2001)
- Environmental Legislation, IMBEWU (2017)
- Mining Legislation, Cameron Cross & Associates (2013)
- Environmental and Social Risk Management (ESRM), International Finance Corporation (2018)

Professional Society Affiliations:

- Registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist: Environmental Scientist (400024/00)
- Registered with the International Association for Impact Assessment South Africa (IAIASa): 5601
- Member of the South African Wind Energy Association (SAWEA)

EMPLOYMENT

Date	Company	Roles and Responsibilities
January 2006 - Current:	Savannah Environmental (Pty) Ltd	Director Project manager Independent specialist environmental consultant, Environmental Assessment Practitioner (EAP) and advisor.
1997 – 2005:	Bohlweki Environmental (Pty) Ltd	Senior Environmental Scientist at. Environmental Management and Project Management
January – July 1997:	Sutherland High School, Pretoria	Junior Science Teacher

PROJECT EXPERIENCE

Project experience includes large infrastructure projects, including electricity generation and transmission, wastewater treatment facilities, mining and prospecting activities, property development, and national roads, as well as strategy and guidelines development.

RENEWABLE POWER GENERATION PROJECTS: PHOTOVOLTAIC SOLAR ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Christiana PV 2 SEF, North West	Solar Reserve South Africa	Project Manager & EAP
De Aar PV facility, Northern Cape	iNca Energy	Project Manager & EAP
Everest SEF near Hennenman, Free State	FRV Energy South Africa	Project Manager & EAP
Graafwater PV SEF, Western Cape	iNca Energy	Project Manager & EAP
Grootkop SEF near Allanridge, Free State	FRV Energy South Africa	Project Manager & EAP
Hertzogville PV 2 SEF with 2 phases, Free State	SunCorp / Solar Reserve	Project Manager & EAP
Karoshhoek CPV facility on site 2 as part of the larger Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP

Project Name & Location	Client Name	Role
Kgabalatsane SEF North-East for Brits, North West	Built Environment African Energy Services	Project Manager & EAP
Kleinbegin PV SEF West of Groblershoop, Northern Cape	MedEnergy Global	Project Manager & EAP
Lethabo Power Station PV Installation, Free State	Eskom Holdings SoC Limited	Project Manager & EAP
Majuba Power Station PV Installation, Mpumalanga	Eskom Holdings SoC Limited	Project Manager & EAP
Merapi PV SEF Phase 1 – 4 South-East of Excelsior, Free State	SolaireDirect Southern Africa	Project Manager & EAP
Sannaspos Solar Park, Free State Province	SolaireDirect Southern Africa	Project Manager & EAP
Ofir-Zx PV Plant near Keimoes, Northern Cape	S28 Degrees Energy	Project Manager & EAP
Oryx SEF near Virginia, Free State	FRV Energy South Africa	Project Manager & EAP
Project Blue SEF North of Kleinsee, Northern Cape	WWK Development	Project Manager & EAP
S-Kol PV Plant near Keimoes, Northern Cape	S28 Degrees Energy	Project Manager & EAP
Sonnenberg PV Plant near Keimoes, Northern Cape	S28 Degrees Energy	Project Manager & EAP
Tutuka Power Station PV Installation, Mpumalanga	Eskom Transmission	Project Manager & EAP
Two PV sites within the Northern Cape	MedEnergy Global	Project Manager & EAP
Two PV sites within the Western & Northern Cape	iNca Energy	Project Manager & EAP
Upington PV SEF, Northern Cape	MedEnergy Global	Project Manager & EAP
Vredendal PV facility, Western Cape	iNca Energy	Project Manager & EAP
Waterberg PV plant, Limpopo	Thupela Energy	Project Manager & EAP
Watershed Phase I & II SEF near Litchtenburg, North West	FRV Energy South Africa	Project Manager & EAP
Alldays PV & CPV SEF Phase 1, Limpopo	BioTherm Energy	Project Manager & EAP
Hyperion PV Solar Development 1, 2, 3, 4, 5 & 6	Building Energy	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Aberdeen PV SEF, Eastern Cape	BioTherm Energy	Project Manager & EAP
Christiana PV 1 SEF on Hartebeestpan Farm, North-West Province	Solar Reserve South Africa	Project Manager & EAP
Heuningspruit PV1 & PV 2 facilities near Koppies, Free State	Sun Mechanics	Project Manager & EAP
Kakamas PV Facility, Northern Cape	iNca Energy	Project Manager & EAP
Kakamas II PV Facility, Northern Cape	iNca Energy	Project Manager & EAP
Machadodorp 1 PV SEF, Mpumalanga	Solar To Benefit Africa	Project Manager & EAP
PV site within the Northern Cape	iNca Energy	Project Manager & EAP
PV sites within 4 ACSA airports within South Africa, National	Airports Company South Africa (ACSA)	Project Manager & EAP
RustMo1 PV Plant near Buffelspoort, North West	Momentous Energy	Project Manager & EAP
RustMo2 PV Plant near Buffelspoort, North West	Momentous Energy	Project Manager & EAP
RustMo3 PV Plant near Buffelspoort, North West	Momentous Energy	Project Manager & EAP
RustMo4 PV Plant near Buffelspoort, North West	Momentous Energy	Project Manager & EAP
Sannaspos PV SEF Phase 2 near Bloemfontein, Free State	SolaireDirect Southern Africa	Project Manager & EAP
Solar Park Expansion within the Rooiwal Power Station, Gauteng	AFRKO Energy	Project Manager & EAP
Steynsrus SEF, Free State	SunCorp	Project Manager & EAP
Thaba Eco Lodge PV Facility, Gauteng	Camco Clean Energy	Project Manager & EAP

Screening Studies

Project Name & Location	Client Name	Role
Allemans Fontein SEF near Noupoot, Northern Cape	Fusion Energy	Project Manager & EAP
Amandel SEF near Thabazimbi, Limpopo	iNca Energy	Project Manager & EAP
Arola/Doornplaat SEF near Ventersdorp, North West	FRV & iNca Energy	Project Manager & EAP
Bloemfontein Airport PV Installation, Free State	The Power Company	Project Manager & EAP
Brakspruit SEF near Klerksorp, North West	FRV & iNca Energy	Project Manager & EAP
Carolus Poort SEF near Noupoot, Northern Cape	Fusion Energy	Project Manager & EAP
Damfontein SEF near Noupoot, Northern Cape	Fusion Energy	Project Manager & EAP
Everest SEF near Welkom, Free State	FRV & iNca Energy	Project Manager & EAP
Gillmer SEF near Noupoot, Northern Cape	Fusion Energy	Project Manager & EAP
Grootkop SEF near Allansridge, Free State	FRV & iNca Energy	Project Manager & EAP
Heuningspruit PV1 & PV 2 near Koppies, Free State	Cronimat	Project Manager & EAP
Kimberley Airport PV Installation, Northern Cape	The Power Company	Project Manager & EAP
Kolonnade Mall Rooftop PV Installation in Tshwane, Gauteng	Momentous Energy	Project Manager & EAP
Loskop SEF near Groblersdal, Limpopo	S&P Power Unit	Project Manager & EAP
Marble SEF near Marble Hall, Limpopo	S&P Power Unit	Project Manager & EAP
Morgenson PV1 SEF South-West of Windsorton, Northern Cape	Solar Reserve South Africa	Project Manager & EAP
OR Tambo Airport PV Installation, Gauteng	The Power Company	Project Manager & EAP
Oryx SEF near Virginia, Free State	FRV & iNca Energy	Project Manager & EAP
Rhino SEF near Vaalwater, Limpopo	S&P Power Unit	Project Manager & EAP
Rustmo2 PV Plant near Buffelspoort, North West	Momentous Energy	Project Manager & EAP
Spitskop SEF near Northam, Limpopo	FRV & iNca Energy	Project Manager & EAP
Steynsrus PV, Free State	Suncorp	Project Manager & EAP
Tabor SEF near Polokwane, Limpopo	FRV & iNca Energy	Project Manager & EAP
Uppington Airport PV Installation, Northern Cape	The Power Company	Project Manager & EAP
Valeria SEF near Hartebeestpoort Dam, North West	Solar to Benefit Africa	Project Manager & EAP
Watershed SEF near Lichtenburg, North West	FRV & iNca Energy	Project Manager & EAP
Witkop SEF near Polokwane, Limpopo	FRV & iNca Energy	Project Manager & EAP
Woodmead Retail Park Rooftop PV Installation, Gauteng	Momentous Energy	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO and bi-monthly auditing for the construction of the Adams Solar PV Project Two South of Hotazel, Northern Cape	Enel Green Power	Project Manager
ECO for the construction of the Kathu PV Facility, Northern Cape	REISA	Project Manager
ECO and bi-monthly auditing for the construction of the Pulida PV Facility, Free State	Enel Green Power	Project Manager
ECO for the construction of the RustMo1 SEF, North West	Momentous Energy	Project Manager
ECO for the construction of the Sishen SEF, Northern Cape	Windfall 59 Properties	Project Manager
ECO for the construction of the Uppington Airport PV Facility, Northern Cape	Sublanary Trading	Project Manager
Quarterly compliance monitoring of compliance with all environmental licenses for the operation	REISA	Project Manager

Project Name & Location	Client Name	Role
activities at the Kathu PV facility, Northern Cape		
ECO for the construction of the Konkoonises II PV SEF and associated infrastructure, Northern Cape province	BioTherm Energy	Project Manager
ECO for the construction of the Aggeneys PV SEF and associated infrastructure, Northern Cape province	BioTherm Energy	Project Manager

Compliance Advice and ESAP Reporting

Project Name & Location	Client Name	Role
Aggeneys Solar Farm, Northern Cape	BioTherm Energy	Environmental Advisor
Airies II PV Facility SW of Kenhardt, Northern Cape	BioTherm Energy	Environmental Advisor
Kalahari SEF Phase II in Kathu, Northern Cape	Engie	Environmental Advisor
Kathu PV Facility, Northern Cape	Building Energy	Environmental Advisor
Kenhardt PV Facility, Northern Cape	BioTherm Energy	Environmental Advisor
Kleinbegin PV SEF West of Groblershoop, Northern Cape	MedEnergy	Environmental Advisor
Konkoonises II SEF near Pofadder, Northern Cape	BioTherm Energy	Environmental Advisor
Konkoonises Solar Farm, Northern Cape	BioTherm Energy	Environmental Advisor
Lephalale SEF, Limpopo	Exxaro	Environmental Advisor
Pixley ka Seme PV Park, South-East of De Aar, Northern Cape	African Clean Energy Developments (ACED)	Environmental Advisor
RustMo1 PV Plant near Buffelspoort, North West	Momentous Energy	Environmental Advisor
Scuitdrift 1 SEF & Scuitdrift 2 SEF, Limpopo	Building Energy	Environmental Advisor
Sirius PV Plants, Northern Cape	Aurora Power Solutions	Environmental Advisor
Upington Airport PV Power Project, Northern Cape	Sublunary Trading	Environmental Advisor
Upington SEF, Northern Cape	Abengoa Solar	Environmental Advisor
Ofir-ZX PV SEF near Keimoes, Northern Cape	Networx S28 Energy	Environmental Advisor

Due Diligence Reporting

Project Name & Location	Client Name	Role
5 PV SEF projects in Lephalale, Limpopo	iNca Energy	Environmental Advisor
Prieska PV Plant, Northern Cape	SunEdison Energy India	Environmental Advisor
Sirius Phase One PV Facility near Upington, Northern Cape	Aurora Power Solutions	Environmental Advisor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Biodiversity Permit & WULA for the Aggeneys SEF near Aggeneys, Northern Cape	BioTherm Energy	Project Manager & EAP
Biodiversity Permit for the Konkoonises II SEF near Pofadder, Northern Cape	BioTherm Energy	Project Manager & EAP
Biodiversity Permitting for the Lephalale SEF, Limpopo	Exxaro Resources	Project Manager & EAP
Environmental Permitting for the Kleinbegin PV SEF West of Groblershoop, Northern Cape	MedEnergy	Project Manager & EAP
Environmental Permitting for the Upington SEF, Northern Cape	Abengoa Solar	Project Manager & EAP
Environmental Permitting for the Kathu PV Facility, Northern Cape	Building Energy	Project Manager & EAP

Project Name & Location	Client Name	Role
Environmental Permitting for the Konkoonsies Solar Farm, Northern Cape	BioTherm Energy	Project Manager & EAP
Environmental Permitting for the Lephalale SEF, Limpopo	Exxaro Resources	Project Manager & EAP
Environmental Permitting for the Scuitdrift 1 SEF & Scuitdrift 2 SEF, Limpopo	Building Energy	Project Manager & EAP
Environmental Permitting for the Sirius PV Plant, Northern Cape	Aurora Power Solutions	Project Manager & EAP
Permits for the Kleinbegin and UAP PV Plants, Northern Cape	MedEnergy Global	Project Manager & EAP
S53 Application for Arriesfontein Solar Park Phase 1 – 3 near Danielskuil, Northern Cape	Solar Reserve / SunCorp	Project Manager & EAP
S53 Application for Hertzogville PV1 & PV 2 SEFs, Free State	Solar Reserve / SunCorp	Project Manager & EAP
S53 Application for the Bloemfontein Airport PV Facility, Free State	Sublunary Trading	Project Manager & EAP
S53 Application for the Kimberley Airport PV Facility, Northern Cape	Sublunary Trading	Project Manager & EAP
S53 Application for the Project Blue SEF, Northern Cape	WWK Developments	Project Manager & EAP
S53 Application for the Upington Airport PV Facility, Free State	Sublunary Trading	Project Manager & EAP
WULA for the Kalahari SEF Phase II in Kathu, Northern Cape	Engie	Project Manager & EAP

RENEWABLE POWER GENERATION PROJECTS: CONCENTRATED SOLAR FACILITIES (CSP)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Ilanga CSP 2, 3, 4, 5, 7 & 9 Facilities near Upington, Northern Cape	Emvelo Holdings	Project Manager & EAP
Ilanga CSP near Upington, Northern Cape	Ilangethu Energy	Project Manager & EAP
Ilanga Tower 1 Facility near Upington, Northern Cape	Emvelo Holdings	Project Manager & EAP
Karoshhoek CPVPD 1-4 facilities on site 2 as part of the larger Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP
Karoshhoek CSP facilities on sites 1.4; 4 & 5 as part of the larger Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP
Karoshhoek Linear Fresnel 1 Facility on site 1.1 as part of the larger Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO for the construction of the !Khi CSP Facility, Northern Cape	Abengoa Solar	Project Manager
ECO for the construction of the Ilanga CSP 1 Facility near Upington, Northern Cape	Karoshhoek Solar One	Project Manager

Project Name & Location	Client Name	Role
ECO for the construction of the folar Park, Northern Cape	Kathu Solar	Project Manager
ECO for the construction of the KaXu! CSP Facility, Northern Cape	Abengoa Solar	Project Manager
Internal audit of compliance with the conditions of the IWUL issued to the Karoshoek Solar One CSP Facility, Northern Cape	Karoshoek Solar One	Project Manager

Screening Studies

Project Name & Location	Client Name	Role
Upington CSP (Tower) Plant near Kanoneiland, Northern Cape	iNca Energy and FRV	Project Manager & EAP

Compliance Advice and ESAP reporting

Project Name & Location	Client Name	Role
Ilanga CSP Facility near Upington, Northern Cape	Ilangethu Energy	Environmental Advisor
Ilangalethu CSP 2, Northern Cape	FG Emvelo	Environmental Advisor
Kathu CSP Facility, Northern Cape	GDF Suez	Environmental Advisor
Lephalale SEF, Limpopo	Cennergi	Environmental Advisor
Solis I CSP Facility, Northern Cape	Brightsource	Environmental Advisor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Environmental Permitting for the Ilanga CSP Facility near Upington, Northern Cape	Ilangethu Energy	Project Manager & EAP
Environmental Permitting for the Kathu CSP, Northern Cape	GDF Suez	Project Manager & EAP
WULA for the Solis I CSP Facility, Northern Cape	Brightsource	Project Manager & EAP

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Sere WEF, Western Cape	Eskom Holdings SoC Limited	EAP
Aberdeen WEF, Eastern Cape	Eskom Holdings SoC Limited	Project Manager & EAP
Amakhala Emoyeni WEF, Eastern Cape	Windlab Developments	Project Manager & EAP
EXXARO West Coast WEF, Western Cape	EXXARO Resources	Project Manager & EAP
Goereesoe Wind Farm near Swellendam, Western Cape	iNca Energy	Project Manager & EAP
Hartneest WEF, Western Cape	Juwi Renewable Energies	Project Manager & EAP
Hopefield WEF, Western Cape	Umoya Energy	EAP
Kleinsee WEF, Northern Cape	Eskom Holdings SoC Limited	Project Manager & EAP
Klipheuwel/Dassiesfontein WEF within the Overberg area, Western Cape	BioTherm Energy	Project Manager & EAP
Moorreesburg WEF, Western Cape	iNca Energy	Project Manager & EAP
Oyster Bay WEF, Eastern Cape	Renewable Energy Resources Southern Africa	Project Manager & EAP
Project Blue WEF, Northern Cape	Windy World	Project Manager & EAP
Rhebokfontein WEF, Western Cape	Moyeng Energy	Project Manager & EAP

Project Name & Location	Client Name	Role
Spitskop East WEF near Riebeeck East, Eastern Cape	Renewable Energy Resources Southern Africa	Project Manager & EAP
Suurplaat WEF, Western Cape	Moyeng Energy	Project Manager & EAP
Swellendam WEF, Western Cape	IE Swellendam	Project Manager & EAP
Tsitsikamma WEF, Eastern Cape	Exxarro	Project Manager & EAP
West Coast One WEF, Western Cape	Moyeng Energy	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Amakhala Emoyeni Wind Monitoring Masts, Eastern Cape	Windlab Developments	Project Manager & EAP
Beaufort West Wind Monitoring Masts, Western Cape	Umoya Energy	Project Manager & EAP
Hopefield Community Wind Farm near Hopefield, Western Cape	Umoya Energy	Project Manager & EAP
Koekenaap Wind Monitoring Masts, Western Cape	EXXARO Resources	Project Manager & EAP
Koingnaas WEF, Northern Cape	Just Palm Tree Power	Project Manager & EAP
Laingsburg Area Wind Monitoring Masts, Western Cape	Umoya Energy	Project Manager & EAP
Overberg Area Wind Monitoring Masts, Western Cape	BioTherm Energy	Project Manager & EAP
Oyster Bay Wind Monitoring Masts, Eastern Cape	Renewable Energy Systems Southern Africa (RES)	Project Manager & EAP

Screening Studies

Project Name & Location	Client Name	Role
Albertinia WEF, Western Cape	BioTherm Energy	Project Manager & EAP
Koingnaas WEF, Northern Cape	Just Pal Tree Power	Project Manager & EAP
Napier Region WEF Developments, Western Cape	BioTherm Energy	Project Manager & EAP
Tsitsikamma WEF, Eastern Cape	Exxarro Resources	Project Manager & EAP
Various WEFs within an identified area in the Overberg area, Western Cape	BioTherm Energy	Project Manager & EAP
Various WEFs within an identified area on the West Coast, Western Cape	Investec Bank Limited	Project Manager & EAP
Various WEFs within an identified area on the West Coast, Western Cape	Eskom Holdings Limited	Project Manager & EAP
Various WEFs within the Western Cape	Western Cape Department of Environmental Affairs and Development Planning	Project Manager & EAP
Velddrift WEF, Western Cape	VentuSA Energy	Project Manager & EAP
Wind 1000 Project	Thabo Consulting on behalf of Eskom Holdings	Project Manager & EAP
Wittekleibosch, Snylip & Doriskraal WEFs, Eastern Cape	Exxarro Resources	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO for the construction of the West Coast One WEF, Western Cape	Aurora Wind Power	Project Manager
ECO for the construction of the Gouda WEF, Western Cape	Blue Falcon	Project Manager

EO for the Dassiesklip Wind Energy Facility, Western Cape	Group 5	Project Manager
Quarterly compliance monitoring of compliance with all environmental licenses for the operation activities at the Gouda Wind Energy facility near Gouda, Western Cape Province	Blue Falcon	Project Manager
Annual auditing of compliance with all environmental licenses for the operation activities at the West Coast One Wind Energy facility near Vredenburg, Western Cape Province	Aurora Wind Power	Project Manager
External environmental and social audit for the Amakhala Wind farm	Cennergi	Project Manager
External environmental and social audit for the Tsitsikamma Wind farm	Cennergi	Project Manager
ECO for the construction of the Excelsior Wind Farm and associated infrastructure, Northern Cape province	BioTherm Energy	Project Manager

Compliance Advice

Project Name & Location	Client Name	Role
Amakhala Phase 1 WEF, Eastern Cape	Cennergi	Environmental Advisor
Dassiesfontein WEF within the Overberg area, Western Cape	BioTherm Energy	Environmental Advisor
Excelsior Wind Farm, Western Cape	BioTherm Energy	Environmental Advisor
Great Karoo Wind Farm, Northern Cape	African Clean Energy Developments (ACED)	Environmental Advisor
Hopefield Community WEF, Western Cape	African Clean Energy Developments (ACED)	Environmental Advisor
Rheboksfontein WEF, Western Cape	Moyeng Energy	Environmental Advisor
Tiqua WEF, Western Cape	Cennergi	Environmental Advisor
Tsitsikamma WEF, Eastern Cape	Cennergi	Environmental Advisor
West Coast One WEF, Western Cape	Moyeng Energy	Environmental Advisor

Due Diligence Reporting

Project Name & Location	Client Name	Role
Witteberg WEF, Western Cape	EDPR Renewables	Environmental Advisor
IPD Vredenburg WEF within the Saldanha Bay area, Western Cape	IL&FS Energy Development Company	Environmental Advisor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Biodiversity Permitting for the Power Line between the Tsitikamma Community WEF & the Diep River Substation, Eastern Cape	Cennergi	Project Manager & EAP
Biodiversity Permitting for the West Coast One WEF, Western Cape	Aurora Wind Power	Project Manager & EAP
Environmental Permitting for the Excelsior WEF, Western Cape	BioTherm Energy	Project Manager & EAP
Plant Permits & WULA for the Tsitsikamma Community WEF, Eastern Cape	Cennergi	Project Manager & EAP

Project Name & Location	Client Name	Role
S24G and WULA for the Rectification for the commencement of unlawful activities on Ruimsig AH in Honeydew, Gauteng	Hossam Soror	Project Manager & EAP
S24G Application for the Rheboksfontein WEF, Western Cape	Ormonde - Theo Basson	Project Manager & EAP
S53 Application & WULA for Suurplaat and Gemini WEFs, Northern Cape	Engie	Project Manager & EAP
S53 Application for the Hopefield Community Wind Farm near Hopefield, Western Cape	Umoya Energy	Project Manager & EAP
S53 Application for the Project Blue WEF, Northern Cape	WWK Developments	Project Manager & EAP
S53 for the Oyster Bay WEF, Eastern Cape	RES	Project Manager & EAP
WULA for the Great Karoo Wind Farm, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP

CONVENTIONAL POWER GENERATION PROJECTS (COAL)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Mutsho Power Station near Makhado, Limpopo Province	Mutsho Consortium	Project Manager & EAP
Coal-fired Power Station near Ogies, Mpumalanga	Ruukki SA	Project Manager & EAP
Thabametsi IPP Coal-fired Power Station, near Lephallale, Limpopo	Axia	Project Manager & EAP
Transalloys Coal-fired Power Station, Mpumalanga	Transalloys	Project Manager & EAP
Tshivasho IPP Coal-fired Power Station (with WML), near Lephallale, Limpopo	Cennergi	Project Manager & EAP
Umbani Coal-fired Power Station, near Kriel, Mpumalanga	ISS Global Mining	Project Manager & EAP
Waterberg IPP Coal-Fired Power Station near Lephallale, Limpopo	Exxaro Resources	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Coal Stockyard on Medupi Ash Dump Site, Limpopo Province	Eskom Holdings	Project Manager & EAP
Biomass Co-Firing Demonstration Facility at Arnot Power Station East of Middleburg, Mpumalanga	Eskom Holdings	Project Manager & EAP

Screening Studies

Project Name & Location	Client Name	Role
Baseload Power Station near Lephallale, Limpopo	Cennergi	Project Manager & EAP
Coal-Fired Power Plant near Delmas, Mpumalanga	Exxaro Resources	Project Manager & EAP
Makhado Power Station, Limpopo	Mutsho Consortium, Limpopo	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO for the Camden Power Station, Mpumalanga	Eskom Holdings	Project Manager

Compliance Advice

Project Name & Location	Client Name	Role
Thabametsi IPP Coal-fired Power Station, near Lephallale, Limpopo	Axia	Environmental Advisor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Permit application for the Thabametsi Bulk Water Pipeline, near Lephallale, Limpopo	Axia	Project Manager & EAP
S53 & WULA for the Waterberg IPP Coal-Fired Power Station near Lephallale, Limpopo	Exxaro Resources	Project Manager & EAP
S53 Application for the Tshivasho Coal-fired Power Station near Lephallale, Limpopo	Cennergi	Project Manager & EAP

CONVENTIONAL POWER GENERATION PROJECTS (GAS)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Ankerlig OCGT to CCGT Conversion project & 400 kV transmission power line between Ankerlig and the Omega Substation, Western Cape	Eskom Holdings SoC Limited	Project Manager & EAP
Gourikwa OCGT to CCGT Conversion project & 400 kV transmission power line between Gourikwa & Proteus Substation, Western Cape	Eskom Holdings SoC Limited	Project Manager & EAP
Richards Bay Gas to Power Combined Cycle Power Station, KwaZulu-Natal	Eskom Holdings SoC Limited	Project Manager & EAP
Richards Bay Gas to Power Plant, KwaZulu-Natal	Richards Bay Gas	Project Manager & EAP
Decommissioning & Recommissioning of 3 Gas Turbine Units at Acacia Power Station & 1 Gas Turbine Unit at Port Rex Power Station to the existing Ankerlig Power Station in Atlantis Industria, Western Cape	Eskom Holdings	Project Manager & EAP
Two 132kV Chickadee Lines to the new Zonnebloem Switching Station, Mpumalanga	Eskom Holdings	Project Manager & EAP

Screening Studies

Project Name & Location	Client Name	Role
Fatal Flaw Analysis for 3 area identified for the establishment of a 500MW CCGT Power Station	Globeleq Advisors Limited	Project Manager & EAP
Richards Bay Gas to Power Combined Cycle Power Station, KwaZulu-Natal	Eskom Holdings SoC Limited	Project Manager & EAP

GRID INFRASTRUCTURE PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Aggeneis-Oranjemond Transmission Line & Substation Upgrade, Northern Cape	Eskom Transmission	Project Manager & EAP

Project Name & Location	Client Name	Role
Ankerlig-Omega Transmission Power Lines, Western Cape	Eskom Transmission	Project Manager & EAP
Karoshhoek Grid Integration project as part of the Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP
Koeberg-Omega Transmission Power Lines,, Western Cape	Eskom Transmission	Project Manager & EAP
Koeberg-Stikland Transmission Power Lines, Western Cape	Eskom Transmission	Project Manager & EAP
Kyalami Strengthening Project, Gauteng	Eskom Transmission	Project Manager & EAP
Mokopane Integration Project, Limpopo	Eskom Transmission	Project Manager & EAP
Saldanha Bay Strengthening Project, Western Cape	Eskom Transmission	Project Manager & EAP
Steelpoort Integration Project, Limpopo	Eskom Transmission	Project Manager & EAP
Transmission Lines from the Koeberg-2 Nuclear Power Station site, Western Cape	Eskom Transmission	Project Manager & EAP
Tshwane Strengthening Project, Phase 1, Gauteng	Eskom Transmission	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Dassenberg-Koeberg Power Line Deviation from the Koeberg to the Ankerlig Power Station, Western Cape	Eskom Holdings	Project Manager & EAP
Golden Valley II WEF Power Line & Substation near Cookhouse, Eastern Cape	BioTherm Energy	Project Manager & EAP
Golden Valley WEF Power Line near Cookhouse, Eastern Cape	BioTherm Energy	Project Manager & EAP
Karoshhoek Grid Integration project as part of the Karoshhoek Solar Valley Development East of Upington, Northern Cape	FG Emvelo	Project Manager & EAP
Konkoonies II PV SEF Power Line to the Paulputs Substation near Pofadder, Northern Cape	BioTherm Energy	Project Manager & EAP
Perdekraal West WEF Powerline to the Eskom Kappa Substation, Western Cape	BioTherm Energy	Project Manager & EAP
Rhebokfontein WEF Powerline to the Aurora Substation, Western Cape	Moyeng Energy	Project Manager & EAP
Soetwater Switching Station near Sutherland, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Solis Power I Power Line & Switchyard Station near Upington, Northern Cape	Brightsource	Project Manager & EAP
Stormwater Canal System for the Ilanga CSP near Upington, Northern Cape	Karoshhoek Solar One	Project Manager & EAP
Tsitsikamma Community WEF Powerline to the Diep River Substation, Eastern Cape	Eskom Holdings	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO for the construction of the Ferrum-Mookodi Transmission Line, Northern Cape and North West	Trans-Africa Projects on behalf of Eskom	Project Manager
EO for the construction of the Gamma-Kappa Section A Transmission Line, Western Cape	Trans-Africa Projects on behalf of Eskom	Project Manager

EO for the construction of the Gamma-Kappa Section B Transmission Line, Western Cape	Trans-Africa Projects on behalf of Eskom	Project Manager
EO for the construction of the Hydra IPP Integration project, Northern Cape	Trans-Africa Projects on behalf of Eskom	Project Manager
EO for the construction of the Kappa-Sterrekus Section C Transmission Line, Western Cape	Trans-Africa Projects on behalf of Eskom	Project Manager
EO for the construction of the Namaqualand Strengthening project in Port Nolloth, Western Cape	Trans-Africa Projects on behalf of Eskom	Project Manager
ECO for the construction of the Neptune Substation Soil Erosion Mitigation Project, Eastern Cape	Eskom	Project Manager
ECO for the construction of the Ilanga-Gordonia 132kV power line, Northern Cape	Karoshhoek Solar One	Project Manager

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Environmental Permitting and WULA for the Rockdale B Substation & Loop in Power Lines,	Eskom Holdings	Project Manager & EAP
Environmental Permitting and WULA for the Steelpoort Integration project, Limpopo	Eskom Holdings	Project Manager & EAP
Environmental Permitting for Solis CSP near Upington, Northern Cape	Brightsource	Project Manager & EAP

MINING SECTOR PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Elitheni Coal Mine near Indwe, Eastern Cape	Elitheni Coal	Project Manager & EAP
Groot Letaba River Development Project Borrow Pits	liso	Project Manager & EAP
Grootegeluk Coal Mine for coal transportation infrastructure between the mine and Medupi Power Station (EMPr amendment) , Limpopo	Eskom Holdings	Project Manager & EAP
Waterberg Coal Mine (EMPr amendment), Limpopo	Seskoko Resources	Project Manager & EAP
Aluminium Plant WML & AEL, Gauteng	GfE-MIR Alloys & Minerals	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Rare Earth Separation Plant in Vredendal, Western Cape	Rareco	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO for the construction of the Duhva Mine Water Recovery Project, Mpumalanga	Eskom Holdings SoC Limited	Project Manager
External compliance audit of Palesa Coal Mine's Integrated Water Use License (IWUL), near KwaMhlanga, Mpumalanga	HCI Coal	Project Manager
External compliance audit of Palesa Coal Mine's Waste Management License (WML) and EMP, near KwaMhlanga, Mpumalanga	HCI Coal	Project Manager

Project Name & Location	Client Name	Role
External compliance audit of Mbali Coal Mine's Integrated Water Use License (IWUL), near Ogies, Mpumalanga	HCI Coal	Project Manager
Independent External Compliance Audit of Water Use License (WUL) for the Tronox Namakwa Sands (TNS) Mining Operations (Brand se Baai), Western Cape	Tronox Namakwa Sands	Project Manager
Independent External Compliance Audit of Water Use License (WUL) for the Tronox Namakwa Sands (TNS) Mineral Separation Plant (MSP), Western Cape	Tronox Namakwa Sands	Project Manager
Independent External Compliance Audit of Water Use License (WUL) for the Tronox Namakwa Sands (TNS) Smelter Operations (Saldanha), Western Cape	Tronox Namakwa Sands	Project Manager
Compliance Auditing of the Waste Management Licence for the PetroSA Landfill Site at the GTL Refinery, Western Cape	PetroSA	Project Manager

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Waste Licence Application for the Rare Earth Separation Plant in Vredendal, Western Cape	Rareco	Project Manager & EAP
WULA for the Expansion of the Landfill site at Exxaro's Namakwa Sands Mineral Separation Plant, Western Cape	Exxaro Resources	Project Manager & EAP
S24G & WML for an Aluminium Plant, Gauteng	GfE-MIR Alloys & Minerals	Project Manager & EAP

INFRASTRUCTURE DEVELOPMENT PROJECTS (BRIDGES, PIPELINES, ROADS, WATER RESOURCES, STORAGE, ETC)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Bridge across the Ngotwane River, on the border of South Africa and Botswana	Eskom Holdings	Project Manager & EAP
Chemical Storage Tanks, Metallurgical Plant Upgrade & Backfill Plant upgrade at South Deep Gold Mine, near Westonaria, Gauteng	Goldfields	Project Manager & EAP
Expansion of the existing Welgedacht Water Care Works, Gauteng	ERWAT	Project Manager & EAP
Golden Valley WEF Access Road near Cookhouse, Eastern Cape	BioTherm Energy	Project Manager & EAP
Great Fish River Wind Farm Access Roads and Watercourse Crossings near Cookhouse, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Ilanga CSP Facility Watercourse Crossings near Upington, Northern Cape	Karoshhoek Solar one	Project Manager & EAP
Modification of the existing Hartebeestfontein Water Care Works, Gauteng	ERWAT	Project Manager & EAP
N10 Road Realignment for the Ilanga CSP Facility, East of Upington, Northern Cape	SANRAL	Project Manager & EAP
Nxuba (Bedford) Wind Farm Watercourse Crossings near Cookhouse, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP

Project Name & Location	Client Name	Role
Pollution Control Dams at the Medupi Power Station Ash Dump & Coal Stockyard, Limpopo	Eskom	Project Manager & EAP
Qoboshane borrow pits (EMPr only), Eastern Cape	Emalahleni Local Municipality	Project Manager & EAP
Tsitsikamma Community WEF Watercourse Crossings, Eastern Cape	Cennergi	Project Manager & EAP
Clayville Central Steam Plant, Gauteng	Bellmall Energy	Project Manager & EAP
Msenge Emoyeni Wind Farm Watercourse Crossings and Roads, Eastern Cape	Windlab	Project Manager & EAP

Basic Assessments

Project Name & Location	Client Name	Role
Harmony Gold WWTW at Doornkop Mine, Gauteng	Harmony Doornkop Plant	Project Manager & EAP
Ofir-ZX Watercourse Crossing for the Solar PV Facility, near Keimoes, Northern Cape	Networx S28 Energy	Project Manager & EAP
Qoboshane bridge & access roads, Eastern Cape	Emalahleni Local Municipality	Project Manager & EAP
Relocation of the Assay Laboratory near Carletonville, Gauteng	Sibanye Gold	Project Manager & EAP
Richards Bay Harbour Staging Area, KwaZulu-Natal	Eskom Holdings	Project Manager & EAP
S-Kol Watercourse Crossing for the Solar PV Facility, East of Keimoes, Northern Cape	Networx S28 Energy	Project Manager & EAP
Sonnenberg Watercourse Crossing for the Solar PV Facility, West Keimoes, Northern Cape	Networx S28 Energy	Project Manager & EAP
Kruisvallei Hydroelectric Power Generation Scheme, Free State Province	Building Energy	Project Manager & EAP

Screening Studies

Project Name & Location	Client Name	Role
Roodepoort Open Space Optimisation Programme (OSOP) Precinct, Gauteng	TIMAC Engineering Projects	Project Manager & EAP

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
ECO and bi-monthly auditing for the construction of the Olifants River Water Resources Development Project (ORWRDP) Phase 2A: De Hoop Dam, R555 realignment and housing infrastructure	Department of Water and Sanitation	Project Manager Auditor
ECO for the Rehabilitation of the Blaaupan & Storm Water Channel, Gauteng	Airports Company of South Africa (ACSA)	Project Manager
Due Diligence reporting for the Better Fuel Pyrolysis Facility, Gauteng	Better Fuels	Project Manager
ECO for the Construction of the Water Pipeline from Kendal Power Station to Kendal Pump Station, Mpumalanga	Transnet	Project Manager

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
WULA for the Izubulo Private Nature Reserve, Limpopo	Kjell Bismeyer, Jann Bader, Laurence Saad	Project Manager & EAP
WULA for the Masodini Private Game Lode, Limpopo	Masodini Private Game Lodge	Environmental Advisor

WULA for the Ezulwini Private Nature Reserve, Limpopo	Ezulwini Investments	Project Manager & EAP
WULA for the Masodini Private Game Lode, Limpopo	Masodini Private Game Lodge	Project Manager & EAP
WULA for the N10 Realignment at the Ilanga SEF, Northern Cape	Karoshok Solar One	Project Manager & EAP
WULA for the Kruisvallei Hydroelectric Power Generation Scheme, Free State	Building Energy	Project Manager & EAP
S24G and WULA for the illegal construction of structures within a watercourse on EFF 24 Ruimsig Agricultural Holdings, Gauteng	Sorrow Language Services	Project Manager & EAP

HOUSING AND URBAN PROJECTS

Basic Assessments

Project Name & Location	Client Name	Role
Postmasburg Housing Development, Northern Cape	Transnet	Project Manager & EAP

Compliance Advice and reporting

Project Name & Location	Client Name	Role
Kampi ya Thude at the Olifants West Game Reserve, Limpopo	Nick Elliot	Environmental Advisor
External Compliance Audit of WUL for the Johannesburg Country Club, Gauteng	Johannesburg Country Club	Project Manager

ENVIRONMENTAL MANAGEMENT TOOLS

Project Name & Location	Client Name	Role
Development of the 3rd Edition Environmental Implementation Plan (EIP)	Gauteng Department of Agriculture and Rural Development (GDARD)	Project Manager & EAP
Development of Provincial Guidelines on 4x4 routes, Western Cape	Western Cape Department of Environmental Affairs and Development Planning	EAP
Compilation of Construction and Operation EMP for the Braamhoek Transmission Integration Project, Kwazulu-Natal	Eskom Holdings	Project Manager & EAP
Compilation of EMP for the Wholesale Trade of Petroleum Products, Gauteng	Munaca Technologies	Project Manager & EAP
Operational Environmental Management Programme (OEMP) for Medupi Power Station, Limpopo	Eskom Holdings	Project Manager & EAP
Operational Environmental Management Programme (OEMP) for the Dube TradePort Site Wide Precinct	Dube TradePort Corporation	Project Manager & EAP
Operational Environmental Management Programme (OEMP) for the Kusile Power Station, Mpumalanga	Eskom Holdings	Project Manager & EAP
Review of Basic Assessment Process for the Wittekleibosch Wind Monitoring Mast, Eastern Cape	Exxaro Resources	Project Manager & EAP
Revision of the EMP for the Sirius Solar PV	Aurora Power Solutions	Project Manager & EAP

State of the Environment (SoE) for Emalahleni Local Municipality, Mpumalanga	Simo Consulting on behalf of Emalahleni Local Municipality	Project Manager & EAP
Aspects and Impacts Register for Salberg Concrete Products operations	Salberg Concrete Products	EAP
First State of Waste Report for South Africa	Golder on behalf of the Department of Environmental Affairs	Project Manager & EAP

PROJECTS OUTSIDE OF SOUTH AFRICA

Project Name & Location	Client Name	Role
Advisory Services for the Zizabona Transmission Project, Zambia, Zimbabwe, Botswana & Namibia	PHD Capital	Advisor
EIA for the Semonkong WEF, Lesotho	MOSCET	Project Manager & EAP
EMP for the Kuvaninga Energia Gas Fired Power Project, Mozambique	ADC (Pty) Ltd	Project Manager & EAP
Environmental Screening Report for the SEF near Thabana Morena, Lesotho	Building Energy	EAP
EPBs for the Kawambwa, Mansa, Mwense and Nchelenge SEFs in Luapula Province, Zambia	Building Energy	Project Manager & EAP
ESG Due Diligence for the Hilton Garden Inn Development in Windhoek, Namibia	Vatange Capital	Project Manager
Mandahill Mall Rooftop PV SEF EPB, Lusaka, Zambia	Building Energy	Project Manager & EAP
Monthly ECO for the PV Power Plant for the Mocuba Power Station	Scatec	Project Manager

CURRICULUM VITAE OF THALITA BOTHA

Profession:	Environmental Assessment Practitioner (EAP)
Specialisation:	Environmental Assessments, Report writing, report reviewing, Geographical Information Systems (GIS), development of project proposals for procuring new projects, project administration
Work Experience:	3 years' experience in Environmental Assessments and GIS

VOCATIONAL EXPERIENCE

Professional execution of consulting services for projects in the environmental management field, specialising in Environmental Impact Assessment studies, environmental permitting, public participation, compilation of Environmental Management Plans and Programmes, environmental policy, and integrated environmental management. Responsibilities include report writing, analysis and the manipulation of geographical and technical experience with the use of ArcGIS, project management, review of specialist studies and the identification and assessment of potential negative environmental impacts and benefits. Compilation of the reports for environmental studies is in accordance with all relevant environmental legislation.

Experience in conducting environmental impact assessments for Concentrated Solar Power (CSP) Projects, Wind Energy Projects and grid infrastructure projects as well as infrastructure projects. Recent projects have been undertaken for both the public- and private-sector, including electricity generation and transmission projects (wind and solar), linear developments (such local roads and power lines), as well as general environmental planning, development and management. The completion of a diverse set of environmental management studies has resulted in a good working knowledge of environmental legislation and policy requirements.

SKILLS BASE AND CORE COMPETENCIES

- Compilation of environmental impact assessment reports and environmental management programmes in accordance with relevant environmental legislative requirements;
- Analysis and manipulation of geographical information and data and technical experience with the use of ArcGIS;
- Identification and assessment of potential negative environmental impacts and benefits through the review of specialist studies;
- Public participation/involvement and stakeholder consultation;
- Identification of practical and achievable mitigation measures and the compilation of appropriate management plans; and
- Key experience in the assessment of impacts associated with renewable energy and large infrastructure projects.

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Sc. (Hons.) Environmental Management (2014), North-West University, Potchefstroom
- B.Sc. Environmental- and Biological Science (2013), North-West University, Potchefstroom

Courses:

- Integrated Water Resources Management, the National Water Act and Water Use Authorisations (2017), Carin Bosman Sustainable Solutions

EMPLOYMENT

Date	Company	Roles and Responsibilities
September 2015 - Current	Savannah Environmental (Pty) Ltd	<p>Environmental Assessment Practitioner</p> <p><i>Tasks include: Compilation of Environmental Impact Assessment (EIA) reports; Basic Assessment (BA) reports and Environmental Management Programmes; Environmental Screening reports; Co-ordination of the public participation process; Project management; project proposals and tenders; Client liaison and Marketing; Process EIA Applications.</i></p> <p>GIS (utilising ArcGIS),</p> <p><i>Tasks include: Analysis and manipulation of data, screening assessments; compilation of maps.</i></p>

PROJECT EXPERIENCE

Renewable Power Generation Projects: Solar Energy Facilities

Basic Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Thaba Eco Hotel SEF, Gauteng	Camco Clean Energy	EAP
Moeding Solar PV Facility, North West Province	Moeding Solar	EAP

Screening Studies

Project Name & Location	Client Name	Role
Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Hotazel, Northern Cape Province	ABO Wind	EAP
Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Vryburg, North West Province	ABO Wind	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
Sol Invictus PV 1, Aggeneys, Northern Cape	Cyraclox	GIS
Sol Invictus PV 2, Aggeneys, Northern Cape	Cyracraft	GIS
Sol Invictus PV 3, Aggeneys, Northern Cape	Cyrafusion	GIS
Sol Invictus PV 4, Aggeneys, Northern Cape	Cyralex	GIS
Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Hotazel, Northern Cape Province	ABO Wind	GIS
Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Aggeneys, North West Province	ABO Wind	GIS
Moeding Solar PV Facility, North West Province	Moeding Solar	GIS

Renewable power generation projects: Wind Energy Facilities

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Hartebeest WEF, Moorreesburg, Western Cape	Hartebeest Wind Farm	EAP

Environmental Permitting & WUL Applications

Project Name & Location	Client Name	Role
Karusa WEF WUL Application, Northern Cape	ACED	EAP
Soetwater WEF WUL Application, Northern Cape	ACED	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
Hartebeest WEF, Moorreesburg, Western Cape	Hartebeest Wind Farm	GIS
Karusa WEF WUL Application, Northern Cape	ACED	GIS
Soetwater WEF WUL Application, Northern Cape	ACED	GIS

Renewable Power Generation Projects: Concentrated Solar Facilities (CSP)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Ilanga CSP 9, Northern Cape	Emvelo Holdings	EAP
Noupoort CSP, Northern Cape	CRESCO Energy	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
Noupoort CSP, Northern Cape	CRESCO Energy	GIS

Renewable Power Generation Projects: Hydroelectrical Power Generation Facilities

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Kruisvallei Hydroelectric Power Generation Scheme	Zevobuzz	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
-------------------------	-------------	------

Kruisvallei Hydroelectric Power Generation Scheme	Zevobuzz	GIS
---	----------	-----

Environmental Permitting & WUL Applications

Project Name & Location	Client Name	Role
WULA for the Kruisvallei Hydroelectric Power Generation Scheme	Zevobuzz	EAP
GA for the power line associated with the Kruisvallei Hydroelectric Power Generation Scheme	Zevobuzz	EAP

Steam Generation Projects:

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Clayville Thermal Plant, Gauteng	Bellmall Energy	EAP

Screening Studies

Project Name & Location	Client Name	Role
Fatal flaw analysis for the Clayville Thermal Plant, Gauteng	Bellmall Energy	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
Clayville Thermal Plant, Gauteng	Bellmall Energy	GIS

Grid Infrastructure Projects

Basic Assessments

Project Name & Location	Client Name	Role
Gunstfontein Switching Station and Power Line, Northern Cape	ACED	EAP
Zonnebloem Switching Station and Power Lines, Mpumalanga	Eskom SOC Ltd	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
Zonnebloem Switching Station and Power Lines, Mpumalanga	Eskom SOC Ltd	GIS

Mining Sector Projects

Environmental Permitting & WUL Applications

Project Name & Location	Client Name	Role
S53 for Steynsrus PV 1, Western Cape	Cronimet Power Solutions	EAP
S53 for Steynsrus PV 2, Western Cape	Cronimet Power Solutions	EAP
S53 for Heuningspruit PV 1, Western Cape	Cronimet Power Solutions	EAP

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
S53 for Steynsrus PV 1, Western Cape	Cronimet Power Solutions	GIS

<i>S53 for Steynsrus PV 2, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>GIS</i>
<i>S53 for Heuningspruit PV 1, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>GIS</i>

Infrastructure Development Projects (bridges, pipelines, roads, waste etc)

Basic Assessments

Project Name & Location	Client Name	Role
<i>MN73 Road Realignment, Northern Cape</i>	<i>Northern Cape Department of Roads and Public Works</i>	<i>EAP</i>
<i>S24G for the unlawful commencement of activities within a watercourse, Honeydew, Gauteng</i>	<i>Soror Language Services cc</i>	<i>EAP</i>
<i>Access Roads and Watercourse Crossings for the Iziduli Emoyeni Wind Energy Facility</i>	<i>Emoyeni Wind Farm Renewable Energy</i>	<i>EAP</i>
<i>Access Roads and Watercourse Crossings for the Msenge Emoyeni Wind Energy Facility</i>	<i>Amakhala Emoyeni Renewable Energy</i>	<i>EAP</i>

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
<i>S24G for the operation of a Aluminium, Alumino-thermic, Briquetting, Separation and Manganese Plant, Gauteng Province</i>	<i>GfE-MIR Alloys and Minerals SA</i>	<i>EAP</i>

Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
<i>MN73 Road Realignment, Northern Cape</i>	<i>Northern Cape Department of Roads and Public Works</i>	<i>GIS</i>
<i>S24G for the unlawful commencement of activities within a watercourse, Honeydew, Gauteng</i>	<i>Soror Language Services cc</i>	<i>GIS</i>
<i>Access Roads and Watercourse Crossings for the Iziduli Emoyeni Wind Energy Facility</i>	<i>Emoyeni Wind Farm Renewable Energy</i>	<i>GIS</i>
<i>Access Roads and Watercourse Crossings for the Msenge Emoyeni Wind Energy Facility</i>	<i>Amakhala Emoyeni Renewable Energy</i>	<i>GIS</i>
<i>S24G for the operation of a Aluminium, Alumino-thermic, Briquetting, Separation and Manganese Plant, Gauteng Province</i>	<i>GfE-MIR Alloys and Minerals SA</i>	<i>GIS</i>

CURRICULUM VITAE OF SHAUN TAYLOR

Profession :	Environmental and Permitting Lead Consultant
Specialisation:	Environmental Impact Assessments; Strategic Environmental Assessments; Environmental permitting compliance, advice & assurance; Water Use Licenses; Project Management; Wetland Assessments.
Work Experience:	Eleven (11) years' experience in the environmental field

OCATIONAL EXPERIENCE

Shaun's highest qualification is a Master of Science Degree in Aquatic Health. Shaun has an in-depth understanding of environmental and water related South African legislation. Applicable legislation includes the National Environmental Management Act, 1998 (Act No. 107 of 1998), the Environmental Impact Assessment (EIA) Regulations (2006, 2010 and 2014, as amended) and the National Water Act, 1998 (Act No. 36 of 1998). Over and above a number of other projects, Shaun has successfully conducted and obtained environmental approvals for numerous renewable energy (wind and solar) developments as well as for infrastructure (roads, water pipeline and power line) related projects. Shaun has excellent experience in dealing with the entire environmental authorization (EA) process from beginning to end i.e. submission of applications, undertaking Environmental Impact Assessments and Basic Assessments (BAs), conducting EA amendments, extension applications and compiling Draft and Final Environmental Management Programmes (EMPrs). Shaun is well acquainted and experienced in dealing with the key provincial and national environmental authorities, other organs of state as well as any other key stakeholders.

Within the water field, Shaun has completed numerous water use license applications (WULAs), General Authorisations (GAs), Risk Assessments and WULA compliance monitoring for various developments. Shaun is also specialised in wetland ecology and operates as a wetland specialist. Shaun has undertaken and completed numerous wetland and riparian assessments for renewable energy, linear projects as well as site specific projects. Shaun has also undertaken a wetland offset plan and several wetland rehabilitation plans for various developments.

SKILLS BASE AND CORE COMPETENCIES

- Environmental Project Management
- Environmental Impact Assessments and Basic Assessments
- Environmental Management Programmes
- Environmental Compliance Monitoring
- Environmental Amendments
- Strategic Environmental Assessments
- Environmental Management
- Public and Stakeholder Engagement
- Water Use License Applications
- General Authorisations

- Risk Assessment Matrix
- Wetland Delineation, Functional and Impact Assessments
- Geographic Information Systems (GIS)

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- M.Sc. Aquatic Health, University of Johannesburg, Johannesburg (2011)
- B.Sc (Hons) Geography and Environmental Studies, University of Witwatersrand, Johannesburg (2010)
- B.A Geography and Environmental Science, Monash University, Johannesburg (2008)

Short Courses:

- National Training and Development Buffer Zone Workshop, Eco-pulse (2015)
- Integrated Water Resources Management (IWRM), the National Water Act (NWA), and Water Use Authorisations, focusing on Water Use License Applications – Procedures, Guidelines, Integrated Water and Waste Management Plan (IWWMP), Carin Bosman Sustainable Solutions (2014)
- Grass identification short course, Bushveld Eco Services (2010)
- Wildflower identification short course, Bushveld Eco Services (2010)
- Veld management short course, Bushveld Eco Services (2010)
- Short course and certification in Wetland Delineation and Rehabilitation Training Course from the School of Continuing Education, University of Pretoria (2008)

Professional Society Affiliations:

- Member of the South African Wetland Society (SAWS) (Current)
- Registration pending with the South African Council for Natural Scientific Professions as a Professional Natural Scientist: Environmental Scientist (Current)

Other Relevant Skills:

- Project Management Course, SiVEST (2017)

EMPLOYMENT

Date	Company	Roles and Responsibilities
June 2018 - Current:	Savannah Environmental (Pty) Ltd	Environmental and Permitting Lead Consultant <i>Tasks include: undertaking strategic environmental assessments, environmental impact assessments, basic assessments, environmental management programmes (EMPrs), environmental amendments, environmental screening and due diligence assessments, water use license applications, wetland assessments and rehabilitation plans. Ensuring environmental compliance on permitting processes. Client liaison and relationship management.</i>
November 2010 – May 2018	SiVEST South Africa (Pty) Ltd	Environmental Scientist <i>Tasks included: conducting environmental impact assessments, basic assessments and water use license application processes, undertaking amendment and exemption</i>

Date	Company	Roles and Responsibilities
		<i>applications, general project management, report writing, marketing and proposal writing, client liaison and relationship management, invoicing, conducting specialist riparian/wetland delineation and functional assessments, environmental and water related compliance monitoring and auditing.</i>
October 2009 – March 2010	<i>Envirokey cc</i>	Junior Environmental Consultant and GIS support <i>Tasks included: being responsible for managing basic assessments, report writing, conducting specialist wetland assessments, auditing procedures and GIS mapping.</i>
August 2007 – September 2009	Holgate Meyer and Associates Environmental Management Services	Junior Environmental Consultant <i>Tasks included: being responsible for managing basic assessments, report writing, conducting specialist wetland assessments, environmental auditing procedures and GIS mapping.</i>

PROJECT EXPERIENCE

Project experience includes environmental approvals for numerous renewable energy (wind and solar) developments as well as for infrastructure (roads, water pipeline and power line) related projects. Within the water field, project experience includes numerous water use license applications, general authorisations, risk assessments and compliance monitoring for various developments. In terms of wetland assessments, project experience includes numerous wetland and riparian delineation, functional and impact assessments for renewable energy, linear projects and site-specific projects. The wetland experience also includes a wetland offset plan and several wetland rehabilitation plans (various types of developments).

RENEWABLE POWER GENERATION PROJECTS: SOLAR ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
<i>Loeriesfontein Photovoltaic (PV) Plant, Northern Cape Province</i>	<i>Mainstream Renewable Power South Africa</i>	<i>Environmental consultant, public participation, wetland specialist</i>
<i>Renosterberg PV Plant near De Aar, Northern Cape Province</i>	<i>Renosterberg Wind Energy Corporation (RWEC) & Industrial Development Corporation (IDC) of South Africa</i>	<i>Environmental consultant, public participation, wetland specialist</i>
<i>Droogfontein II - 70MW Solar Photovoltaic Power Plant near Kimberley, Northern Cape Province</i>	<i>Mainstream Renewable Power South Africa</i>	<i>Environmental consultant, wetland specialist</i>
<i>Construction of a Concentrated PV/ PV Plant in De Aar, Northern Cape</i>	<i>Mainstream Renewable Power South Africa</i>	<i>Environmental consultant, wetland specialist</i>

Basic Assessments

Project Name & Location	Client Name	Role
Proposed development of a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, public participation, wetland specialist
Proposed development of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, public participation, wetland specialist
Loeriesfontein 70MW PV Plant, Northern Cape Province	Biotherm Energy	Environmental consultant
Droogfontein II - 70MW Solar Photovoltaic Power Plant near Kimberley, Northern Cape Province	SunEdison	Project leader, environmental consultant

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Integrated Water Use License Application for the Construction of a Concentrated PV/ PV Plant in De Aar, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, wetland specialist
Proposed Construction of the De Wildt Solar Photovoltaic Power Plant, General Authorisation and Risk Assessment, Gauteng Province	SunEdison	Project leader, environmental consultant, wetland specialist
Loeriesfontein Photovoltaic (PV) Plant Vegetation Permits, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant
Droogfontein II 70MW Solar Photovoltaic Power Plant near Kimberley Vegetation Permits, Northern Cape Province	SunEdison	Environmental consultant

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Noupoort Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant & public participation
Loeriesfontein Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist
Khobab Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist
Renosterberg Wind Farm near De Aar, Northern Cape Province	Renosterberg Wind Energy Corporation (RWECC) & Industrial Development Corporation (IDC) of South Africa	Environmental consultant, public participation, wetland specialist
Ithemba Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist
Harte Beeste Leegte Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist

Gras Koppies Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist
Xhal Boom Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, public participation, wetland specialist

Screening Studies

Project Name & Location	Client Name	Role
Environmental Constraints Analysis Report for the establishment of four Wind Farms in the Northern and Eastern Cape Provinces	Mainstream Renewable Power South Africa	Environmental consultant, wetland specialist

Compliance Advice and ESAP reporting

Project Name & Location	Client Name	Role
Noupoort Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental advisor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Water Use License for the Dwarsrug Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, wetland specialist
Water Use License for the Victoria West Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant, wetland specialist
Khobab Wind Farm Vegetation Permits, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant
Loeriesfontein Wind Farm Vegetation Permits, Northern Cape Province	Mainstream Renewable Power South Africa	Environmental consultant

RENEWABLE POWER GENERATION PROJECTS: CONCENTRATED SOLAR FACILITIES (CSP)

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Integrated Water Use License Application for the Construction of a CPV/ PV Plant in De Aar, Northern Cape Province of South Africa	Mainstream Renewable Power South Africa	Environmental consultant, wetland specialist
Water Use License for the Rooipunt Concentrated Solar Power Project, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, wetland specialist
Water Use License for the Limestone Concentrated Solar Power Project, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, wetland specialist

CONVENTIONAL POWER GENERATION PROJECTS (COAL)

Basic Assessments

Project Name & Location	Client Name	Role
Proposed Installation of a 500m ³ Bulk Storage Fuel Oil Tank at Grootvlei Power Station, Mpumalanga Province	Eskom Generation	Environmental consultant, wetland specialist

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Water Use License Compliance Auditing for Grootvlei Power Station, Mpumalanga Province, South Africa	Eskom Generation	Project leader, environmental auditor, wetland specialist
Kusile Power Station Armcors Water Use License Compliance Audit, Mpumalanga Province	Eskom Generation	Project leader, environmental auditor, wetland specialist
Kusile Power Station Ash Dump Water Use License Compliance Audit, Mpumalanga Province	Eskom Generation	Project leader, environmental auditor, wetland specialist
Kusile Power Station Pollution Dams Water Use License Compliance Audit, Mpumalanga Province	Eskom Generation	Project leader, environmental auditor, wetland specialist
Kusile Power Station Stream Diversion and Water Pipeline Crossings Water Use License Compliance Audit, Mpumalanga Province	Eskom Generation	Project leader, environmental auditor, wetland specialist
Kusile Power Station Geotechnical Water Use License Compliance Audit, Mpumalanga Province	Eskom Generation	Project leader, environmental auditor, wetland specialist

GRID INFRASTRUCTURE PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Mookodi Integration Project Environmental Impact Assessment, North West Province	Eskom Distribution	Environmental consultant, wetland specialist
Eskom Thyspunt Nuclear Integration Project – Transmission and Substation Infrastructure (Northern and Southern Corridor), Eastern Cape Province	Eskom Transmission	Environmental consultant, wetland specialist

Basic Assessments

Project Name & Location	Client Name	Role
Frankfort Strengthening Project: 88kV Power Line from Heilbron (via Frankfort) to Villiers, Free State Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist
Wilger 132kV Overhead Distribution Power Line, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Project leader, environmental consultant, wetland specialist
Limestone 1 – 132kV Overhead Distribution Power Line, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, wetland specialist
Limestone 2 – 132kV Overhead Distribution Power Line, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Environmental consultant, wetland specialist
Proposed Tweespruit to Welroux Power Line and Substations, Free State Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist
Proposed Construction of a 132kV Power Line and Associated Infrastructure for the evacuation of power from the proposed 200MW Concentrated	SolarReserve South Africa (Pty) Ltd	Project leader, environmental consultant, wetland specialist

Solar Power (CSP) Plant on the Farm Rooipunt Number 617 near Upington, Northern Cape Province		
Loeriesfontein 132kV Power Line, Northern Cape Province	Biotherm Energy	Project leader, environmental consultant, wetland specialist
Proposed Construction of a 132kV Power Line and Associated Infrastructure for the evacuation of power from the Kalkaar Concentrating Solar Thermal Power Project on the Remainder of Portion 1 of the Farm Kalkaar 389 near Jacobsdal, Free State and Northern Cape Provinces	SolarReserve South Africa (Pty) Ltd	Project leader, environmental consultant, wetland specialist
Droogfontein II – 132kV power line and substation near Kimberley, Northern Cape Province	SunEdison	Project leader, environmental consultant
Mookodi Integration Project II – 132kV Power Line, Havelock Loop-in/Loop-out, Ganyesa Substation, North West Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Environmental Compliance Auditing for the Nigel Substation to Jameson Park (Inland Terminal 2) 88kV power lines	Eskom Distribution	Environmental auditor
Ga-rankuwa 11kV Underground Power Cable Water Use License Compliance Audit, Gauteng Province	Eskom Distribution	Project leader, environmental auditor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Water Use License / General Authorisation for Ga-rankuwa Substation, Gauteng Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist
Water Use License / General Authorisation for Klevebank to Dalkieth 88kV Power Line, Gauteng Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist
Water Use License Application for the Frankfort Strengthening Project: 88kV Power Line from Heilbron (via Frankfort) to Villiers, Free State Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist
Water Use License / General Authorisation Proposed Tweespruit to Welroux Power Line and Substations, Free State Province	Eskom Distribution	Project leader, environmental consultant, wetland specialist

MINING SECTOR PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Karowe Diamond Mine Environmental Management Plan Review and Update, Boteti District, Botswana	Karowe Diamond Mine	Environmental consultant

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Post-rehabilitation Assessment of Three Wetland Crossing Sites for the Re-working of a Tailings Dam Project near Stilfontein, North West Province	Chemwes (Pty) Ltd	Environmental auditor

TRANSPORT SECTOR PROJECTS**Basic Assessments**

Project Name & Location	Client Name	Role
Polokwane Integrated Rapid Public Transport Network, Limpopo Province	City of Polokwane	Environmental consultant, wetland specialist

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Transnet Rail Water Use License Compliance Audit, Northern Cape Province	Hatch-Goba / Transnet	Environmental auditor

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Water Use Licensing for the Polokwane Integrated Rapid Public Transport Network, Limpopo Province	City of Polokwane	Environmental consultant, wetland specialist
General Authorisation for the proposed eThekweni Integrated Rapid Public Transport Network (IRPTN) - BRT Phase 1: Route C1A, General Authorisation and Risk Assessment, Kwa-Zulu Natal Province	Nako Iliso	Environmental consultant, wetland specialist

INFRASTRUCTURE DEVELOPMENT PROJECTS (BRIDGES, PIPELINES, ROADS, WATER RESOURCES, STORAGE, ETC)**Basic Assessments**

Project Name & Location	Client Name	Role
Sir Lowry's Pass River Flood Alleviation Project, Western Cape Province	City of Cape Town	Environmental consultant

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Wetland Post-rehabilitation Assessment of the Inland New Multi-Purpose Pipeline in the Mpumalanga and Gauteng Provinces	Transnet SOC Ltd	Wetland specialist

HOUSING AND URBAN PROJECTS**Screening Studies**

Project Name & Location	Client Name	Role
Social Housing Projects in Sasolburg and Secunda, Gauteng Province	Provincial Department of Human Settlements	Environmental consultant, wetland specialist

INDUSTRIAL PROJECTS

Basic Assessments

Project Name & Location	Client Name	Role
SPAR Distribution Centre, Port Elizabeth, Eastern Cape Province	SPAR Group Ltd	Project leader, environmental consultant, wetland specialist

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Environmental Compliance Auditing for the Meadow Feeds Standerton Broiler Feed Mill, Mpumalanga Province	Meadow Feeds	Environmental consultant, wetland specialist

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	Client Name	Role
Water Use License for the SPAR Distribution Centre, Port Elizabeth, Eastern Cape Province	SPAR Group Ltd	Project leader, environmental consultant, wetland specialist
Water Use License for the Proposed Tissue Manufacturing Capacity at the Kliprivier Operations Base, General Authorisation and Risk Assessment, Gauteng Province	Twinsaver Group	Project leader, environmental consultant, wetland specialist

ENVIRONMENTAL MANAGEMENT TOOLS

Strategic Environmental Assessments

Project Name & Location	Client Name	Role
Molemole Local Municipality Strategic Environmental Assessment, Limpopo Province	Capricorn District Municipality	Environmental consultant, wetland specialist
Blouberg Local Municipality Strategic Environmental Assessment, Limpopo Province	Capricorn District Municipality	Environmental consultant, wetland specialist

SPECIALIST STUDIES

Wetland and Riparian Delineation, Functional and Impact Assessments

Project Name & Location	Client Name	Role
Surface Water Assessment for the Construction of a Wind Farm in Prieska, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Construction of a Wind Farm in Loeriesfontein, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Construction of a 132KV Distribution Line from the Kudu Substation to Dorstfontein Substation in Mpumalanga Province	Eskom Distribution	Wetland specialist
EIA for the Thyspunt Transmission Lines Integration Project: Surface Water Impact Assessment Report – EIA – Northern Corridor: Eastern Cape Province	Eskom Transmission	Wetland specialist
EIA for the Thyspunt Transmission Lines Integration Project: Surface Water Impact Assessment Report – EIA – Southern Corridor: Eastern Cape Province	Eskom Transmission	Wetland specialist

Surface Water Assessment for the Construction of a CSP and a CPV/ PV Plant in De Aar, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Environmental Management Framework for the Mogale City Local Municipality Surface Water Report – Desired State Report: Gauteng Province	Mogale City	Wetland specialist
Surface Water Assessment for the Proposed Township Development on the Remainder of Portion 27 of the Farm Middelburg and Townsland 287 JS, Mpumalanga Province	Steve Tshwete Local Municipality	Wetland specialist
Surface Water Assessment for the Construction of a CSP and a CPV/ PV Plant in De Aar, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Construction of a CSP and a CPV/ PV Plant in Kimberley, Northern Cape Province, South Africa	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Westrand Strengthening Project from Westgate Substation to Hera Substation and Westgate Substation Extension, Gauteng Province	Eskom Distribution	Wetland specialist
Mookodi Integration Project 2 Basic Assessment Surface Water Impact Assessment, North West Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Construction of a Gabion Structure at Waterval Substation in the Midrand Area, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Single 400kV Power Line from Borutho to Nzhelele, North West Province	Eskom Transmission	Wetland specialist
Surface Water Assessment for the Proposed Construction of an 88kv Power Line at Palmridge in the Ekurhuleni Metropolitan Municipality, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province	SolarReserve South Africa (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Proposed Rebuilding of an 88kV Power Line from Henneman Substation to Serfontein Substation near Kroonstad, Free State Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Deconstruction and Construction of an 11kV Power Line near Delmas, Mpumalanga Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Solar Photovoltaic Power Plant near De Aar, Northern Cape Province, South Africa	Renosterberg Wind Energy Corporation (RWEC) & Industrial Development Corporation (IDC) of South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Wind Farm near De Aar, Northern Cape Province	Renosterberg Wind Energy Corporation (RWEC) & Industrial Development	Wetland specialist

	Corporation (IDC) of South Africa	
Surface Water Assessment for the Proposed Construction of a Low-Cost Housing Development in the Soutpan area of Tshwane, Gauteng Province	Makole Property Development	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 132kV Power Line near Kimberley, Northern Cape Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Extension of Delmas Substation and Associated Power Lines, Mpumalanga Province, South Africa	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Substation in the Midrand area of Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Construction of an 88kV Power Line at Lochvaal Kudu in the Emfuleni Municipality, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed construction of an 88kV Power Line from Klevebank Substation to Dalkeith Substation, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of an 88kV Power Line from Heilbron Substation to Villiers Substation, Free State Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 132kV Power Line, Substation and the Extension of Homestead Substation Associated with the 75MW Concentrating Photovoltaic (CPV) / Photovoltaic (PV) Plant (PV 3) on the Farm Droogfontein in Kimberley, Northern Cape Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Moddershaft Underground to Overhead Cable Replacement of an 11kV Power Line from Moddershaft Substation to a Minisub near Anzac, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of an 11kV Underground Power Cable from Civic Centre to Zola Substation, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Substation on Portion 265 Randjesfontein 405-JR, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Mathibestad Danhauser 33kV Power Line Network, North West Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Mathibestad-Danhauser Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Mothutlung North Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Mothutlung South Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist

Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Nonyane Madidi North Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Nonyane Swartdam Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Rebuild of a Section of the Existing 33kV Pelly Klipdrift Network, Gauteng and North West Provinces	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Zonderwater Kraal Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Hammanskraal Lusthof Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of a Section of the Existing 33kV Klipgat Circle Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Re-build of Sections of the Existing 33kV Erasmus Aviva Power Line Network, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of an 11kV Underground Power Cable at the Ga-Rankuwa Substation, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Mamatwan Manganese Mine, Northern Cape Province	Groundwater Consulting Services (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Dwarsrug Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Manzimtoti Sewer Line Project, Kwa-Zulu Natal Province	Environmental Planning and Design cc	Wetland specialist
Surface Water Assessment for the Compensation Flats Development, Kwa-Zulu Natal Province	Tongaat Hulett	Wetland specialist
Surface Water Assessment for the Tinley Manor South Road Development, Kwa-Zulu Natal Province	Tongaat Hulett	Wetland specialist
Surface Water Assessment for the Ntuzuma Sewer Line Project, Kwa-Zulu Natal Province	Environmental Planning and Design cc	Wetland specialist
Surface Water Assessment for the Esphiva Sewer Line Project, Kwa-Zulu Natal Province	Environmental Planning and Design cc	Wetland specialist
Frankfort 132kV Power Line Wetland Walk-down Assessment, Free State Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Esphiva Water Pipeline near Ulundi, KwaZulu-Natal Province	Environmental Planning and Design cc	Wetland specialist
Surface Water Assessment for the Grootvlei Power Station, Mpumalanga Province	Eskom Generation	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Embangweni and Bhekabantu Irrigation Schemes, KwaZulu-Natal Province	Nzingwe Consultancy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Nondabuya and Khwehle	Nzingwe Consultancy	Wetland specialist

Primary Agriculture Schemes, KwaZulu-Natal Province		
Surface Water Assessment for the Proposed Expansion of the Makhathini Irrigation Scheme, KwaZulu-Natal Province	Nzingwe Consultancy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Mbaliyezwe Irrigation Schemes, KwaZulu-Natal Province	Nzingwe Consultancy	Wetland specialist
Surface Water Assessment for the Proposed Mixed Use Development on the Remainder of Portion 27 of the Farm Middelburg Town and Townlands 287 JS, Steve Tshwete Local Municipality in the Mpumalanga Province	Steve Tshwete Local Municipality	Wetland specialist
Surface Water Assessment for the Proposed Construction of Two Power Lines and Two Substations for the Mainstream Wind Facilities near Beaufort West, Western Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed eThekweni Integrated Rapid Transport Network (IRPTN) – Bus Rapid Transport (BRT) Phase 1: Route C1A, KwaZulu-Natal Province	Nako Iliso	Wetland specialist
Surface Water Assessment for the Proposed Coal Railway Siding at the Welbedacht Marshalling Yard and associated Milder Road Upgrade near Springs, Gauteng Province	Canyon Coal	Wetland specialist
Surface Water Assessment for the Proposed Development of a 22kV Medium Voltage Power Line in Mofofutso, North West Province	Eskom Distribution	Wetland specialist
Wetland Walk-down Assessment for the Mookodi Integration Power Line Project, North West Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Coal Loading Facility within the existing Bronkhorstspuit Railway Siding near Bronkhorstspuit, Gauteng Province	Canyon Coal	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Two 75MW Tlisitseng Solar Photovoltaic Energy Facilities near Lichtenburg, North West Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Two 75MW Sendawo Solar Photovoltaic Energy Facilities near Lichtenburg, North West Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Sendawo Solar Substation and associated 400kV Power Line near Lichtenburg, North West Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Helena 1, 2 & 3 Photovoltaic Energy Facilities near Copperton, Northern Cape Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 70MW Photovoltaic Facility and	Mainstream Renewable Power South Africa	Wetland specialist

132kV Power Line near Loeriesfontein, Northern Cape Province		
Surface Water Assessment for the Proposed Expansion of the Tissue Manufacturing Capacity at the Kliprivier Operations Base, Gauteng Province	Twinsaver Group	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Eureka West 140MW Wind Farm near Copperton, Northern Cape Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Eureka East 140MW Wind Farm near Copperton, Northern Cape Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Eureka 132kV Power Line near Copperton, Northern Cape Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Aletta 140MW Wind Farm near Copperton, Northern Cape Province	Biotherm Energy	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Ithemba Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Harte Beeste Leegte Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Gras Koppies Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Xha! Boom Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Expansion of the Mountain Valley "A" Grade Chicken Abattoir on the Remainder of Subdivision of Portion 17 (of 16) of the Farm Leeuw Poort 1120 FT, KwaZulu-Natal Province	Shangoni Management Services (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Proposed Construction of a Linking Station, Power Lines and Substations for the Mainstream Wind Energy Facilities near Beaufort West, Western Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction 132kV Power Lines and a Substation for Tsakane Ext 10 and 22, Gauteng Province	Eskom Distribution	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Harte Beeste Leegte Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Ithemba Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Gras Koppies Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist

Surface Water Assessment for the Proposed Construction of the Xha! Boom Wind Farm, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Construction of the SPAR Distribution Centre, Port Elizabeth, Eastern Cape Province	SPAR Group Ltd	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 140MW Wind Farm and Associated Infrastructure near Hutchison, Northern Cape Province	Mainstream Renewable Power South Africa	Wetland specialist
Surface Water Assessment for the Proposed Maintenance of the Water Pipeline in Parys, Ngwathe Local Municipality, Free State Province	Gedezar Consulting	Wetland specialist
Surface Water Assessment for the Proposed Construction of the Rietkuil Coal Railway Siding near Bronkhorstspuit, Gauteng Province	Canyon Coal	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 75MW Solar Photovoltaic Power Plant near Dennilton, Limpopo Province	Nokukhanya Energy (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Proposed Construction of a 9.9 MW Solar Photovoltaic (PV) Energy Facility on the Farm Wildebeestkuil near Leeudoringstad, North West Province	Leeudoringstad Solar Plant (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Proposed Construction of up to a 5MW Solar Photovoltaic (PV) Energy Facility on Portion 37 of the Farm Leeuwbosch No. 44 near Leeudoringstad, North West Province	Leeudoringstad Solar Plant (Pty) Ltd	Wetland specialist
Surface Water Assessment for the Proposed Construction of the De Wildt Solar Photovoltaic Power Plant, Gauteng Province	SunEdison	Wetland specialist

Wetland and Riparian Rehabilitation Plans

Project Name & Location	Client Name	Role
Wetland and River Rehabilitation Plan for the Fourways 22kV Feeder Cable, Gauteng Province	Eskom Distribution	Wetland specialist
Wetland and Riparian Rehabilitation Plan for the Proposed eThekweni Integrated Rapid Transport Network (IRPTN) – Bus Rapid Transport (BRT) Phase 1: Route C1A, KwaZulu-Natal Province	eThekweni Metropolitan Municipality	Wetland specialist
Wetland Rehabilitation Plan for the Delmas Pedestrian Bridge, Mpumalanga Province	Canyon Coal	Wetland specialist
Wetland Remediation Plan for the Graspan Colliery Extension on the Remaining Extent of Portion 31 on the Farm Elandspruit 291 JS, Mpumalanga Province	GIBB	Wetland specialist

Wetland Offset Plans

Project Name & Location	Client Name	Role
------------------------------------	--------------------	-------------

Wetland Offset Plan for the Proposed Construction of the SPAR Distribution Centre, Port Elizabeth, Eastern Cape Province

SPAR Group Ltd

Wetland specialist



CURRICULUM VITAE OF NICOLENE VENTER

Profession :	Public Participation and Social Consultant
Specialisation:	Public participation process; stakeholder engagement; facilitation (workshops, focus group and public meetings; public open days; steering committees); monitoring and evaluation of public participation and stakeholder engagement processes
Work Experience:	21 years' experience as a Public Participation Practitioner and Stakeholder Consultant

VOCATIONAL EXPERIENCE

Over the past 21 years Nicolene established herself as an experienced and well recognised public participation practitioner, facilitator and strategic reviewer of public participation processes. She has experience in managing public participation projects and awareness creation programmes. Her experience includes designing and managing countrywide public participation and awareness creation projects, managing multi-project schedules, budgets and achieving project goals. She has successfully undertaken several public participation processes for EIA, BA and WULA projects. The EIA and BA process include linear projects such as the NMPP, Eskom Transmission and Distribution power lines as well as site specific developments such as renewable energy projects i.e. solar, photo voltaic and wind farms. She also successfully managed stakeholder engagement projects which were required to be in line with the Equator Principles.

SKILLS BASE AND CORE COMPETENCIES

- Project Management
- Public Participation, Stakeholder Engagement and Awareness Creation
- Public Speaking and Presentation Skills
- Facilitation (workshops, focus group meetings, public meetings, public open days, working groups and committees)
- Social Assessments (Stakeholder Analysis / Stakeholder Mapping)
- Monitoring and Evaluation of Public Participation and Stakeholder Engagement Processes
- Community Liaison
- IFC Performance Standards
- Equator Principles
- Minute taking, issues mapping, report writing and quality control

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- Higher Secretarial Certificate, Pretoria Technicon (1970)

Short Courses:

- Techniques for Effective Public Participation, International Association for Public Participation, IAP2 (2008)
- Foundations of Public Participation (Planning and Communication for Effective Public Participation, IAP2 (2009)
- Certificate in Public Relations, Public Relation Institute of South Africa, Damelin Management School (1989)

Professional Society Affiliations:

- Board Member of International Association for Public Participation (IAP2): Southern Africa

EMPLOYMENT

Date	Company	Roles and Responsibilities
2016 – Current	Independent Consultant Imaginative Africa (Pty) Ltd	<p>Consulting to various Environmental Assessment Practitioners for Public Participation and Stakeholder Engagements: <i>Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc.</i></p> <p><i>Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved</i></p> <p><u>Clients:</u> <i>SiVEST Environmental, Savannah Environmental, Baagi Environmental; Royal Haskoning DHV (previously SSI)</i></p>
2013 - 2016	Senior Public Participation Practitioner Zitholele Consulting	<p>Project Manager</p> <p><i>Project managed public participation process for EIA/BA/WULA/EAL projects. Manages two Public Participation Administrators. Public Participation tasks as outlined as above and including financial management of public participation processes.</i></p>

Date	Company	Roles and Responsibilities
2011 - 2013	Independent Consultant Imaginative Africa (Pty) Ltd	<p>Consulting to various Environmental Assessment Practitioners for Public Participation and Stakeholder Engagements: Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc.</p> <p>Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved</p> <p><u>Clients:</u> Bohlweki Environmental, Bemani Sustainability (Pty) Ltd; Naledzi Environmental</p>
2007 – 2011	Unit Manager: Public Participation Practitioner SiVEST SA (Pty) Ltd	<p>Unit Manager Project managed public participation process for EIA/BA projects. Manages two Junior Public Participation Practitioners. Public Participation tasks as outlined as above and including financial management of public participation processes.</p>
2005 – 2006	Independent Consultant Imaginative Africa (Pty) Ltd	<p>Public Participation and Stakeholder Engagement Practitioner. Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc.</p> <p>Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved.</p> <p><u>Clients:</u></p>

Date	Company	Roles and Responsibilities
		Manyaka-Greyling-Meiring (previously Greyling Liaison and currently Golder Associates)
2004 – 2005	Personal Assistant National Intelligence Agency	Responsibilities: Upkeep of diary; Review and ensure Submissions are compliant to Regulations; Travel arrangements (domestic & international); Compilation of travel reports
1997 - 2004	Independent Consultant Imaginative Africa (Pty) Ltd	Public Participation Practitioner. Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, affected landowners, etc. Managing interaction between Stakeholders and Team Members, liaising with National, Provincial Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved. <u>Clients:</u> Greyling Liaison (currently Golder Associates); Bemani Sustainability (Pty) Ltd; Lidwala Environmental; Naledzi Environmental

PROJECT EXPERIENCE

Renewable Power Generation Projects: Solar Energy Facilities

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
<p>Ilisitseng PV, Substations & Power Lines, Lichtenburg, North West Province</p> <p>Sendawo PVs, Substations & Power Lines, Vryburg, North West Province</p> <p>Helena Solar 1, 2 and 3 PVs, Copperton, Northern Cape Province</p>	<p>BioTherm Energy (Pty) Ltd EAP: SIVEST</p>	<p>Public Participation, Landowner and Community Consultation</p>
<p>Farm Spes Bona 23552 Solar PV Plants, Bloemfontein, Free State Province</p>	<p>Surya Power (Pty) Ltd EAP: SIVEST</p>	<p>Public Participation, Landowner and Community Consultation</p>
<p>De Aar Solar Energy Facility, De Aar, Northern Cape Province</p>		<p>Public Participation, Landowner and</p>

Droogfontein Solar Energy Facility, Kimberley, Northern Cape Province	South Africa Mainstream Renewable Power Developments (Pty) Ltd EAP: SiVEST	Community Consultation
Kaalspruit Solar Energy Facility, Loeriesfontein, Northern Cape Province		
Platsjambok East PV, Prieska, Northern Cape Province		
Renosterburg PV, De Aar, Northern Cape Province	Renosterberg Wind Energy Company (Pty) Ltd EAP: SiVEST	Public Participation, Landowner and Community Consultation
19MW Solar Power Plant on Farm 198 (Slykklip), Danielskuil, Northern Cape Province	Solar Reserve South Africa (Pty) Ltd EAP: SiVEST	Public Participation, Landowner and Community Consultation

Renewable Power Generation Projects: Wind Energy Facilities

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Aletta Wind Farm, Copperton, Northern Cape Province	BioTherm Energy (Pty) Ltd EAP: SiVEST	Public Participation
Eureka Wind Farm, Copperton, Northern Cape Province		
Loeriesfontein Wind Farm, Loeriesfontein, Northern Cape Province	South Africa Mainstream Renewable Power Developments (Pty) Ltd EAP: SiVEST	Public Participation
Droogfontein Wind Farm, Loeriesfontein, Northern Cape Province		
Four Leeuwberg Wind Farms, Loeriesfontein, Northern Cape Province		
Noupoort Wind Farm, Noupoort, Northern Cape Province		
Mierdam PV & Wind Farm, Prieska, Northern Cape Province		
Platsjambok West Wind Farm & PV, Prieska, Northern Cape Province		

Renewable Power Generation Projects: Concentrated Solar Facilities (CSP)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Upington Concentrating Solar Plant and associated Infrastructures	Eskom Holdings SOC Ltd EAP: Bohlweki Environmental	Public Participation

Grid Infrastructure Projects

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Pluto-Mahikeng Main Transmission Substation and 400kV Power Line (Carletonville to Mahikeng), Gauteng and North West Provinces	Eskom Holdings SOC Ltd Baagi Environmental	

Thyspunt Transmission Lines Integration Project, Eastern Cape Province	Eskom Holdings SOC Ltd EAP: SIVEST	Public Participation, Landowner and Community Consultation
Westrand Strengthening Project, Gauteng Province		
Mookodi Integration Project, North-West Province		Public Participation,
Transnet Coallink, Mpumalanga and KwaZulu-Natal Provinces		
Delarey-Kopela-Phahameng Distribution power line and newly proposed Substations, North-West Province		Public Participation, Landowner and Community Consultation
Invubu-Theta 400kV Eskom Transmission Power Line, KwaZulu-Natal Province	Eskom Holding SOC Ltd EAP: Bemani Environmental	

Basic Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Melkhout-Kudu-Grassridge 132kV Power Line Project (project not submitted to DEA), Eastern Cape Province	Eskom Holdings SOC Ltd EAP: SIVEST	Public Participation, Landowner and Community Consultation
Tweespruit-Welroux-Driedorp-Wepener 132Kv Power Line, Free State Province		Public Participation, Landowner and Community Consultation
Kuruman 132Kv Power Line Upgrade, Northern Cape Province	Eskom Holdings SOC Ltd EAP: Zitholele	Public Participation, Landowner and Community Consultation
Vaalbank 132Kv Power Line, Free State Province		Public Participation, Landowner and Community Consultation
Pongola-Candover-Golela 132kV Power Line (Impact Phase), KwaZulu-Natal Province		Public Participation, Landowner and Community Consultation
Ndumo-Geziza 132kV Power Line, KwaZulu-Natal Province		Public Participation, Landowner and Community Consultation

Power Generation Sector Projects

Project Name & Location	Client Name	Role
Medupi Flue Gas Desulphurisation Project (up to completion of Scoping Phase), Limpopo Province	Eskom Holdings SOC Ltd EAP: Zitholele Consulting	Public Participation, Landowner and Community Consultation
Kendal 30-year Ash Disposal Facility, Mpumalanga Province		
Kusile 60-year Ash Disposal Facility		
Camden Power Station Ash Disposal Facility, Mpumalanga Province		
Tutuka Fabric Filter Retrofit and Dust Handling Plant Projects, Mpumalanga Province	Eskom Holdings SOC Ltd Lidwala Environmental	Public Participation, Landowner and Community Consultation
Eskom's Majuba and Tutuka Ash Dump Expansion, Mpumalanga Province		Public Participation, Landowner and Community Consultation

Hendrina Ash Dam Expansion, Mpumalanga Province		Public Participation, Landowner and Community Consultation
---	--	--

Basic Assessments

Project Name & Location	Client Name	Role
Proposed Realignment of the Bulshoek Dam Weir near Klawer and the Doring River Weir near Clanwilliam, Western Cape Province	Applicant: Dept of Water and Sanitation EAP: Zitholele	Public Participation

Environmental Authorisation Amendments

Project Name & Location	Client Name	Role
Proposed Beaufort West 280MW Wind Farm into two 140MW Trakas and Beaufort West Wind Farms, Western Cape Province	South Africa Mainstream Renewable Power Developments (Pty) Ltd EAP: SiVEST	Public Participation

Infrastructure Development Projects (bridges, pipelines, roads, etc)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Transnet's New Multi-Products Pipeline	Transnet DEAP: Bohlweki Environmental	Public Participation

Screening Studies

Project Name & Location	Client Name	Role
Environmental Screening Study for potential power line alternatives from Humansdorp to Port Elizabeth, Eastern Cape Province	Nelson Mandela Bay Municipality EAP: SiVEST	Social Assessment

Mining Sector

Environmental Impact Assessment and Environmental Management Programme

Project Name & Location	Client Name	Role
Koffiefontein Slimes Dam	Petra Diamond Mines EAP: Zitholele	Public Participation
Baobab Project: Ethenol Plant, Chimbanje, Middle Sabie, Zimbabwe	Applicant: Green Fuel (Private) Limited EAP: SiVEST	Public Participation & Community Consultation
BHP Billiton Energy Coal SA's Middelburg Water Treatment Plant, Mpumalanga Province	BHP Billiton Group EAP: Jones & Wagener	Public Participation

Facilitation

Project Name & Location	Client Name	Meeting Type
Bloemfontein Strengthening Project	Escom Holdings SOC Ltd	Public Meetings

	<i>EAP: Baagi Environmental</i>	
<i>Mooibraai-Smitkloof 132kV Power Line and Substation, Northern Cape Province</i>	<i>Eskom Holdings SOC Ltd EAP: SSI</i>	<i>Focus Group Meetings</i>
<i>Thabametsi IPP Power Station, Limpopo Province</i>	<i>Thabametsi Power Company Proprietary Limited EAP: Savannah Environmental</i>	<i>Focus Group Meeting & Public Meeting</i>
<i>Aggeneis-Oranjemond 400kV Eskom Transmission Power Line, Northern Cape Province</i>	<i>Eskom Holdings SOC Ltd EAP: Savannah Environmental</i>	<i>Focus Group Meetings & Public Meetings</i>
<i>Ariadne-Eros 400kV/132kV Multi-Circuit Transmission Power Line (Public Meetings)</i>	<i>Eskom Holdings SOC Ltd EAP: ACER Africa</i>	<i>Public Meetings</i>
<i>Majuba-Venus 765kV Transmission Power Lines</i>		<i>Public Meetings</i>
<i>SmancorCR Chemical Plant (Public Meeting)</i>	<i>Samancor Chrome (Pty) Ltd EAP: Environmental Science Associates</i>	<i>Public Meeting</i>

Stakeholder Engagement

Project Name & Location	Client Name	Role
<i>Determination, Review and Implementation of the Reserve in the Olifants/Letaba System</i>	<i>Department of Water and Sanitation</i>	<i>Secretarial Services</i>
<i>Orange River Bulk Water Supply System</i>	<i>Golder Associates</i>	
<i>Levuvu-Letaba Resources Quality Objectives</i>		

CURRICULUM VITAE OF SARAH WATSON

- Profession:** Environnemental Consultant
- Specialisation:** Environmental Impact Assessment, Environmental Management, Environmental Compliance and Due Diligence, and Compilation of Reports for projects in the infrastructure sector.
- Work Experience:** Seven (7) years in the environmental field

VOCATIONAL EXPERIENCE

Sarah has a Bachelor of Social Science (B.Soc.Sci.) Honours Degree in Geography and Environmental Management from the University of KwaZulu-Natal (UKZN), and seven (7) years of experience as an Environmental Consultant in the field of Environmental Impact Assessment and Environmental Management. She has experience working on a range of projects, specifically within the telecommunications; residential; industrial; bulk infrastructure; rural development; and energy sectors.

SKILLS BASE AND CORE COMPETENCIES

- Environmental Assessment
- Environmental Management
- Environmental Compliance Monitoring
- Geographic Information System (GIS)
- Stakeholder Engagement

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Soc.Sci. Honours in Geography and Environmental Management, University of KwaZulu-Natal, 2007
- B.Soc.Sci. Geography and Environmental Management, University of KwaZulu-Natal, 2006

Short Courses:

- Environmental and Social Risk Management (ESRM), International Finance Corporation, 2018

Professional Society Affiliations:

- Member of the South African affiliate of the International Association for Impact Assessment (IAIAsa)
- Member of the Society of South African Geographers (SSAG).

EMPLOYMENT

Date	Company	Roles and Responsibilities
October 2016 – Current	Savannah Environmental (Pty) Ltd	Environmental Consultant <i>Tasks included: Executing Environmental Impact Assessment (EIA) processes, GIS Work, Environmental Screening, Environmental Due Diligence, and Environmental Management and auditing</i>
December 2013 – December 2014	Golder Associates Africa (Pty) Ltd	Environmental Consultant <i>Tasks included: Executing Environmental Impact Assessment (EIA) and Basic Assessment (BA) processes, GIS work, Environmental Due Diligence, and Environmental Management and auditing</i>
January 2011 – November 2013	Scientific and Industrial Research (CSIR)	Environmental Consultant <i>Tasks included: Executing Environmental Impact Assessment (EIA) and Basic Assessment (BA) processes, GIS work, Public Participation, Environmental Screening, and Environmental Management</i>
April 2008 – December 2010	K2M Environmental (Pty) Ltd	Environmental Consultant <i>Tasks included: Assisting Senior Environmental Consultant with executing Basic Assessment (BA) processes, GIS work, Public Participation, Preliminary Environmental Screening, and Environmental Managements</i>

PROJECT EXPERIENCE**Renewable Power Generation Projects: Solar Energy Facilities****Environmental Impact Assessments and Environmental Management Programmes**

Project Name & Location	Client Name	Role
<i>Combined EIA for the Betelgeuse PV Solar Projects 1, 2, 3 and 4; between Murraysburg and Victoria West, Western Cape Province.</i>	<i>Aurora Power Solutions (Pty) Ltd</i>	<i>Environmental, GIS and Public Participation Consultant (Scoping Phase)</i>
<i>EIA for the 75 MW Glen Thorne PV Solar Facility, near Bloemfontein, Free State Province.</i>	<i>SolaireDirect</i>	<i>Author of the draft Scoping Report (SR)</i>

Basic Assessments

Project Name & Location	Client Name	Role
<i>BA for the PV Power Project on Kennilworth Farm, Northern Cape.</i>	<i>Biotherm Energy</i>	<i>Author of the draft Basic Assessment Report (BAR)</i>

Screening Studies

Project Name & Location	Client Name	Role
<i>Environmental Site Screening Assessment For Solar PV Energy Facilities proposed at Salima, Lilongwe and Golomoti, Central Region, Malawi.</i>	<i>H1 Holdings (Pty) Ltd</i>	<i>Environmental and GIS Consultant</i>

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
2017 Annual Environmental Compliance Evaluation with the Equator Principles and Environmental and Social Action Plan for the Mulilo Solar PV De Aar Photovoltaic Solar Energy Facility, Northern Cape Province	Mulilo Renewable Energy Solar PV De Aar (Pty) Ltd	Auditor
2017 Annual Environmental Compliance Evaluation with the Equator Principles and Environmental and Social Action Plan for the Mulilo Solar PV Prieska Photovoltaic Solar Energy Facility, Northern Cape Province	Mulilo Renewable Energy Solar PV Prieska (Pty) Ltd	Auditor
Biannual Environmental Compliance Audit of the Konkoonies 10MW Photovoltaic (PV) Solar Energy Facility near Pofadder, Northern Cape Province	Limarco 77(Pty) Ltd	Auditor
Biannual Environmental Compliance Audit of the Aries 10MW Photovoltaic (PV) Solar Energy Facility near Kenhardt, Northern Cape Province	Sevenstones 159 (Pty) Ltd	Auditor
Final Environmental Compliance Audit for the Xina Solar One Thermal Plant, near Pofadder, Northern Cape Province	Xina Solar One RF (Pty) Ltd	Auditor

Renewable Power Generation Projects: Wind Energy Facilities

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Combined EIA for the Ishwati Emoyeni Wind Energy Facility and associated Eskom Grid Connection Infrastructure, near Murraysburg, Western Cape Province.	Windlab Developments South Africa (Pty) Ltd (WDSA)	Environmental, GIS, and Public Participation Consultant (Scoping Phase)
EIA for the proposed Universal Wind Energy Project in the Coega IDZ, Eastern Cape Province.	Universal Wind	Environmental Consultant

Screening Studies

Project Name & Location	Client Name	Role
Environmental Screening Study (ESS) of Sites being Investigated for Potential Wind Energy Projects, in the Northern Cape, Eastern Cape, Western Cape; and KwaZulu-Natal Provinces.	Confidential	Environmental and GIS Consultant

Due Diligence Reporting

Project Name & Location	Client Name	Role
Environmental and Social Due Diligence Report for the Roggeveld Wind Farm in the Northern and Western Cape Province.	Building Energy South Africa (Pty) Ltd	Environmental Consultant

Conventional Power Generation Projects (Coal)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
------------------------------------	--------------------	-------------

H2 Energy Power Station and associated infrastructure near KwaMhlanga, Mpumalanga Province.	H2 Clean Energy (Pty) Ltd	Environmental and GIS Consultant
Mutsho Power Project and Associated Infrastructure on a site near Makhado (Louis Trichardt), Limpopo Province.	Mutsho Power (Pty) Ltd	Environmental and GIS Consultant

Screening Studies

Project Name & Location	Client Name	Role
Environmental Site Screening Assessment for a new coal-fired power station near Makhado (Louis Trichardt), Limpopo Province.	Confidential	Environmental and GIS Consultant

Mining Sector Projects

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
ESIA for a proposed Iron Ore Mine near Melmoth, Northern KwaZulu-Natal.	Jindal Mining (Pty) Ltd	Environmental Consultant (Scoping Phase)
ESIA for a proposed Iron Ore Processing Site near Melmoth, KwaZulu-Natal Province.	Jindal Processing (Pty) Ltd	Environmental Consultant (Scoping Phase)

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Independent External Compliance audit of Palesa Mine's Integrated Water Use License (IWUL), near KwaMhlanga, Mpumalanga Province	HCI Coal	Auditor
Independent External Compliance audit of Palesa Mine's Waste Management License (WML), near KwaMhlanga, Mpumalanga Province	HCI Coal	Auditor
Independent External Compliance audit of Mbali Mine's Integrated Water Use License (IWUL), near Ogies, Mpumalanga Province	HCI Coal	Auditor

Infrastructure Development Projects (bridges, pipelines, roads, etc.)

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
EIA for the proposed Vopak-Reatile Terminal Richards Bay Bulk Liquid Storage and Handling Facility, Richards Bay, KwaZulu-Natal Province.	Vopak South Africa Developments (Pty) Ltd.	Environmental Consultant (Scoping Phase)
EIA for a proposed Common User Marine Servitude and Pipelines	Coega Development Corporation (CDC)	Environmental Consultant (Scoping Phase)

Basic Assessments

Project Name & Location	Client Name	Role
BA for site clearing and site preparation activities on Lots 4 and 5 of Portion 3 of Erf 11478 in the South Dunes Precinct of the Port of Richards Bay, KwaZulu-Natal Province.	Vopak South Africa Developments (Pty) Ltd.	Environmental Consultant
BA for the proposed Hlabisa Bulk Water Supply Scheme, Hlabisa, KwaZulu-Natal Province.	Mhlathuze Water	Environmental, GIS and Public Participation Consultant
BA for the proposed construction of a Bulk Sewage Rising Main, City of uMhlathuze, KwaZulu-Natal Province.	City of uMhlathuze Local Municipality.	Environmental, GIS and Public Participation Consultant
BA for the proposed Rita Light Industrial Park Development, near Camperdown, KwaZulu-Natal Province.	Daisy Wheel Investments (Pty) Ltd	Environmental, GIS and Public Participation Consultant
BA for the development of a Light Industrial Park on Portion 10 of the Farm Balgowrie, Camperdown, KwaZulu-Natal.	Daisy Wheel Investments (Pty) Ltd	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Richards Bay, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station at Felixton, near Empangeni, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Ballito, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Howick, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Richmond, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station in Durban, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Kokstad, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant

Project Name & Location	Client Name	Role
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Richmond, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Mkondeni, Pietermaritzburg, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station in Pietermaritzburg, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station in Bulwer, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Camperdown, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Underberg, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station in Cowies Hill, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station in Phoenix, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Kokstad, Eastern Cape Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Vulindlela, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MTN Telecommunication Mast and associated Base Station near Mpendle, KwaZulu-Natal Province.	BSO International on behalf of MTN	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Water Tower Transmission Installations and associated Base Stations in Isipingo, KwaZulu-Natal Province	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Water Tower Transmission Installations and associated Base Stations in Umlazi, KwaZulu-Natal Province	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Rooftop Transmission Installation and associated Base Station in Reservoir Hills, KwaZulu-Natal Province.	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Rooftop Transmission Installation and associated Base Station in Wentworth, KwaZulu-Natal Province.	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Rooftop Transmission Installation and associated Base Station in Queensburgh, KwaZulu-Natal Province.	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant

Project Name & Location	Client Name	Role
BA for the construction of a MultiChoice Rooftop Transmission Installation and associated Base Station at the University of KwaZulu-Natal (UKZN), KwaZulu-Natal Province.	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of a MultiChoice Rooftop Transmission Installation and associated Base Station in Amanzimtoti, KwaZulu-Natal Province.	BSO International on behalf of MultiChoice	Environmental, GIS and Public Participation Consultant
BA for the construction of an iBurst Telecommunication Mast and associated Base Station in Kloof, KwaZulu-Natal Province	BSO International on behalf of iBurst	Environmental, GIS and Public Participation Consultant

Screening Studies

Project Name & Location	Client Name	Role
ESS for the proposed Development of Pier 1 Phase 2 Container Terminal in the Port of Durban, KwaZulu-Natal Province.	Transnet Capital Projects (TCP).	Environmental Consultant and co-author

Environmental Compliance, Auditing and ECO

Project Name & Location	Client Name	Role
Construction of a New Distribution Centre and Warehouse on Erf 5539 and 5540 (Chloorkop X74), Lords View Industrial Park, Gauteng Province	Olivier & Partners on behalf of ARB Holdings (Pty) Ltd	Environmental Control Officer (ECO)
Gap Analysis of Venture Diversified Product (VDP) Rosslyn Facility's EMS, in Rosslyn, Gauteng Province	Venture Diversified Product (VDP) Rosslyn	Auditor
Construction of the Hlabisa Bulk Water Supply Scheme, in Hlabisa, KwaZulu-Natal Province	Mhlathuze Water	Environmental Control Officer (ECO)

Training

Project Name & Location	Client Name	Role
Capacity Building Workshop on Amended Environmental Impact Assessment Regulations and Associated Legislation, Durban, KwaZulu-Natal	Transnet	Assistant Environmental Consultant and Researcher

Housing and Urban Projects

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
EMP for the Makhasaneni Rural Subsidised Housing Development, in Mthonjaneni (Ward 5), KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Mthonjaneni Local Municipality, and the KwaZulu-Natal Department of Housing.	Environmental and GIS Consultant
EMP for the Ntembisweni Rural Subsidised Housing Development in the Ntembisweni Traditional Authority Area near Greytown, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Umvoti Local Municipality, and the KwaZulu-Natal Department of Housing.	Environmental and GIS Consultant

Project Name & Location	Client Name	Role
<i>EMP for the Sikhonyane Rural Subsidised Housing Development, in the Sikhonyane Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Mandeni Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>EMP for the Umzumbe Cluster A Rural Subsidised Housing Development, near Umzumbe, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Umzumbe Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>EMP for the Applebosch Rural Subsidised Housing Development near Ndwedwe, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Msunduzi Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>

Basic Assessments

Project Name & Location	Client Name	Role
<i>BA for the proposed Loch-Sloy Rural Subsidised Housing Development, near Estcourt, KwaZulu-Natal Province.</i>	<i>Imbabazane Local Municipality</i>	<i>Environmental, GIS and Public Participation Consultant</i>
<i>BA for the proposed "Living in THE PARK" Residential Development, near Albert Falls, KwaZulu-Natal Province.</i>	<i>J.H.K Developers</i>	<i>Environmental, GIS and Public Participation Consultant</i>
<i>BA for the proposed Residential Development on the Remainder of Erf 215, Prince's Grant, KwaZulu-Natal Province.</i>	<i>Princes Grant</i>	<i>Environmental, GIS and Public Participation Consultant</i>
<i>BA for the proposed Greenmeadow Lane Retirement Village, KwaZulu-Natal Province.</i>	<i>Rodney Blake Jolly on behalf of Georgies Avenue Investments (Pty) Ltd</i>	<i>Environmental, GIS and Public Participation Consultant</i>

Screening Studies

Project Name & Location	Client Name	Role
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, in the Ntembisweni Traditional Authority area near Greytown, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Umvoti Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, in the Mkhwanazi Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the City of uMhlathuze Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at Makhasaneni in Ward 5 of the Mthonjaneni Local Municipality, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Mthonjaneni Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>

Project Name & Location	Client Name	Role
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at the Sikhonyane Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Mandeni Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, near Ndwedwe, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Msunduzi Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at Nxamalala Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Impendle Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at KwaDolo Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Msinga Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at Ndlangubo Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the uMlalazi Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at the Embo Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Maphumulo Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for a Rural Subsidised Housing Development, at Mthandeni Traditional Authority area, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Maphumulo Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>
<i>Preliminary Environmental Assessment for the Highflats Slum Clearance Housing Project near Ixopo, KwaZulu-Natal Province.</i>	<i>Stedone Developments and Bigen Africa on behalf of the Ubuhlebezwe Local Municipality, and the KwaZulu-Natal Department of Housing.</i>	<i>Environmental and GIS Consultant</i>

Environmental Permitting & WUL Applications

Project Name & Location	Client Name	Role
Application for Planning Consent for the proposed Kwamavundla Rural Subsidised Housing Development in the Kwamavundla Traditional Authority area, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Hibiscus Coast Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Ngolokodo Rural Subsidised Housing Development, near Nquthu KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Ubuhlebezwe Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Mdletshe Traditional Authority Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Hlabisa Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Makhasaneni Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Mthonjaneni Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Njomelwane Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Ntambanana Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Umzambe Cluster A Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Umzambe Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Ntanzi Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Nongoma Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant
Application for Planning Consent for the proposed Abakwahlabisa Rural Subsidised Housing Development, KwaZulu-Natal Province.	Stedone Developments and Bigen Africa on behalf of the Hlabisa Local Municipality, and the KwaZulu-Natal Department of Housing.	GIS Consultant and assistant Environmental Consultant

Environmental Management Tools

Screening Studies

Project Name & Location	Client Name	Role
<i>Umzinyathi District Municipality's Strategic Environmental Assessment (July 2009).</i>	<i>Umzinyathi District Municipality</i>	<i>Assistant GIS Consultant</i>

Specialist Studies

Social Impact Assessments

Project Name & Location	Client Name	Role
<i>BA for the Kruisvallei Hydroelectric Power Generation Scheme, Free State Province</i>	<i>Zevobuzz (Pty) Ltd</i>	<i>Social Consultant</i>
<i>Lake Management Plan for Lake Mzingazi, Richards Bay, KwaZulu-Natal Province</i>	<i>City of uMhlathuze</i>	<i>Social Consultant (Review and update of Social Assessment)</i>

Short CV/Summary of Expertise – Simon Todd

 <p>SIMON TODD CONSULTING ECOLOGICAL SPECIALIST SERVICES Assessment/Management/Research</p>	<p>Simon Todd Pr.Sci.Nat C: 082 3326502 O: 021 782 0377 Simon.Todd@3foxes.co.za 60 Forrest Way Glencairn 7975</p>	<p>Ecological Solutions for People & the Environment</p>
--	---	--

Professional Profile

Simon Todd has extensive experience in biodiversity management and ecological assessment across South African ecosystems. This includes a variety of broad-scale strategic assessments and best-practice guidelines for a range of industries. In addition, Simon Todd has conducted a large amount of research on the impacts of land-use on biodiversity and has published numerous scientific papers in international peer-reviewed journals on this topic. Simon Todd is a recognised ecological expert and is a past chairman and current executive committee member of the Arid-Zone Ecology Forum and has over 20 years' experience working throughout the country. Simon Todd is registered with the South African Council for Natural Scientific Professions (No. 400425/11).

Recent notable projects include:

- First-author of a book chapter on the ecological impacts of Shale Gas development on the Karroo of South Africa. (2017)
 - Co-author on the Biodiversity chapter of the Shale Gas SEA being conducted by CSIR. (2016)
 - Co-author on the Eskom Grid Infrastructure SEA, managed by CSIR. (2016)
 - Co-author on the Wind and Solar SEA, managed by CSIR. (2015)
-

Abbreviated CV

- Profession: Independent Ecological Consultant - Pr.Sci.Nat 400425/11
- Specialisation: Plant & Animal Ecology
- Years of Experience: 20 Years

Skills & Primary Competencies

- Research & description of ecological patterns & processes in Thicket, Savannah Nama Karoo, Succulent Karoo, Arid Grassland and Fynbos Ecosystems.
- Ecological Impacts of land use on biodiversity and provision of associated management advice.

- 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.
- 2010-Present – Self-employed as consultant and sole proprietor of Simon Todd Consulting, which has conducted more than 150 specialist assessments.

General Experience & Expertise

- Lead ecologist on several SEA chapters, including Eskom Grid Infrastructure, Wind and Solar SEA and Shale Gas SEA.
- Conducted a large number of fauna and flora specialist assessments distributed widely across South Africa. Projects have ranged in extent from <50 ha to more than 50 000 ha.
- Widely-recognized ecology specialist. Published numerous peer-reviewed scientific publications based on various ecological studies across the country. Past chairman of the Arid Zone Ecology Forum and current executive committee member.
- Extensive field and personal experience across a broad range of South African ecosystems, with particular focus on the Western, Northern and Eastern Cape.
- Strong research background which has proved invaluable when working on ecologically sensitive and endangered ecosystems, habitats and species.
- 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 African ecosystems.
- Maintain several long-term vegetation monitoring projects which have led to several publications.
- Guest lecturer at two universities and have also served as an external examiner.
- Reviewed papers for more than 12 international ecological journals.
- SACNASP registered as a Professional Natural Scientist, (Ecology) No. 400425/11.

Current Committees

- SANBI Vegmap Committee – 2015 – present
- CSIR Wind and Solar SEA Phase II advisory committee – 2016-present
- AZEF deputy chair – 2012-present
- SANBI Karoo Biogaps Taxon leads' committee and executive committee member.

Recent & Relevant Outputs & Publications

Strategic Environmental Assessments

Co-Author. Chapter 7 - Biodiversity & Ecosystems - Shale Gas SEA. CSIR 2016.

Co-Author. Chapter 1 Scenarios and Activities – Shale Gas SEA. CSIR 2016.

Co-Author – Ecological Chapter – Wind and Solar SEA. CSIR 2014.

Co-Author – Ecological Chapter – Eskom Grid Infrastructure SEA. CSIR 2015.

Contributor – Ecological & Conservation components to SKA SEA. CSIR 2017.

Specialist Fauna and Flora Assessments:

Specialist Ecological studies for many different developments distributed across the country including:

- Over 30 Wind Energy projects
- More than 60 Solar Energy developments
- More than 30 different housing, roads, mining and other infrastructure development projects.
- More than 20 electricity transmission infrastructure projects.

A full list of projects is available on request.

CURRICULUM VITAE

A. Personal Details

Last name: **Pienaar**

First name: **Mariné**

Nationality: **South African**

Employment: **Self-employed (Consultant)**

B. Contact Details

Email address: mpienaar@terraafrica.co.za

Website: www.terraafrica.co.za

Mailing address: **PO Box 433, Ottosdal, 2610**

Telephone: **+27828283587**

Address: **57 Kruger Street, Wolmaransstad, 2630, Republic of South Africa**

Current Job: **Lead Consultant and Owner of Terra Africa Consult**

C. Concise biography

Mariné Pienaar is a professionally registered soil- and agricultural scientist (SACNASP) who has consulted extensively for the past eleven years in the fields of soil, land use and agriculture in several African countries. These countries include South Africa, Liberia, Ghana, DRC, Mozambique, Botswana, Angola, Swaziland and Malawi. She has worked with mining houses, environmental consulting companies, Eskom, government departments as well as legal and engineering firms. She conducted more than three hundred specialist studies that included baseline soil assessment and rehabilitation planning for new projects or expansion of existing projects, soil quality monitoring, land rehabilitation assessment and monitoring, natural resource assessment as part of agricultural project planning, evaluation and development of sustainable agriculture practices, land use assessment and livelihood restoration planning as part of resettlement projects and land contamination risk assessments. She holds a BSc. Agriculture degree with specialisation in Plant Production and Soil Science from the University of Pretoria and a MSc in Environmental Science from the University of the Witwatersrand. In addition to this, she has attended a number of

courses in Europe, the USA and Israel in addition to those attended in South Africa. Mariné is a contributing author of a report on the balance of natural resources between the mining industry and agriculture in South Africa (published by the Bureau for Food and Agricultural Policy, 2015).

D. Qualifications

Academic Qualifications:

- ♦ **MSc Environmental Science**; University of Witwatersrand, South Africa, 2018
- ♦ **BSc (Agric) Plant Production and Soil Science**; University of Pretoria, South Africa, 2004
- ♦ **Senior Certificate / Matric**; Wolmaransstad High School, South Africa, 2000

Courses Completed:

- ♦ **World Soils and their Assessment**; ISRIC – World Soil Information, Wageningen, 2015
- ♦ **Intensive Agriculture in Arid- and Semi-Arid Environments** – Gilat Research Centre, Israel, 2015
- ♦ **Hydrus Modelling of Soil-Water-Leachate Movement**; University of KwaZulu-Natal, South Africa, 2010
- ♦ **Global Sustainability Summer School 2012**; Institute for Advanced Sustainability Studies, Potsdam, Germany, 2012
- ♦ **Wetland Rehabilitation**; University of Pretoria, South Africa, 2008
- ♦ **Enviropreneurship Institute**; Property and Environment Research Centre [PERC], Montana, U.S.A., 2011
- ♦ **Youth Encounter on Sustainability**; ACTIS Education [official spin-off of ETH Zürich], Switzerland, 2011
- ♦ **Environmental Impact Assessment | Environmental Management Systems – ISO 14001:2004 | Environmental Law**; University of Potchefstroom, South Africa, 2008
- ♦ **Carbon Footprint Analyst Level 1**; Global Carbon Exchange Assessed, 2011
- ♦ **Negotiation of Financial Transactions**; United Nations Institute for Training and Research, 2011
- ♦ **Food Security: Can Trade and Investment Improve it?** United Nations Institute for Training and Research, 2011

E. Language ability

Perfectly fluent in English and Afrikaans (native speaker of both) and conversant in French.

F. Professional Experience

Name of firm	Terra Africa Environmental Consultants
Designation	Owner Principal Consultant
Period of work	December 2008 to Date

G. Prior Tenures

Integrated Development Expertise (Pty) Ltd; **Junior Land Use Consultant** [July 2006 to October 2008]

Omnia Fertilizer (Pty) Ltd; **Horticulturist and Extension Specialist** [January 2005 to June 2006]

H. Professional Affiliations

- ♦ South African Council for Natural Scientific Professions [SACNASP]
- ♦ Soil Science Society of South Africa [SSSA]
- ♦ Soil Science Society of America
- ♦ South African Soil Surveyors' Organisation [SASSO]
- ♦ International Society for Sustainability Professionals [ISSP]

Summary of a selected number of projects completed successfully:

[Comprehensive project dossier available on request]

- ♦ *Sekoko Railway Alignment and Siding Soil, Land Use and Capability Study* in close proximity to the Medupi Power Station in the Lephalale area, Limpopo Province.
- ♦ *ItalThai Rail and Port Projects, Mozambique* – The study included a thorough assessment of the current land use practices in the proposed development areas including subsistence crop production and fishing as well as livestock farming and forestry activities. All the land uses were mapped and intrinsically linked to the different soil

types and associated land capabilities. This study was used to develop Livelihood Restoration Planning from.

- ♦ *Bomi Hills Railway Alignment Project, Liberia*: soil, land use and agricultural scientist for field survey and reporting of soil potential, current land use activities and existing soil pollution levels, as well as associated infrastructure upgrades of the port, road and railway.
- ♦ *Kingston Vale Waste Facility, Mpumalanga Province, South Africa*: Soil and vegetation monitoring to determine the risk of manganese pollution resulting from activities at the waste facility.
- ♦ *Keaton Mining's Vanggatfontein Colliery, Mpumalanga*: Assessment of soil contamination levels in the mining area, stockpiles as well as surrounding areas as part of a long-term monitoring strategy and rehabilitation plan.
- ♦ *Richards Bay Minerals, KwaZulu-Natal*: Contaminated land assessment of community vegetable gardens outside Richards Bay as a result of spillages from pipelines of Rio Tinto's Richards Bay Minerals Mine.
- ♦ *Buffelsfontein Gold Mine, Northwest Province, South Africa*: Soil and land contamination risk assessment for as part of a mine closure application. Propose soil restoration strategies.
- ♦ *Glenover Phosphate Mining Project near Steenbokpan in the Lephalale area* – Soil, Land Use and Land Capability Study as part of the environmental authorisation process.
- ♦ *Waterberg Coal 3 and 4 Soil, Land Use and Land Capability Study* on 23 000 ha of land around Steenbokpan in the Lephalale area.
- ♦ *Lesotho Highlands Development Agency, development of Phase II (Polihali Dam and associated infrastructure)*: External review and editing of the initial Soil, Land Use and Land Capability Assessment as requested by ERM Southern Africa.
- ♦ *Tina Falls Hydropower Project, Eastern Cape, South Africa*: Soil, land use and land capability assessment as part of the ESIA for the construction of a hydropower plant at the Tina Falls.

- ♦ *Graveyard relocation as part of Exxaro Coal's Belfast Resettlement Action Plan: Soil assessment to determine pedohydrological properties of the relocation area in order to minimise soil pollution caused by graveyards.*
- ♦ *Rhino Oil Resources: Strategic high-level soil, land use and land capability assessment of five proposed regions to be explored for shale gas resources in the KwaZulu-Natal, Eastern Cape, North-West and Free State provinces of South Africa.*
- ♦ *Eskom Kimberley Strengthening Phase 4 Project, Northern Cape & Free State, South Africa: soil, agricultural potential and land capability assessment.*
- *Mocuba Solar Project, Mozambique – The study included a land use assessment together with that of the soil and land capabilities of the study area. All current land uses were documented and mapped and the land productivity was determined. This study advocated the resettlement and livelihood restoration planning.*
- ♦ *Botswana (Limpopo-Lipadi Game Reserve). Soil research study on 36 000 ha on the banks of the Limpopo River. This soil study forms part of an environmental management plan for the Limpopo-Lipadi Game Reserve situated here as well as the basis for the Environmental Impact Assessment for the development of lodges and Land Use Management in this area.*
- ♦ *TFM Mining Operations [proposed] Integrated Development Zone, Katanga, DRC [part of mining concession between Tenke and Fungurume]: soil and agricultural impact assessment study.*
- ♦ *Closure Strategy Development for Techmina Mining Company – Lucapa, Angola. Conducted an analysis of the natural resources (soil, water) to determine the existing environmental conditions on an opencast diamond mine in Angola. The mine currently experience severe problems with kimberlite sediment flowing into the river. A plan is currently being developed to change the mining area into a sustainable bamboo farming operation.*
- *Closure of sand mining operations, Zeerust District. Successfully conducted the closure application of the Roos Family Sand Mine in the Zeerust District. Land Use*

Management Plans for rehabilitated soil were developed. The mine has closed now and the financial provision has been paid out to the applicant.

- ♦ *ESIA for [proposed] Musonoi Mine, Kolwezi area, Katanga, DRC: soil, land use and land capability assessment.*
- ♦ *Bauba A Hlabirwa Moeijelik Platinum mine [proposed] project, Mpumalanga, South Africa: soil, land use and land capability assessment and impact on agricultural potential of soil.*
- ♦ *Commissiekraal Coal Mine [proposed] project, KwaZulu-Natal, South Africa: sustainable soil management plans, assessment of natural resource and agricultural potential and study of the possible impacts of the proposed project on current land use. Soil conservation strategies included in soil management plan.*
- ♦ *Cronimet Chrome Mine [proposed] project, Limpopo Province, South Africa: soil, land use and land capability of project area and assessment of the impacts of the proposed project.*
- ♦ *Moonlight Iron Ore Land Use Assessment, South Africa – Conducted a comprehensive land use assessment that included interviews with land users in the direct and indirect project zones of influence. The study considered all other anticipated social and environmental impacts such as water, air quality and noise and this was incorporated into a sensitivity analysis of all land users to the proposed project.*
- ♦ *Project Fairway Land Use Assessment, South Africa – The study included an analysis of all land users that will directly and indirectly be influenced by the project. It analysed the components of their land uses and how this components will be affected by the proposed project. Part of the study was to develop mitigation measures to reduce the impact on the land users.*
- ♦ *Bekkersdal Urban Renewal Project – Farmer Support Programme, Independent consultation on the farmer support programme that forms part of Bekkersdal Renewal Project. This entailed the production of short and long term business plans based on soil and water research conducted. Part of responsibilities were the evaluation of current irrigation systems and calculation of potential water needs, etc. as well as determining quantities and prices of all project items to facilitate the formalisation of tender documents.*

- ♦ *Area-based agricultural business plans for municipalities in Dr. Kenneth Kaunda Municipal District.* Evaluation of the agricultural and environmental status of the total district as well as for each municipality within the district. This included the critical evaluation of current agricultural projects in the area. The writing of sustainable, executable agricultural business plans for different agricultural enterprises to form part of the land reform plans of each Municipality within the district.
- ♦ *Batsamaya Mmogo, Hartswater.* Conducted a soil and water assessment for the farm and compiled management and farming plans for boergoats grazing on *Sericea lespedeza* with pecan nuts and lucerne under irrigation.
- ♦ *Anglo Platinum Twickenham Mine – Irrigated Cotton Project.* Project management of an irrigated cotton production project for Twickenham Platinum Mine. This project will ensure that the community benefit from the excess water that is available from the mine activities.
- ♦ *Grasvally Chrome (Pty) Ltd Sylvania Platinum [proposed] Project, Limpopo Province, South Africa:* Soil, land use and agricultural potential assessment.
- ♦ *Jeanette Gold mine project [reviving of historical mine], Free State, South Africa:* Soil, land use and agricultural potential assessment.
- ♦ *Kangra Coal Project, Mpumalanga, South Africa:* Soil conservation strategies proposed to mitigate the impact of the project on the soil and agricultural potential.
- ♦ *Richards Bay Integrated Development Zone Project, South Africa* [future development includes an additional 1500 ha of land into industrial areas on the fringes of Richards Bay]: natural resource and agricultural potential assessment, including soil, water and vegetation.
- ♦ *Exxaro Belfast Coal Mine [proposed] infrastructure development projects* [linear: road and railway upgrade | site-specific coal loading facilities]: soil, land capability and agricultural potential assessment.
- ♦ *Marikana In-Pit Rehabilitation Project of Aquarius Platinum, South Africa:* soil, land capability and land use assessment.

- ♦ *Eskom Bighorn Substation proposed upgrades, South Africa: soil, land capability and agricultural potential assessment.*
- ♦ *Exxaro Leeuwpan Coal Mining Right Area, South Africa: consolidation of all existing soil and agricultural potential data. Conducted new surveys and identified and updated gaps in historic data sets.*
- ♦ *Banro Namoya Mining Operation, DRC: soil, land use and agricultural scientist for field survey and reporting of soil potential, current land use activities and existing soil pollution levels, including proposed project extension areas and progressive soil and land use rehabilitation plan.*
- ♦ *Kumba Iron Ore's Sishen Mine, Northern Cape, South Africa: soil, land use and agricultural scientist | Western Waste Rock Dumps [proposed] Project: soil, land use and agricultural potential assessment, including recommendations regarding stripping/stockpiling and alternative uses for the large calcrete resources available.*
- ♦ *Vetlaagte Solar Development Project, De Aar, South Africa: soil, land use and agricultural scientist. Soil, land use and agricultural potential assessment for proposed new 1500 ha solar development project, including soil management plan.*



ENVIRONMENTAL PLANNING AND DESIGN

Name JONATHAN MARSHALL
Nationality British
Year of Birth 1956
Specialisation Landscape Architecture / Landscape & Visual Impact Assessment / Environmental Planning / Environmental Impact Assessment.

Qualifications

Education Diploma in Landscape Architecture,
Gloucestershire College of Art and Design,
UK (1979)
Environmental Law, University of KZN
(1997)

Professional Registered Professional Landscape Architect (South Africa)
Chartered Member of the Landscape Institute (UK)
Certified Environmental Assessment Practitioner of South Africa.
Member of the International Association of Impact
Assessment, South Africa

Languages

<u>English</u> -	Speaking	-	Excellent
-	Reading	-	Excellent
-	Writing	-	Excellent

Contact Details Post: PO Box 2122
Westville
3630
Republic of South Africa

Phone: +27 31 2668241, Cell: +27 83 7032995

Key Experience

Jon qualified as a Landscape Architect at Cheltenham (UK) in 1979. He has been a Chartered Member of the Landscape Institute (UK) since 1986. He is also a registered Landscape Architect and Environmental Assessment Practitioner of South Africa.

During the early part of his career (1981 – 1990) he worked with Clouston (now RPS) in Hong Kong and Australia. During this period he was called on to undertake visual impact assessment input to numerous environmental assessment processes for major infrastructure projects. This work was generally based on photography with line drawing superimposed to illustrate the extent of development visible.

He worked in the United Kingdom (1990 – 1995) for major supermarket chains including Sainsbury's and prepared CAD based visual impact assessments for public enquiry for new store development. He also prepared the VIA input to the environmental statement for the Cardiff Bay Barrage for consideration by the UK Parliament in the passing of the Barrage Bill.

His more recent VIA work in Africa (1995 to present) includes a combination of CAD and GIS based work for a new international airport to the north of Durban, new heavy industrial operations, overhead electrical transmission lines, mining operations, a number of commercial and residential developments as well as numerous renewable energy projects.

VIA work undertaken during the last twelve months includes assessments for several proposed Eskom power lines / substations and numerous solar and wind energy projects.

Relevant Landscape & Visual Impact Assessment (LVIA) Projects

1. **Paulputs CSP Power Tower project** – LVIA for a 200MW CSP power tower facility near Pofadder in the Northern Cape.
2. **Karoshhoek Solar Valley** – LVIA for nine CSP projects including power tower and parabolic trough projects in the Karoshhoek Solar Valley near Upington in the Northern Cape.
3. **Noupoort CSP** – LVIA for two CSP parabolic trough facilities close to Noupoort in the Northern Cape.
4. **Sol Invictus Solar** – LVIA for four 150MW photovoltaic solar arrays near Aggeneys in the Northern Cape for a private client
5. **Tshivhaso Power Station** – LVIA for a proposed new 600MW power station including associated infrastructure and dumps near Lephalale in the Limpopo Province for a private client.
6. **Woodhouse Solar** – LVIA for two 100MW photovoltaic solar arrays near Vryburg in the North West Province for a private client.
7. **Saldanha Eskom Network Strengthening Project** – LVIA for major improvements to Eskom's electrical infrastructure between Langebaan and Saldanha in the Western Cape for Eskom.
8. **Albany Solar Array** – LVIA for two 75MW photovoltaic solar arrays near Upington in the Northern Cape.
9. **Mpophomeni Shopping Centre** – LVIA for a proposed new shopping center to the south of Midmar Dam in KwaZulu Natal for a private client.
10. **Gunstfontein Wind Farm** – LVIA for a 200MWnd farm near Sutherland in the Northern Cape for a private client.
11. **Hennenman Solar Array** – LVIA for a proposed solar array in the Free State for a private client.
12. **Moorreesburg Wind Farm** – LVIA for a proposed wind energy project in the Western Cape for a private client.
13. **Lethabo Solar Array** – LVIA for a proposed solar array at the Lethabo Power Station in the Free State for Eskom.
14. **Tutuka Solar Array** – LVIA for a proposed solar array at the Tutuka Power Station in Mpumalanga for Eskom.
15. **Majuba Solar Array** – LVIA for a proposed solar array at the Majuba Power Station in Mpumalanga for Eskom.
16. **Isundu 765 / 400Kv Sub Station** - LVIA for a proposed major substation in KwaZulu Natal for Eskom.
17. **Bhangazi Lake Tourism Development** – Visual impact assessment for a proposed lodge development within the Isimangaliso Wetland Park World Heritage Site. This work is ongoing.
18. **Quarry Development for the Upgrade of Sani Pass** – Visual Impact Assessments for two proposed quarry developments on the edge of the uKhahlamba-Drakensburg World Heritage Site.
19. **Mtubatuba to St Lucia Overhead Power Line** – Visual Impact Assessment for a proposed power line bordering on the Isimangaliso Wetland Park World Heritage Site for

Eskom.

20. **St Faiths 400/132 kV Sub-Station and Associated Power Lines** - Visual Impact Assessment for a proposed new major sub-station and approximately 15km of overhead power line for Eskom.
21. **Clocolan to Ficksburg Overhead Power Line** – Visual Impact Assessment for a proposed power line for Eskom.
22. **Solar Plant Projects including Photovoltaic and Concentrating Solar Power Plants** – Numerous projects for Eskom and private clients in the Northern Cape, Limpopo, Mpumalanga and the Free State.
23. **Moorreesburg Wind Farm.** Visual impact assessment for a proposed new wind farm in the Western Cape.
24. **AngloGold Ashanti, Dokyiwa (Ghana)** – Visual Impact Assessment for proposed new Tailings Storage Facility at a mine site working with SGS as part of their EIA team.
25. **Camperdown Industrial Development** - Visual Impact Assessment for proposed new light industrial area to the north of Camperdown for a private client.
26. **Wild Coast N2 Toll Highway** – Peer review of VIA undertaken by another consultant.
27. **Gamma to Grass Ridge 765kv transmission line** – Peer review of LVIA undertaken by another consultant.
28. **Gateway Shopping Centre Extension (Durban)** – Visual Impact Assessment for a proposed shopping centre extension in Umhlanga, Durban.
29. **Kouroussa Gold Mine (Guinea)** – Visual impact assessment for a proposed new mine in Guinea working with SGS as part of their EIA team.
30. **Mampon Gold Mine (Ghana)** - Visual impact assessment for a proposed new mine in Ghana working with SGS as part of their EIA team.
31. **Telkom Towers** – Visual impact assessments for numerous Telkom masts in KwaZulu Natal
32. **Dube Trade Port, Durban International Airport** – Visual Impact Assessment for a new international airport.
33. **Sibaya Precinct Plan** – Visual Impact Assessment as part of Environmental Impact Assessment for a major new development area to the north of Durban.
34. **Umdloti Housing** – Visual Impact Assessment as part of Environmental Impact Assessment for a residential development beside the Umdloti Lagoon to the north of Durban.
35. **Tata Steel Ferrochrome Smelter** - Visual impact assessment of proposed new Ferrochrome Smelter in Richards Bay as part of EIA undertaken by the CSIR.
36. **Diamond Mine at Rooipoort Nature Reserve near Kimberley** – Visual impact assessment for a proposed diamond mine within an existing nature reserve for De Beers.
37. **Durban Solid Waste Large Landfill Sites** – Visual Impact Assessment of proposed development sites to the North and South of the Durban Metropolitan Area. The project utilised 3d computer visualisation techniques.
38. **Hillside Aluminium Smelter, Richards Bay** - Visual Impact Assessment of proposed extension of the existing smelter. The project utilised 3d computer visualisation techniques.
39. **Estuaries of KwaZulu Natal Phase 1 and Phase 2** – Visual character assessment and GIS mapping as part of a review of the condition and development capacity of eight

- estuary landscapes for the Town and Regional Planning Commission. The project was extended to include all estuaries in KwaZulu Natal.
40. **Signage Assessments** – Numerous impact assessments for proposed signage developments for Blast Media.
 41. **Signage Strategy** – Preparation of an environmental strategy report for a national advertising campaign on National Roads for Visual Image Placements.
 42. **Zeekoegatt, Durban** - Computer aided visual impact assessment. Acted as advisor to the Province of KwaZulu Natal in an appeal brought about by a developer to extend a light industrial development within a 60 metre building line from the National N3 Highway.
 43. **La Lucia Mall Extension** - Visual impact assessment using three dimensional computer modelling / photo realistic rendering and montage techniques for proposed extension to shopping mall for public consultation exercise.
 44. **Redhill Industrial Development** - Visual impact assessment using three dimensional computer modelling / photo realistic rendering and montage techniques for proposed new industrial area for public consultation exercise.
 45. **Avondale Reservoir** - Visual impact assessment using three dimensional computer modelling / photo realistic rendering and montage techniques for proposed hilltop reservoir as part of Environmental Impact Assessment for Umgeni Water.
 46. **Hammersdale Reservoir** - Visual impact assessment using three dimensional computer modelling / photo realistic rendering and montage techniques for proposed hilltop reservoir as part of Environmental Impact Assessment for Umgeni Water.
 47. **Southgate Industrial Park, Durban** - Computer Aided Visual Impact Assessment and Landscape Design for AECI.
 48. **Sainsbury's Bryn Rhos (UK)** - Computer Aided Visual Impact Assessment/ Planning Application for the development of a new store within the Green Wedge North of Swansea.
 49. **Ynyston Farm Access (UK)** - Computer Aided Impact Assessment of visual intrusion of access road to proposed development in Cardiff for the Land Authority for Wales.
 50. **Cardiff Bay Barrage (UK)** - Concept Design, Detail Design, Documentation, and Visual Input to Environmental Statement for consideration by Parliament in the debate prior to the passing of the Cardiff Bay Barrage Bill. The work was undertaken for Cardiff Bay Development Corporation.
 51. **A470, Cefn Coed to Pentrebach (UK)** - Preparation of frameworks for the assessment of the impact of the proposed alignment on the landscape for The Welsh Office.
 52. **Sparkford to Ilchester Bye Pass (UK)** - The preparation of the landscape framework and the draft landscape plan for the Department of Transport.
 53. **Green Island Reclamation Study (Hong Kong)** - Visual Impact Assessment of building massing, Urban Design Guidelines and Masterplanning for a New Town extension to Hong Kong Island.
 54. **Route 3 (Hong Kong)** - Visual Impact Assessment for alternative road alignments between Hong Kong Island and the Chinese Border.
 55. **China Border Link (Hong Kong)** - Visual Impact Assessment and initial Landscape Design for a new border crossing at Lok Ma Chau.
 56. **Route 81, Aberdeen Tunnel to Stanley (Hong Kong)** - Visual Impact Assessment for alternative highway alignments on the South side of Hong Kong Island.



Curriculum Vitae

Jayson David John Orton

ARCHAEOLOGIST AND HERITAGE CONSULTANT

Contact Details and personal information:

Address: 6A Scarborough Road, Muizenberg, 7945
Telephone: (021) 788 8425
Cell Phone: 083 272 3225
Email: jayson@asha-consulting.co.za

Birth date and place: 22 June 1976, Cape Town, South Africa
Citizenship: South African
ID no: 760622 522 4085
Driver's License: Code 08
Marital Status: Married to Carol Orton
Languages spoken: English and Afrikaans

Education:

SA College High School	Matric	1994
University of Cape Town	B.A. (Archaeology, Environmental & Geographical Science)	1997
University of Cape Town	B.A. (Honours) (Archaeology)*	1998
University of Cape Town	M.A. (Archaeology)	2004
University of Oxford	D.Phil. (Archaeology)	2013

*Frank Schweitzer memorial book prize for an outstanding student and the degree in the First Class.

Employment History:

Spatial Archaeology Research Unit, UCT	Research assistant	Jan 1996 – Dec 1998
Department of Archaeology, UCT	Field archaeologist	Jan 1998 – Dec 1998
UCT Archaeology Contracts Office	Field archaeologist	Jan 1999 – May 2004
UCT Archaeology Contracts Office	Heritage & archaeological consultant	Jun 2004 – May 2012
School of Archaeology, University of Oxford	Undergraduate Tutor	Oct 2008 – Dec 2008
ACO Associates cc	Associate, Heritage & archaeological consultant	Jan 2011 – Dec 2013
ASHA Consulting (Pty) Ltd	Director, Heritage & archaeological consultant	Jan 2014 –

Professional Accreditation:

Association of Southern African Professional Archaeologists (ASAPA) membership number: 233

CRM Section member with the following accreditation:

- Principal Investigator: Coastal shell middens (awarded 2007)
Stone Age archaeology (awarded 2007)
Grave relocation (awarded 2014)
- Field Director: Rock art (awarded 2007)
Colonial period archaeology (awarded 2007)

Association of Professional Heritage Practitioners (APHP)

- Accredited Professional Heritage Practitioner

➤ **Memberships and affiliations:**

South African Archaeological Society Council member	2004 –
Assoc. Southern African Professional Archaeologists (ASAPA) member	2006 –
UCT Department of Archaeology Research Associate	2013 –
Heritage Western Cape APM Committee member	2013 –
UNISA Department of Archaeology and Anthropology Research Fellow	2014 –
Fish Hoek Valley Historical Association	2014 –
Kalk Bay Historical Association	2016 –
Association of Professional Heritage Practitioners member	2016 –

➤ **Fieldwork and project experience:**

Extensive fieldwork as both Field Director and Principle Investigator throughout the Western and Northern Cape, and also in the western parts of the Free State and Eastern Cape as follows:

Phase 1 surveys and impact assessments:

- Project types
 - Notification of Intent to Develop applications (for Heritage Western Cape)
 - Heritage Impact Assessments (largely in the Environmental Impact Assessment or Basic Assessment context under NEMA and Section 38(8) of the NHRA, but also self-standing assessments under Section 38(1) of the NHRA)
 - Archaeological specialist studies including Phase 1 test excavations (historic & prehistoric sites)
 - Archaeological research projects
- Development types
 - Mining and borrow pits
 - Roads (new and upgrades)
 - Residential, commercial and industrial development
 - Dams and pipe lines
 - Power lines and substations
 - Renewable energy facilities (wind energy, solar energy and hydro-electric facilities)

Phase 2 mitigation and research excavations:

- ESA open sites
 - Duinefontein, Gouda
- MSA rock shelters
 - Fish Hoek, Yzerfontein, Cederberg, Namaqualand
- MSA open sites
 - Swartland, Bushmanland, Namaqualand
- LSA rock shelters
 - Cederberg, Namaqualand, Bushmanland
- LSA open sites (inland)
 - Swartland, Franschhoek, Namaqualand, Bushmanland
- LSA coastal shell middens
 - Melkbosstrand, Yzerfontein, Saldanha Bay, Paternoster, Dwarskersbos, Infanta, Knysna, Namaqualand
- LSA burials
 - Melkbosstrand, Saldanha Bay, Namaqualand, Knysna
- Historical sites
 - Franschhoek (farmstead and well), Waterfront (fort, dump and well), Noordhoek (cottage), variety of small excavations in central Cape Town and surrounding suburbs
- Historic burial grounds
 - Green Point (Prestwich Street), V&A Waterfront (Marina Residential), Paarl

Curriculum Vitae

JOHN E. ALMOND Ph.D. (Cantab)

**Natura Viva cc, PO Box 12410 Mill Street, CAPE TOWN 8010, RSA
tel: (021) 462 3622 e-mail: naturaviva@universe.co.za**

- **Honours Degree in Natural Sciences (Zoology)**, University of Cambridge, UK (1980).
- **PhD in Earth Sciences (Palaeontology)**, University of Cambridge, UK (1986).
- **Post-doctoral Research Fellowships** at University of Cambridge, UK and Tübingen University, Germany (Humboldt Research Fellow).
- **Visiting Scientist** at various research institutions in Europe, North America, South Africa and fieldwork experience in all these areas, as well as in North Africa.
- **Scientific Officer, Council for Geoscience, RSA** (1990-1998) – palaeontological research and fieldwork – especially in western RSA and Namibia.
- **Managing Member, Natura Viva cc** – a Cape Town-based company specialising in broad-based natural history education, tourism and research – especially in the Arid West of Southern Africa (2000 onwards). *Natura Viva cc* produces **technical reports** on palaeontology, geology, botany and other aspects of natural history for public and private nature reserves.
- **Current palaeontological research** focuses on fossil record of the Precambrian / Cambrian boundary (especially trace fossils), and the Cape Supergroup of South Africa.
- **Registered Field Guide for South Africa and Namibia**
- **Member of the A-team, Botanical Society of SA** (Kirstenbosch Branch) – involved in teaching and training leaders for botanical excursions. Invited leader of annual Botanical Society excursions (Kirstenbosch Branch) to Little Karoo, Cederberg, Namaqualand and other areas since 2005.
- **Professional training of Western and Eastern Cape Field Guides** (FGASA Level 1 & 2, in conjunction with *The Gloriosa Nature Company*) and of Tourist Guides in various aspects of natural history.
- Involved in **extra-mural teaching in natural history** since the early 1980s. Extensive experience in **public lecturing**, running **intensive courses** and leading **field excursions for professional academics as well as enthusiastic amateurs** (e.g. Geological Society / Archaeological Society / Friends of the SA Museum / Cape Natural History Club / Mineral Club / Botanical Society of South Africa / SA Museum Summer & Winter School Programmes / UCT Summer School)
- **Development of palaeontological teaching materials** (textbooks, teachers guides, palaeontological displays) and **teacher training** for the new school science curriculum (GET, FET).
- Former long-standing member of **Archaeology, Palaeontology and Meteorites Committee for Heritage Western Cape (HWC)**. Advisor on palaeontological conservation and management issues for the Palaeontological Society of South Africa (PSSA), HWC and SAHRA (including APM Permit Committee at HWC). Compilation of **technical reports on provincial palaeontological heritage of Western, Northern and Eastern Cape** for SAHRA and HWC. Accredited member of PSSA and APHP (Association of Professional Heritage Practitioners, Western Cape).
- **Palaeontological impact assessments for developments in the Western Cape, Eastern Cape, Northern Cape, Free State, Northwest Province, Mpumalanga, Gauteng.**

- Several hundred **palaeontological heritage desktop studies and field assessments** completed over the past few years. Examples of recent larger projects include:
 - (1) Several major alternative energy projects (wind / solar) in the Prieska, De Aar, Sutherland and Cookhouse / Middleton areas (N. Cape, E. Cape)
 - (2) Palaeontological heritage survey of the Coega IDZ (E. Cape)
 - (3) On-going survey of borrow pits in the Western Cape
 - (4) Palaeontological heritage assessments for the Transnet 16 mtpa railway development, Hotazel to Coega IDZ (N. Cape, E. Cape)
 - (5) Eskom transmission line developments such as Gamma-Omega and Gamma Perseus projects (N. Cape, W. Cape, Free State)
 - (6) Mining exploration studies on the Great Karoo
 - (7) Strategic Environmental Assessment Specialist Report – Heritage (palaeontological component) For National Wind and Solar PV, Shale Gas in the Karoo, Square Kilometre Array
- **Reviews of fossil heritage** related to new 1: 250 000 geological maps published by the Council for Geoscience (Geological Survey of SA) – e.g. Clanwilliam, Loeriesfontein, Alexander Bay sheets.



SCIENTIFIC AQUATIC SERVICES (SAS) – SPECIALIST CONSULTANT INFORMATION

CURRICULUM VITAE OF **CHRISTEL DU PREEZ**

PERSONAL DETAILS

Position in Company	Junior Wetland Ecologist
Date of Birth	22 March 1990
Nationality	South African
Languages	English, Afrikaans
Joined SAS	January 2016

EDUCATION

Qualifications

MSc Environmental Sciences (North West University)	2016
BSc (Hons) Environmental Sciences (North West University)	2012
BSc Environmental and Biological Sciences (North West University)	2011

COUNTRIES OF WORK EXPERIENCE

South Africa – KwaZulu Natal, Northern Cape, Gauteng, Mpumalanga, Free State

SELECTED PROJECT EXAMPLES

Wetland Assessments

- Baseline freshwater assessment as part of the environmental assessment and authorisation process for the proposed National Route 3 (N3) Van Reenen Village Caltex Interchange, KwaZulu Natal
- Basic assessment for the proposed construction of supporting electrical infrastructure for the Victoria West Wind Farm, Victoria West, Northern Cape Province
- Freshwater Ecological Assessment in Support of the WULA Associated with the Rehabilitation of the Wetland Resources in Ecopark, Centurion, Gauteng
- Wetland Ecological Assessment for the Proposed Mixed Land Use Development (Kosmosdal Extension 92) on the remainder of Portion 2 of the farm Olievenhoutbosch 389 Jr, City of Tshwane Metropolitan Municipality, Gauteng Province
- Freshwater Ecological Assessment for the Mokate Pig Production and Chicken Broiler Facility on the farm Rietvalei Portion 1 and 6 near Delmas, Mpumalanga
- Wetland Ecological Assessment as part of the Environmental Assessment and Authorisation Process for the Proposed Relocation of a Dragline from the Kromdraai Section to Navigation Section of the Anglo American Landau Colliery in Mpumalanga
- Freshwater Assessment as part of the Environmental Assessment and Authorisation Process for a proposed 132kv powerline and associated infrastructure for the proposed Kalkaar Solar Thermal Power Plant near Kimberley, Free State and Northern Cape Provinces
- Freshwater Ecological Assessment of the Freshwater Prospect Stream in the AEL Operational Area, Modderfontein, Gauteng
- Specialist Freshwater Scoping and Environmental Impact Assessment for the Proposed Development of the Platberg and Teekloof Wind Energy Facility and Supporting Electrical Infrastructure near Victoria West, Northern Cape Province
- Wetland Ecological Assessment as part of the Environmental Assessment and Authorisation Process for the Proposed Development of Wilgedraai, Vaaldam Settlement 1777, Free State Province
- Freshwater Resource Delineation and Assessment as part of the consolidation of four Environmental Management Plans at the Graspan Colliery, in Middelburg, Mpumalanga Province

- Freshwater Assessment as part of the Water Use Authorisation for the proposed Copperton Wind Energy Facility, Northern Cape.
- Freshwater Resource and Water Quality Ecological Assessment for the Lakefield Manor Residential project, Boksburg, Gauteng Province
- Wetland Assessment as part of the Environmental Assessment and Authorisation Process for the proposed Vredenburg Wind Energy Facility Development near Saldanha, Western Cape Province
- Freshwater Ecological Assessment as part of the Environmental Assessment and Authorisation process for the proposed upgrade of a portion of Allandale Road Midrand, Gauteng Province
- Baseline Freshwater Resource Delineation and Assessment for the Gedex Project, in Brakpan, Gauteng
- Aquatic and Wetland Assessment as part of the Environmental Assessment and Authorisation Process for the Leslie 2 Underground Coal Mining Operation, Gauteng Province
- Biodiversity Assessment with focus on Freshwater Ecology as part of the S24G Application for 136 Plane Road in Kempton Park, Gauteng Province

Rehabilitation and Management Plans

- Wetland Rehabilitation and Management Plan for the proposed Residential Development on Portion 19 of Farm 653 (Vergenoegd) within the Western Cape Province
- Freshwater Resource Rehabilitation and Management Plan for the proposed Copperton Wind Energy Facility, Northern Cape
- Surface Water Rehabilitation and Management Plan as part of the Water Use Authorisation process for the proposed upgrade of a portion of Allandale Road and associated culverts, Midrand, Gauteng Province



SCIENTIFIC AQUATIC SERVICES (SAS) – SPECIALIST CONSULTANT INFORMATION

CURRICULUM VITAE OF **STEPHEN VAN STADEN**

PERSONAL DETAILS

Position in Company	Managing member, Ecologist, Aquatic Ecologist
Date of Birth	13 July 1979
Nationality	South African
Languages	English, Afrikaans
Joined SAS	2003 (year of establishment)
Other Business	Trustee of the Serenity Property Trust

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Registered Professional Scientist at South African Council for Natural Scientific Professions (SACNASP)
Accredited River Health practitioner by the South African River Health Program (RHP)
Member of the South African Soil Surveyors Association (SASSO) Member of the Gauteng Wetland Forum
Member of IAIA South Africa

EDUCATION

Qualifications

MSc (Environmental Management) (University of Johannesburg)	2003
BSc (Hons) Zoology (Aquatic Ecology) (University of Johannesburg)	2001
BSc (Zoology, Geography and Environmental Management) (University of Johannesburg)	2000
Tools for wetland Assessment short course Rhodes University	2016

COUNTRIES OF WORK EXPERIENCE

South Africa – All Provinces
Southern Africa – Lesotho, Botswana, Mozambique, Zimbabwe Zambia
Eastern Africa – Tanzania Mauritius
West Africa – Ghana, Liberia, Angola, Guinea Bissau, Nigeria, Sierra Leona
Central Africa – Democratic Republic of the Congo

SELECTED PROJECT EXAMPLES OUT OF OVER 2000 PROJECTS WORKED ON

<u>Client</u>	<u>Project</u>	<u>Project Description</u>	<u>Area</u>
RESIDENTIAL			
GIBB (PTY) LTD	Bloemwater Knelpoort Project	Full ECO Assessment	Free State
DLC Town Plan (Pty) Ltd	Bongwini and Toekomsrus Project Gold 1	Environmental Sensitivity Analyses as part of the development of site Development Plans and Precinct Planning on the outskirts of Takoradi Ghana (2000 ha)	Randfontein
SRK Consulting (PTY) Ltd	Skoenmaker River	Wetland, Aquatic & ECO Assessment	Somerset East
Century Property Development	The Hills Eco Estate	Wetland delineation and ecological assessment, and rehabilitation plan	Midrand, Gauteng
ROADS, PIPELINES, POWERLINES AND OTHER LINEAR DEVELOPMENTS			
Delta Built Environment Consultants	Lesotho Border Road Project	Soil & Land Capability Assessment, full wetland ecological assessment and aquatic assessment as part of the EIA process	Lesotho
Spoor Environmental	Thabazimbi Waste Water Treatment Works; Upgrade of Sewer Pipeline	Freshwater resource ecological assessment and rehabilitation and management plan	Limpopo
Royal Haskoning DHV (Pty) Ltd	N11 Ring Road	Freshwater Ecological Assessment	Limpopo
Chameleon Environmental	N7 Road Upgrade Cederberg & Kransvleikloof	Floral RDL scan and delineation of the wetland areas along the proposed N7 road upgrade between Clanwilliam and Citrusdal	Western Cape
Iliso Consulting (Pty Ltd)	N3TC De Beers Pass Route	Variation order for additional work on N3TC De Beers pass route and existing N3 route	Kwa-Zulu Natal
MINING			
Anglo Platinum	Der Brochen Mine	Ongoing bi-annual seasonal aquatic biomonitoring from 2011 to present	Steelport Limpopo
Anglo Platinum	Der Brochen Mine	Wetland Ecological Assessment (2014) Full terrestrial, wetland and aquatic ecological assessment, soil and land capability assessment (2018)	Steelport, Limpopo
Bokoni Platinum Mine	Bokoni Platinum Mine	Annual Soil Monitoring & Soil Contamination	Free State
GIBB (PTY) LTD	Rustenburg Bridges	Aquatic Biomonitoring Assessment	Rustenburg, North West
Assmang Chrome Machadodorp	Assmang Chrome Machadodorp Works	Biomonitoring & Toxicological Monitoring for the 2015 period	Machadodorp, Mpumalanga
Globesight Advisory, Consulting & Training	Sabie TGME Project	Freshwater Ecological Assessment as part of the environmental assessment and authorization process for the proposed development (gold mining project – pre-mined residue and hard rock mining near Sabie)	Mpumalanga

Ikwezi Mining (Pty) Ltd	Ikwezi Doornkop Colliery	Develop freshwater resource rehabilitation and management plans, and conduct ecological biomonitoring in fulfillment of the water use licensing process for the Ikwezi Doornkop Colliery near Newcastle	Newcastle
Sappi Southern Africa (Pty) Ltd	Blesbokspruit Enstra Mill	Biomonitoring studies, whole effluent toxicity (WET) studies, bioaccumulation assessment and sediment heavy metal contaminant analyses	Johannesburg
Stibium Mining	Malati Opencast	Freshwater ecological assessment, risk assessment and freshwater rehabilitation and management plan and plant species plan as part of the water use authorization process for a proposed Malati opencast near Tzaneen	Limpopo
EXM Advisory Services	Heuningkranz Mine	Freshwater assessment, soil and land capability assessment done for Sishen Iron Ore Company (Pty) Ltd part of Kumba Iron Ore limited as part of the environmental management services for the Heuningkranz project	Northern Cape
Shangoni Management Services (Pty) Ltd	Leslie Colliery	Project manager, freshwater ecological assessment as part of the environmental impact assessment process for the underground coal mine to determine the status of the freshwater resources within the proposed mining area	Mpumalanga
SLR Consulting (Africa) (Pty) Ltd	Commissiekraal Colliery	Full Ecological investigation, including a terrestrial fauna and flora assessment as well as an assessment of the wetland and aquatic PES and wetland ecoservices on the site.	Kwa-Zulu Natal
Jacana Environmental CC	Leandra Colliery	Full Ecological Assessment, including a terrestrial fauna and flora assessment as well as an assessment of the wetland and aquatic PES and wetland ecoservices on the site.	Mpumalanga
SRK Consulting (PTY) Ltd	Marula Platinum Mine	Freshwater resource ecological assessment. Development of a plant species plan in line with the project's rehabilitation objectives	Burgersfort
Jacana Environmental CC	Donkerhoek Dam development	Full ecological assessment (Fauna, floral, wetland and aquatic assessment) as part of the EIA process	Mpumalanga
EXM Advisory Services	Evander Gold Mining (Pty) Ltd	Determination of the Wetland Offset Requirements for the proposed expansion of the Elikhulu Tailings Storage Facility	Mpumalanga
EXM Advisory Services	Canyon Coal - Witfontein mining project	Delineate and characterize the wetland and aquatic resources for the Witfontein mining project located by the farms Holfontein and Witrand near Bethal	Mpumalanga
SRK Consulting (South Africa) (PTY) Ltd	The Sierra Rutile Mine	Specialist terrestrial ecology, aquatic ecology and wetland ecology studies	Moyamba District - Sierra Leona

INFRASTRUCTURE			
GIBB (Pty) Ltd	Bronkhorstspruit Feeder Line	Monthly Aquatic Biomonitoring as part of the environmental assessment and authorization process for the proposed conversion of the Bronkhorstspruit plots feeder from 6.6kv to 22kv	Bronkhorstspruit
SRK Consulting (PTY) Ltd	South Dunes Precinct Project	Full Ecological Assessment	Richards Bay
SRK Consulting (PTY) Ltd	Braamfonteinspruit Rehabilitation	Terrestrial, Freshwater and Aquatic Ecological Assessment as part of the rehabilitation and management plan for the Braamfonteinspruit, Johannesburg	Johannesburg
Iliso Consulting (Pty Ltd)	City of Johannesburg	Aquatic Ecological Assessment, monitoring and managing the ecological state of rivers in the City Of Johannesburg Metropolitan area	Johannesburg
Maanakana Projects and Consulting (Pty) Ltd	Lethabo Pump Station	Aquatic present ecological state assessment of the Vaal river	Vereeniging
SRK Consulting	CTIA runway re-alignment project – Wetland Offset	Determination of the Wetland offset requirements for Cape Town international Airport runway realignment, identification of a suitable offset location and compilation of relevant baseline assessments (Wetland and faunal), Khayelitsha. (2017)	Cape Town
GIBB (Pty) Ltd	Musami Dam	Determination of the draft environmental water quality requirements for the project	Zimbabwe
Nemai Consulting (PTY) Ltd	uMkhomazi Water Project	Determination of the Wetland and Terrestrial Biodiversity Offset Requirements for the proposed uMkhomazi Water Project	Richmond - KZN
POWER GENERATION			
Iliso Consulting	Mzimvubu Dam	Full Terrestrial (Flora and Faunal), Wetland and Aquatic Baseline Ecological Assessment	Eastern Cape
WKN-Wind current SA C/O Alan Wolfromm	HGA HAGA WEF	Hydrological Assessment	Eastern Cape
SRK Consulting (PTY) Ltd	RPM Crossing	Wetland Delineation	Free State
SRK Consulting (Pty) Ltd	Eskom Denova Powerline and sub-station	Freshwater assessment as part of the EIA process for the proposed Eskom powerline (1,75 km in length) and sub-station (132kV) near Denova, Western Cape. (2014)	Western Cape
CSIR Consulting & Analytical Services	Sutherland WEF	Freshwater Ecological Assessments	Northern Cape

REFERENCES

- Terry Calmeyer
Director: ILISO Consulting Environmental Management (Pty) Ltd
Tel: +27 (0) 11 465 2163
Email: terryc@icem.co.za
- Alex Pheiffer
African Environmental Management Operations Manager
SLR Consulting
Tel: +27 11 467 0945
Email: apheiffer@slrconsulting.com
- Marietjie Eksteen
Managing Director: Jacana Environmental
Tel: 015 291 4015

Yours faithfully



STEPHEN VAN STADEN