

Name: Alicia Govender
Profession: Environmentalist
Date of Birth: 1985/09/29
Parent Firm: Environmental Management Assistance
Position in Firm: Environmental Assessment Practitioner
Nationality: South African
BI & Male/Female Status: Indian Female
Tertiary Education: LLM (Masters in Environmental Law (UKZN))
Professional Qualifications: EAPASA registration in progress
Languages: English and Afrikaans
Countries of Work Experience: South Africa, Mozambique

PROPOSED POSITION ON TEAM: Lead/ principal Environmental Assessment Practitioner

KEY QUALIFICATIONS:

Alicia's passion has always been people, environmental management, sustainable development, and energy related matters all of which have been key contributing drivers toward her career path. Her vision in life is to make a difference, in whatever she does.

Based on the environmental and energy sectors in which Alicia has worked, her experience and competencies include:

- Renewable Energy Project Development Permitting
- Environmental Assessment / Sustainability reporting and reviewing
- Environmental monitoring
- Project planning and project management
- Community liaison and stakeholder management
- Business development and optimisation strategies
- Strategy definition and implementation
- Proficiency in full Microsoft office suite

Having worked mainly in the renewable energy sector for over 13 years, Alicia specialises in Environmental Management and Renewable Energy, and has attained a master's degree in Environmental Law (LLM). Her dissertation focused on the legal protection of avifauna in South Africa, specifically from utility scale solar energy facilities in support of sustainable development, in relation to its beneficial carbon footprint.

Alicia has worked as an Environmental Assessment Practitioner (EAP) for 5 years and has led and been involved in an extensive list of Environmental Impact Assessment Processes for various renewable energy projects (Appendix A). Post her environmental consulting years, she worked in the private sector for two different solar energy Independent Power Producers (IPPs) overseeing their environmental management and project permitting. She has been especially involved in solar developments for 5 years, and has worked with utility scale Concentrating Solar Power (CSP) and Photovoltaic (PV) with key environmental permitting and project management roles for projects bid into the Renewable Energy Independent Power Producer Procurement Program (REIPPPP) for the expedited bid window (BW 4.5). Alicia also recently undertook a bid management role in the Risk Mitigation IPP Procurement programme for Enel Green Power and is currently assisting BioTherm Energy with project permitting and bid management for wind projects in preparation for REIPPPP Bid Window 5.

Other areas of her expertise include Waste Management, Project Management as well as Business Development in South Africa and other African Countries

RELEVANT EXPERIENCE:

Environmental Assessment Practitioner on the following projects:

- EIA and EMPr for the Proposed 1GW Karoshhoek Solar Thermal Park (CSP), Northern Cape (split into 12 different EIA components)
- BAR and EMPr for the 19MW Redstone PV Energy Facility, Northern Cape
- EIA and EMPr for the Proposed Exxaro West Coast Wind Farm Development, north west of Vredendal in the Western Cape Province
- EIA and EMPr for the Proposed Eskom Kleinsee 300 MW Wind Energy Facility, Northern Cape Province
- BAR and EMPr for the 20MW Wind Energy Facility near Koningnaas, Northern Cape Province
- Public Participation for the Proposed Biomass Co-Firing Demonstration Facility at Arnot Power Station, Mpumalanga Province
- Public Participation for the Aggeneis- Oranjemond Transmission Line in the Northern Cape

A comprehensive list of environmental project experience is attached to this CV.

SUMMARY OF OTHER EXPERIENCE

Business Development Manager at SolarReserve (Independent Power Producer)	2016 – 2019
Environmental Specialist at Emvelo (Independent Power Producer)	2015 – 2016
Waste Specialist at Aurecon	2013 – 2015
Environmental Consultant/ Project Manager at Savannah Environmental	2008-2013

I confirm that I have technical and economic capacity as well as the relevant experience to carry out the works required in my specialist field.

Declaration of Independence:

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, EMA was appointed as an independent specialist consultant to undertake the environmental impact assessment process. Neither EMA nor any of its EAPs will benefit from the outcome of the project decision-making, except for reasonable compensation for professional services provided.



Signature of Staff Member

07 September 2021

Date

EAP Project Experience

Task	Project Description	Client
Wind		
Basic Assessment	Wind Farm facility at Brand se Baai	Promethium Carbon
Basic Assessments	Wind Monitoring Masts for properties-North of Koekenaap	Mulilo
Basic Assessment	Proposed establishment of wind monitoring masts on two sites East of Cape Town in the Overberg near Boontjieskraal in the Western Cape	BioTherm Energy (Pty) Ltd
EIA and EMPr	Proposed wind energy facility near Caledon in the Overberg area in the Western Cape Province	BioTherm Energy (Pty) Ltd
EIA and EMPr	Proposed Exxaro West Coast Wind Farm Development, north west of Vredendal in the Western Cape Province	Exxaro Resources
Basic Assessment	Wind Energy Facility near Koingnaas, Northern Cape Province	Just Palmtree Power
EIA and EMPr	Project Blue Wind Energy Facility near Kleinsee, Northern Cape Province (split into 3 different EIA components)	WWK Development (Pty) Ltd
EIA and EMPr	Proposed Kleinsee 300 MW Wind Energy Facility, Northern Cape Province	Eskom Generation
EIA and EMPr	Proposed Aberdeen 200 MW Wind Energy Facility, Eastern Cape Province	Eskom Generation
EIA and EMPr	Proposed Goereesoe, Swellendam Wind Farm, Western Cape Province	INCA Swellendam1 Wind (Pty) Ltd
EIA and EMPr	Proposed Moorreesburg Wind Farm, Western Cape Province	INCA Moorreesburg Wind (Pty) Ltd
Solar (PV)		
EIA	Proposed Photovoltaic Solar Energy Facility on a site southeast of De Aar, Northern Cape Province	INCA De Aar Solar (Pty) Ltd
EIA	Project Blue Solar Energy Facility near Kleinsee, Northern Cape Province	WWK Development (Pty) Ltd
Basic Assessment	Proposed St Helena Bay Solar Energy Facility, Western Cape	Electrawinds Africa and Indian Ocean Islands (Pty) Ltd
EIA	Proposed Graafwater Solar Energy Facility, Western Cape	iNca Energy (Pty) Ltd
EIA	Proposed Prieska Solar Energy Facility, Northern Cape	Jouren Solar (Pty) Ltd
BAR and EMPr	Redstone PV Energy Facility, Northern Cape	SolarReserve
EIA and EMPr	Review and Management of Kotulo Tsatsi PV Plant, Northern Cape Province	SolarReserve
BAR and EMPr	Ergo Mining: 10MW PV, Gauteng Province	DRD Gold Mine
EIA and EMPr	Ergo Mining: 50MW PV, Gauteng Province	DRD Gold Mine
Solar (CSP)		
EIA and Public Participation	Proposed Ilanga Solar Thermal Power Plant as Part of the Future Karoshoek Solar Thermal Park, Northern Cape	Ilangaethu Solar Power (Pty) Ltd
EIA and EMPr	Proposed 1GW Karoshoek Solar Thermal Park, Northern Cape (split into 12 different EIA components)	FG Emvelo (Pty) Ltd
EIA and EMPr	Review and Management of Kotulo Tsatsi CSP Plant, Northern Cape Province	SolarReserve
Interconnection		
Public Participation	Tshwane Strengthening Project: Phase1	Eskom Transmission
Public Participation	Aggeneis- Oranjemond Transmission Line in the	Eskom Transmission

Task	Project Description	Client
	Northern Cape	
Basic Assessment	Proposed grid integration for the Karoshoek Solar Thermal Park, Northern Cape	FG Emvelo (Pty) Ltd
Other		
EIA and EMPr	Upgrade of the Hartebeestfontein Wastewater Care Works	ERWAT
EIA and EMPr	Extension of the Welgedacht Wastewater Care Works	ERWAT
Operational EMPr	Medupi Power Station	Eskom
Educational Booklet for the Environmental Management Plan	Medupi Power Station construction	Eskom
ECO Audit Reports	De Hoop Dam	
Basic Assessment, EMP and Water Use Licence Application	Proposed Bus and Taxi facility in the Dilokong Area, Limpopo Province	SANRAL
EIA and Water Use Licence Application	Proposed construction of the Ngotwane River Bridge and P224-1 road upgrade between South Africa and Botswana (cross border project) .	SANRAL
ECO monitoring	Rehabilitation of Blaauwpan and associated storm water channel, Gauteng	Airports Company South Africa (ACSA)
Public Participation	New proposed Coal fired power station near Oggies/Phola, Mpumalanga Province	Rukki SA
Basic Assessment and EMPr and Public Participation	Remediation of Asbestos Contaminated Land in Limpopo and KZN Provinces	Transnet Freight Rail
Public Participation	Proposed Biomass Co-Firing Demonstration Facility at Arnot Power Station, Mpumalanga Province	Eskom Generation
External review and sign off: BAR and EMPr	Proposed Upgrading of Thembinkosi Primary School Newcastle Local Municipality, Kwazulu-Natal	NCC Environmental
Compilation of Environmental Audit checklists	8 x Omnia Plants (x48 Environmental Authorisations)	MDT Environmental
Public Participation	Vygenhoek Platinum Mine, Mpumalanga Province	Nomamix (Pty) Ltd

Name: **Deon Esterhuizen**
Profession: **Professional Natural Scientist**
Date of Birth: **06 June 1968**
Parent Firm: **MDT Environmental**
Position in Firm: **Environmental Consultant**
Years with Firm: **3 years**
Nationality: **South African**
BI & Male/Female Status: **White Male**
Education: **M.Sc Environmental Ecology, 2003**
B.Sc Honours Botany & Zoology, 1991
B.Sc Botany & Zoology, 1990
Professional Accreditation: **Registered with the South African Council for Natural Scientific Professions: Professional Natural Scientist - Environmental Science (RN: 400154/09).**
Member of the International Association for Impact Assessors South Africa
Languages: **English**

Other Languages	Speaking	Reading	Writing
Afrikaans	Excellent	Excellent	Excellent

Countries of Work Experience: **South Africa**
Proposed Position on Team: **Environmental Leader**

KEY QUALIFICATIONS

24 years of experience in water related projects, which include water resource management, water quality management, water use registration and licensing of water users, including project management of multi-disciplinary studies. He also has extensive experience in a wide-range of environmentally related projects, processes and applications for private, commercial and industrial clients, in addition to local, provincial and national government departments.

RELEVANT EXPERIENCE

SENIOR EAP: REVIEW AND ENVIRONMENTAL BASIC ASSESSMENT REPORT AND EMPR FOR THE REDSTOND PV PROJECT IN THE NORTHERN CAPE PROVINCE.

Responsible for the review of the Basic Assessment Report and the EMPr under environmental legislative requirements.

- Review and comment on BAR and EMPr
- Apply and ensure legislative requirements are met prior to submission to the DEA

DEPUTY PROJECT MANAGER – ENVIRONMENTAL (BIOPHYSICAL AND SOCIAL), OLIFANTS RIVER WATER RESOURCES DEVELOPMENT PROJECT, TCTA & DWS, 2009 TO DATE, VALUE = R13,35 BILLION

Responsible for the management of all environmental, social and land acquisition tasks in accordance with the agreement and reported directly to the Project Manager for Sub-Phases 2 B, C, D, E & F.

These tasks included:

- establish and maintain a close liaison with the Employer's environmental staff and ensure that the obligations of the consulting agreement are fulfilled,
- apply and ensure observance of quality on each of the Consultant's environmental tasks, particularly regarding setting clear definition of work to the various specialist and staff members that will be part of the environmental team,
- lead the additional environmental authorisations,

- provide technical review work as required on all environmental tasks, but was particularly responsible for the EMP and the development of the Project Specifications,
- be responsible for internal environmental performance auditing,
- organise and provide technical backstopping for the site environmental supervision activities and staff.

ENVIRONMENTAL EXPERT – DESIGN AND CONSTRUCTION OF BOTSABELO COMPLEX – LESOTHO BLOOD TRANSFUSION SERVICES SENTRE, NATIONAL REFERENCE LABORATORY, STUDENT ACCOMMODATION AT THE NATIONAL HEALTH TRAINING COLLEGE, THE GOVERNMENT OF THE KINGDOM OF LESOTHO, MARCH 2010 TO DECEMBER 2010, VALUE = R0.5 BILLION

Responsible for the development of an Environmental Protection Plan for implementation during construction. The development of method statements for key environmental construction activities.

ENVIRONMENTAL MANAGEMENT SPECIALIST – ENVIRONMENTAL IMPACT ASSESSMENT TO INVESTIGATE THE ENVIRONMENTAL FEASIBILITY OF RAISING THE TZANEEN DAM, THE CONSTRUCTION OF A STORAGE DAM IN THE GROOT LETABA RIVER AND ASSOCIATED BULK WATER INFRASTRUCTURE IN THE LIMPOPO PROVINCE, DEPARTMENT OF WATER AND SANITATION, APRIL 2007 TO NOVEMBER 2008, VALUE = R1.5 BILLION

Responsible for the development of the Environmental Management Plan.

ENVIRONMENTAL SPECIALIST – CONSTRUCTION OF THE THUNE DAM IN BOTSWANA, REPUBLIC OF BOTSWANA, MINISTRY OF MINERALS, ENERGY AND WATER AFFAIRS: DEPARTMENT OF WATER AFFAIRS, APRIL 2007 TO APRIL 2012, VALUE R1.3 BILLION

SUMMARY OF OTHER EXPERIENCE

2016 to Date MDTE Consulting, Director
2005 to 2016 ILISO Consulting – Director (Environmental Division)
2000 to 2005 BKS – Director (Environmental Division)
1991 to 1999 Department of Water and Sanitation, Assistant Director

POSITION EXPERIENCE

Environmental Management and Monitoring Experience			
Role	Project Name	Contract Value	Duration in Years
Deputy Project Manager	ORWRDP2	R13.35 Billion	2009 - current
Environmental Expert	Botsabelo Complex	R0.5 Billion	March 2010 – December 2010
Environmental Management Specialist	Tzaneen Dam raising and storage dam on Groot Letaba	R1.5 Billion	April 2007 to November 2008
Environmental Specialist	Thune Dam	R1.3 Billion	April 2007 to April 2012

DECLARATION

I confirm that I have technical and economic capacity as well as the relevant experience to carry out the works required in my specialist field in response to RFQ: No 00705-ZA.

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and willing to serve in the position indicated for me in the Proposal for Consulting Services, for the durations and the locations indicated therein.



Signature of Staff Member

02/09/2019

Date

Name: Yaron Keizan
Profession: Student
Date of Birth: 23/10/1995
Nationality: South African
BI & Male/Female Status: White Male
Tertiary Education: BSc (Hons) Animals, Plants and Environmental Sciences
Languages: English
Countries of Work Experience: South Africa

PROPOSED POSITION ON TEAM: Junior EAP

QUALIFICATIONS:

Yaron Keizan has his Honours degree in Environmental Sciences from the University of the Witwatersrand where he focused on sustainable development, freshwater management and biological control. He is currently pursuing his Master's degree through dissertation in the area of biological control of the Alien Invasive Bugweed plant, *Solanum mauritianum*, through the use of insect agents.

Although this project will be his first Impact Assessment, Yaron plans on developing and growing his skills as an EAP to pursue a career in the field.

RELEVANT EXPERIENCE:

- Prospecting and Application for Environmental Authorization for Bronkhorstfontein and Doornfontein Manganese Mines in Limpopo and the Northern Cape respectively

SUMMARY OF EXPERIENCE

BSc in Animals, Plants and Environmental Sciences	2015 - 2017
Honours in Animals, Plants and Environmental Sciences	2018 - 2019
Insectary Technician	2019 - 2020
Masters in Animals, Plants and Environmental Sciences through Dissertation	2021 - Present

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and willing to serve in the position indicated for me in the Proposal for Consulting Services



02/08/2021

Signature of Staff Member

Date

Anandi Alers (EAP)

Personal Information

Name and Surname: Anandi Alers

Identity No: 8801010046087

Residential and postal address 4479 Seringa Street, The Heads, Lydenburg
Postnet suite #153
Private Bag X20097
Lydenburg
1120

Contact Numbers: +27 (0) 72 604 0455

Date of Birth: 01 January 1988

Gender: Female

E-mail address: Anandi.alers@emassistance.co.za

Nationality: South African

Marital Status: Married

Languages: Afrikaans, English

Expertise

Professional Qualifications, Memberships & Registrations

2017: Professional Natural Scientist, registration no: 400015/17

2014: Professional member of the International Association for Impact Assessment, South Africa (IAIASa)

Educational Qualifications

Tertiary Education:

Name of Institution: North West University, Potchefstroom

Course of study: B.Sc. – Geography, Tourism, and Zoology

Duration of study: 3 years

Main subjects:

- Geography
- Tourism
- Zoology

Post Graduate Studies:

Name of Institution: North West University, Potchefstroom

Course of study: HON.B.Sc. – Environmental Science

Duration of study: 1 Year

- Main subjects:**
- OMBO 611 - Introduction to Environmental Management
 - OMBO 614 - Applied GIS (Geographic information system)
 - OMBO 621 – Hydrology
 - OMBE 672 – Reviewing of Environmental Impact Reports (EIRs)
 - OMBO 674 – Environmental Management (Including introduction to ISO 14001 and environmental management systems; environmental legislation)
 - OMBO 675 – Environmental Analysis (EIAs)

Name of Institution: North West University, Potchefstroom

Course of study: M.Sc. in Geography and Environmental Management

Duration of study: 3 years (Part time)

Main subjects: GGFN 871 - Dissertation

Short Courses:

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- LexisNexis: Advanced Environmental Management Systems Course
 - IRCA: RCAT (Root Cause Analysis Techniques)
 - IRCA: Construction Safety Training Course
 - Reptile Ventures: Snake Handling Course
 - CEM-02.1 Environmental Law for Environmental Managers
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Summary of research projects during Post Graduate Studies

Topic 1 (Hon.B.S.c) *Exploring the influence of the Environmental Impact Report (EIR) quality review on the effectiveness of the EIA process in South Africa*

Abstract

The EIR quality review package developed by Lee and Colley was adapted and used to review the quality of 10 BARs and 10 Scoping reports in the research paper. Results showed that 85% of the EIRs were of satisfactory quality, but some areas did not perform as well.

Topic 2 (Hon.B.S.c) *Determining hydrological characteristics from a Digital Elevation Model (DEM) in ESRI ArcGIS™*

Abstract

The purpose of this study was to create a process model based on raster or grid data structures to extract and determine hydrological characteristics. Hydrologic features of a terrain were determined from a DEM (digital elevation model) using standard functions included in commercially available geographic information system (GIS) software and

Spatial Analyst in ESRI ArcGIS™ that operates on raster terrain data. In this study a number of geo-processes were performed to determine hydrological characteristics like the slope, watershed/catchment and stream networks of the associating study area.

Topic 3 (M.S.c
dissertation)

A review package for South African EIA follow-up performance

Abstract

Over the last decades the EIA process has grown to be an important tool for environmental management. However, EIA follow-up, widely considered as a critical step in the process, is neglected globally. To improve the success of EIA follow-up, 17 International Best Practice Principles (IBPP) for follow-up have been developed. In this study, the provisions made in the South African mandatory requirements, regulations, and guidelines as well as the successful implementation of follow-up in selected case studies under the ECA, NEMA 2006, and NEMA 2010 EIA regulations were appraised according to the 17 IBPP. In order to appraise the selected case studies under these three regulatory regimes, a review package for follow-up was developed, with review topics based on the 17 IBPP, and the package designed on the same basis as the Lee-Colley review package. Six projects were selected under the ECA regulatory regime and seven under the NEMA 2006 regime, but for the NEMA 2010 regime only two case studies were available. The selected case studies included wastewater management facilities, housing, recreational facilities, tourism facilities, and infrastructure development projects such as pipelines, solar plants, filling stations and roads. The competent authority in these instances ranged from National to Provincial (mainly Mpumalanga, Limpopo and Northern Cape) government. The results indicated that the overall performance of follow-up in terms of the 17 IBPP was satisfactory under all three the regulatory regimes, with best performance under the NEMA 2006 regime. A number of areas of strength and a few areas of weaknesses were observed. The strengths included well-defined follow-up outcomes, objectives, targets clear performance criteria ; good commitment to follow-up activities; provision for timely, adaptive and action orientated follow-up programmes in both the pre-decision and post decision EIA phases; proponent and regulator accountability for implementing EIA follow-up; and provision of adequate resources. Weakness included poor description of objectives and goals, a lack of communicating and providing feedback on EIA follow-up outcomes, a shortage of genuine opportunities to involve the community in follow-up activities, and failure to address sustainability issues beyond a project level. Therefore, despite the weaknesses, it appears that in terms of the criteria of this study, follow-up in South Africa is relatively well performed. The results suggest that the roles of the EAP, the ECO and competent authority are important contributing factors to the successful

implementation of the 17 IBPP for follow-up. These results are good news in terms of EIA follow-up in the South African context, however further research in follow-up is required covering more provinces, sectors and EIA regimes. It is recommended that the areas of weakness observed be addressed in future EIA practice, including better involvement of the community in follow-up activities; improving requirements on communicating follow-up outcomes; addressing sustainable issues beyond project level; clearly defining follow-up objectives and goals; and clearly defining the role of the EAP, the ECO, and the competent authority with regards to addressing follow-up principles.

Summary of past experience

Appointed Environmental Assistant to Manager

Project: Construction of 132 kV Eskom transmission line, Mamelodi

Contractors Officer and Environmental

Assistant to Environmental Manager:

- Design and development of electronic databases and reporting systems for the purposes of measuring the environmental performance for the projects and the company.
- Development of Impact Aspect registers for a contract and for the plant and yard department of the company.
- Responsible for developing baseline Environmental Management System procedures which were then reviewed and improved by the Environmental Manager.
- Review of environmental legislation and linking to the impact aspect register for the creation of a site-specific legal register.
- Development of activity and site-specific environmental method statements.
- Assisting with environmental legal and management plan compliance audits.
- Environmental monitoring, reporting and investigations of environmental incidents/non-conformances.
- General administrative work for the environmental department.
- Development of training material and training posters aimed at raising the environmental awareness of general workers.

Contracts Environmental Officer:

- Ensuring compliance of the contract with all Environmental Legislation i.e. obtaining of water use permits, way leaves, bush clearing permits.

Appointed contractors
Environmental Officer

Project: Extension and construction
of the ESKOM Garona Substation &
Construction of the ESKOM
Lewensaar Substation

- Ensuring that the company Environmental Management Systems are implemented on the contract.
 - Environmental awareness inductions and environmental training of all site staff.
 - Implementation of contract-specific Environmental Management Plan.
 - Early identification and reporting of significant site-specific environmental risks.
 - Environmental control of site activities.
 - Development and implementation of rehabilitation plans.
 - Maintenance of all site environmental records.
 - Liaison with site management and client with regard environmental issues.
 - Ensuring that activities on Site comply with Environmental legislation.
 - Monitoring and verifying that the environmental specifications are adhered to at all times and taking action if the specifications are not followed.
 - Monitoring and verifying that environmental impacts are kept to a minimum and taking action to address any environmental degradation.
 - Compiling the requisite Method Statements for review by the Environmental Control Officer (ECO) and Client EO.
 - Proactively developing environmentally responsible solutions to problems.
 - Giving a report back on the environmental issues at the monthly Site meetings and other meetings that may be called regarding environmental matters.
 - Keeping records of all activities / incidents concerning the environment on Site.
 - Inspecting the Site and surrounding areas regularly with regard to compliance with the environmental specifications.
 - Maintaining a register of complaints, ensuring that all complaints are appropriately recorded and addressed and notifying the ECO of each complaint and how it was resolved.
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- Undertaking the requisite environmental induction for all new personnel coming onto site, as well as any refresher or *ad hoc* induction that might be required during the Contract.
 - Completing the requisite environmental reporting, namely a daily compliance checklist, a record of staff induction and incident reports, for submission to the ECO.
 - Keeping a photographic record of progress on Site from an environmental perspective.
 - Development and implementation of an on-site waste management plan.

Environmental Consulting

- Site Inspection of three civil projects identifying non-compliance/compliance with environmental legislation.
- Gap analysis with regards to overall Environmental Management.
- Generating progress reports for the three projects.

Contractors Site Environmental Manager

Project: TCTA Olifant's River Resources Development Project-Phase 2C. (Water Pipeline Project)

- Assisting in the development, implementation, establishment, maintenance and monitoring of the Basil Read Environmental management system/strategies/policies in accordance with ISO 14001;
 - Reporting on environmental and sustainability as per international best practice (as per requirements of King 111 and the GRI) to Basil Read SHEQ department thereby ensuring legal compliance of the Olifant's River Resources Development Project (Phase 2 C);
 - Ensuring that activities on Site comply with the project EMP, EA,
 - Environmental legislation and client specifications;
 - Monitoring and verifying that the environmental specifications are adhered to at all times and taking action if the specifications are not followed;
 - Monitoring and verifying that environmental impacts are kept to a minimum and taking action to address any environmental degradation;
 - Compiling the requisite site specific Method Statements;
 - Proactively developing environmentally responsible solutions to problems;
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- Giving a report back on the environmental issues at the monthly Site meetings and other meetings that may be called regarding environmental matters;
 - Ensuring effective communication in respect of environmental aspects to all stakeholders;
 - Setting of targets and deadlines to meet the project programme and avoid complications;
 - Reporting, investigating and recording of environmental incidents;
 - Auditing, analysing and reporting environmental performance to all relevant stakeholders including regulatory bodies;
 - Inspecting the Site and surrounding areas regularly with regard to compliance with the environmental specifications and legislation;
 - Communicate sustainability performance in monthly reports;
 - Ensure timeous upward/downward communication with relevant stakeholders as and when required;
 - Ensure measures are in place to effectively record required information to determine the project Carbon Footprint;
 - Develop, implement and maintain an on-site Awareness training matrix;
 - Undertaking the requisite environmental induction or training for all new personnel coming onto site, as well as any refresher or *ad hoc* induction or training that might be required during the Contract; and
 - Development, implementation and monitoring the project specific integrated Waste management plan and ensuring legal storage, handling, transporting and/or disposal of all waste streams.

Environmental auditing

Conducting and compilation of independent audit as per the EA

Project: : !Kaxu Thermal Solar Plant
(Phase 1 Pofadder Thermal Solar Plant)

Environmental Officer

Project: Glencore Lydenburg Smelter

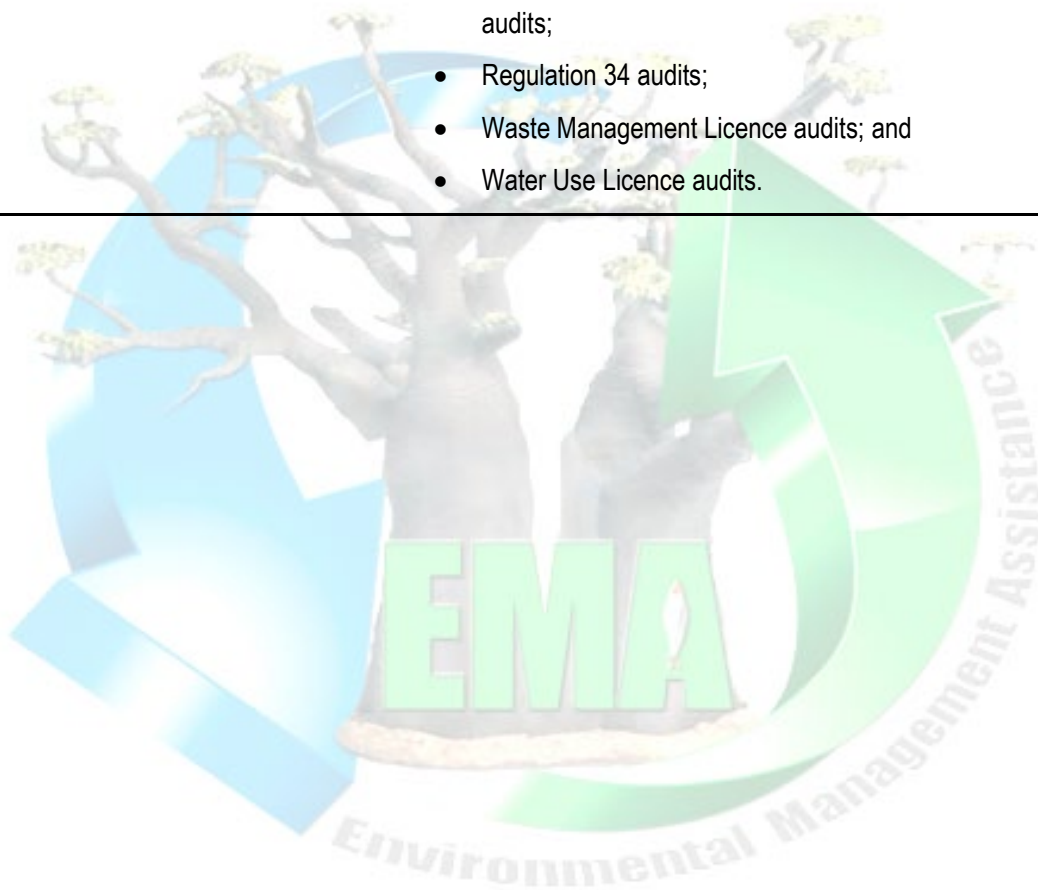
- The development, implementation, establishment, maintenance and monitoring of the environmental
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management system/strategies/policies in accordance with ISO 14001;

- Reporting on environmental and sustainability ;
 - Ensuring that activities on site comply with the EMPr, EA, WUL, WML, and AEL.
 - Monitoring and verifying that the environmental specifications are adhered to at all times and taking action if the specifications are not followed;
 - Monitoring and verifying that environmental impacts are kept to a minimum and taking action to address any environmental degradation;
 - Proactively developing environmentally responsible solutions to problems;
 - Giving a report back on the environmental issues at the monthly meetings and other meetings that may be called regarding environmental matters;
 - Ensuring effective communication in respect of environmental aspects to all stakeholders;
 - Setting of targets and deadlines to meet the project programme and avoid complications;
 - Reporting, investigating and recording of environmental incidents;
 - Auditing, analysing and reporting environmental performance to all relevant stakeholders including regulatory bodies;
 - Inspecting the operation and surrounding areas regularly with regard to compliance with the environmental specifications and legislation;
 - Communicate sustainability performance in monthly reports;
 - Ensure timeous upward/downward communication with relevant stakeholders as and when required;
 - Ensure measures are in place to effectively record required information to determine the project Carbon Footprint;
 - Develop, implement and maintain an on-site awareness training matrix;
 - Managing licence applications and renewals;
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Senior Environmental Consultant

- Development, implementation and monitoring the project specific integrated Waste management plan and ensuring legal storage, handling, transporting and/or disposal of all waste streams.
 - Project management: o Management of EIA projects and specialists associated to EIA studies; and
 - Managing water/waste/air/biodiversity permits/licence's processes.
 - Reviewing environmental application processes;
 - Environmental compliance audits: o ISO14001 EMS gap audits;
 - Regulation 34 audits;
 - Waste Management Licence audits; and
 - Water Use Licence audits.
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Name: Taryn Bigwood
Profession: Environmental and compliance Consultant
Date of Birth: 17 December 1977
Parent Firm: Environmental Management Assistance PTY LTD
Position in Firm: Senior Environmental Scientist and Director
Years with Firm: 4 years
Nationality: South African
BI & Male/Female Status: White Female
Education: Process of doing a PhD Environmental Management, Unisa, 2017
Masters Geography, 2011
Hons Soc Sci Geography
B Soc Sci Environmental Man and Geography
Diploma in Game Ranging
Professional Accreditation: LaRSSA (Landscape and Rehabilitation Society of South Africa Professional Associate: 0633)
SAAG (South African Association of Geographers, Member)
IAIAsa (International Association of Impact Assessors SA, member and committee member for Mpumalanga branch)
SACNASP (registered as a professional environmental scientist:116865)
Languages: English

Other Languages	Speaking	Reading	Writing
Afrikaans	Excellent	Excellent	Excellent

Countries of Work Experience: South Africa

KEY QUALIFICATIONS

Taryn has a Research Masters in Geography specializing in Geomorphology from the University of Pretoria, combined with 15 years of experience in conservation, scientific services, ecological reporting, Renewable energy (Solar and Wind), Environmental Compliance (Grade 2 Environmental Management Inspector), Environmental licensing, Environmental auditing and water resource development. Taryn was trained to be an EMI in Cape town in 2011 and was designated by the minister as a grade 2 EMI as the environmental manager of the iSimangaliso Wetland Park Authority. After being designated, Taryn was involved with many environmental crimes, undertaking administrative justice (writing pre-compliance notices and compliance notices), investigations and inspections in the park authority, she was also involved with the National team of EMIs at times where she represented the authority at cop 17 organisation committee, working group 2,3 and 4 meetings, (which sets objectives for compliance, environmental and estuaries to be presented to the minister at MIMEC and MTECH). Her extended experience results in a wide-range of environmentally related projects, processes and applications for private, commercial and industrial clients, in addition to provincial and national government departments as Environmental Manager, Director, Environmental Consultant, Soil Erosion specialist, Compliance Manager, Environmental Management, EMI, Chief Research Technician, Acting Ecologist, Geomorphology Lecturer, Assistant Cartographer, and Field Guide.

- Integrated Environmental Management (IEM) in general and for conservation areas
- Basic and Environmental Impact Assessments (BAR and EIA's)
- Environmental and Erosion or Soil Management Plans/ Programs (EMPr's, ErMP)
- Implementation of Environmental Management Systems (EMS)

- Rehabilitation, Rehabilitation Closure and Liability Plans and Programs, including financial (RP)
- Environmental training of ECOs and EOs, Monitoring and Auditing
- Elephant and conservation Management Plans (EIMP and EMP)
- Water Use Licensing (WULA)
- Waste Management Plans and licencing (WMP and WL)
- Compliance and Enforcement
- Veld, Evaluations, burning plans, game sensors

RELEVANT EXPERIENCE

DIRECTOR ENVIRONMENTAL CONSULTANT AND COMPLIANCE , VARIOUS, VALUE RANGE BETWEEN (1 Million and 4.5 Billion Rand)

ENVIRONMENTAL MANAGEMENT ASSISTANCE (PTY) LTD, 2014 - Present,

Function is to Manage EMA (admin, budgets, quotes, proposals, tenders, project management and bids) and to operate as a consultant on various projects as the Environmental Manager, consultant, monitor, auditor, trainer or advisor) and implementing all environmental legislation, through cradle to grave operations, planning, implementing and closure. Projects worked on in the mining sector : BRC minerals and Sasol Mining, renewable energy: ilanga Solar, Karos Solar, Njoli Wind Farm, Waste: On Site Oil, Water projects Olifants River Water Resource Development Project (phase C, D, E and F) for Aurecon and Ndondana JV). ORWRDP Taryn was involved but not limited to writing BAR's EMP's, Commissioning, monitoring, rehabilitation planning, construction planning, specifications updates and implementation, auditing and training.

CONSULTANT AND COMPLIANCE AND SOIL SPECIALIST, VARIOUS, CLIENT, 2013 - 2014, VALUE = Ranged between 10 Million and 4 Billion

My responsibilities and duties included but not limited to, writing and managing basic assessments and EIAs, writing EMPs for construction and Soil Erosion Management Plans, Compliance management, supervising and training all ECO's and EO's and Bird and Bat monitoring (worked on 12 projects at Savannah which were related to Eskom, renewable energy and Mining)

ENVIRONMENTAL MANAGEMENT OFFICER, VARIOUS, ISIMANGALISO WETLAND PARKS AUTHORITY, 2010 - 2013, VALUE = N/A

My main functions were to ensure Environmental Compliance across the 500 000ha world heritage site. The main roles were to ensure compliance through implementing and developing a waste management system, implementing an environmental auditing system for all facilities in the park and auditing them, developing demolished plans and rehabilitation plans to remove illegal developments from the park, environmental compliance auditing on all developments being built in the park, drafting scoping reports for new developments, Beach, bush and forest audits, reporting back to working group 2 and 4 at DEA (which is the information filtered to the ministerial committee) writing and issuing pre compliance and compliance notices as an EMI, undertaking environmental crime investigations and reviewing and commenting on EIAs.

CHIEF RESEARCH TECHNICIAN AND ACTING ECOLOGIST, VARIOUS, EZEMVELO KZN WILDLIFE, 2009 - 2010, VALUE = N/A

My main function was to conduct all ecological work on Tembe Elephant Park, Ndumo Game Reserve, Silesa nature reserve, Pongola Nature Reserve, Vreyhuid hill nature Reserve, Pongola Bush Reserve, Thlatikhulu Nature Reserve and Ithala Game Reserve. This included game count senses and reports, vegetation assessments and reports, assisting in drafting management plans for large game and protected species, alien plants management planning, burning program development, running rhino databases, managing masters and doctorate students research, contributing information to the provinces C plan and commenting on any Environmental Impact Assessments or Stewardship programs in Northern Zululand

PROJECTS

OLIPHANT'S RIVER WATER RESOURCE DEVELOPMENT PROJECT PHASE 2C,D,E AND F (TCTA) FOR WATER AFFAIRS CONTRACTED TO AURECON PROJECT VALUE R4.5 BILLION

- Environmental Monitoring Team Leader
- Managing and planning rehabilitation
- Rehabilitation coordination and planning Advising construction on best practice
- Assist in planning and development on site to ensure environmental compliance
- Environmental compliance training
- Issuing the contractor all the site instructions related to environment.
- Managing a team of Environmental monitors
- Ensuring the Environmental Officer team are undertaking their roles adequately in accordance with the relevant authorisations, permits, EMP and method statement
- Environmental auditing
- Assisted in developing and implementation of the environmental and Health and Safety Campaign
- Assisted the contractor in developing an environmental exam for all staff to improve compliance with the EMP, method statement and specification.
- Coordinated compliance with the shutdown plan over December
- Undertook non-compliance investigations of major Environmental non-compliance.
- Reviewing and Approval of Method statements
- Advise the Senior Resident Engineer on compliance matters
- Review weekly compliance reports and issue them to the contractor
- Review application of permitting for plants etc.
- Writing reports and letters on behalf of the project to the contractor to improve compliance.
- Writing reports for the client to understand the environmental compliance on site
- Leasing with the client and keeping them informed of all environmental compliance related information on site
- Contributing a section in the CRE report on Environmental compliance with the specification, EMP and the authorisation
- Writing EMP for operation and operation manuals
- Assisting with writing the remainder of the Operation and maintenance manual
- Assisted in writing the training manual
- Assisted with drafting a fine system for the specification and reviewing the specification
- Application of FIDIC
- Coordinated and managed the onsite environmental team and matters
- Reviewing and assisting with Licensing the project
- Drafting Basic Assessments and EMPs and reviewing

BCR MINERALS (PTY) LTD (SPITSVALE PROJECT) PROJECT VALUE: NOT SURE OUR COMPONENT WAS R3.5 MILLION: INTEGRATED WULA, WML, AND SCOPING & EIA (SEPTEMBER 2015 TO PRESENT) –

- Scoping & EIA mining right application process as well as managing the integrated application process for a WULA (Water Use Licence Application) and WML (Waste Management Licence).

VESTAS: PROJECT VALUE: R1 BILLION: EA AND WUL AMENDMENT (OCTOBER 2015 TO JANUARY 2016) – NOJOLI WIND FARM (RF) (PTY) LTD (CLIENT: VESTAS SOUTH AFRICA (PTY) LTD)

- Manage the EA and WUL amendment process on behalf of Vestas South Africa (Pty) Ltd for the Nojoli Wind Farm (RF) (Pty) Ltd project.

- Monthly site audits (October 2015 to December 2016) - Nojoli Wind Farm (RF) (Pty) Ltd (client: Vestas South Africa (Pty) Ltd)
- Compiling a monthly site audit report on behalf of Vestas

GVK: VALUE: AUDITOR R60 MILLION -R100 MILLION (2017)

- Audited 4 of their projects for legal compliance

ILISO COSALTING (PTY) LTD: PROJECT VALUE: UNSURE: EA, CLOSURES AND GA (JANUARY 2017 TO JANUARY 2018) – PROSPECTING RIGHT AND 3 CLOSURE APPLICATIONS FOR SASOL SOUTH AFRICA

- 4 BARS and EMPs
- 3 Closure applications
- 1 General Authorisation for water use.

SPHANDILE TRADING CC: PROJECT VALUE: R1 BILLION: EA (OCTOBER 2017 TO PRESENT) – MODDERFONTEIN SOLAR FARM (RF)

- Application for EA

SOLARRESERVE SOUTH AFRICA: PROJECT VALUE: R1 BILLION: EA AND SCREENING (TO JANUARY 2018 AUGUST 2018) – ACWA POWER REDSTONE PV AND USF PROJECTS (6) (RF) (PTY) Obtain an Environmental Authorisation.

- Screening of 6 Urban Solar Farm Projects
- Advising

OTHER RENEWABLE WIND AND SOLAR ENERGY PROJECTS VALUE: ALL OVER R1BILLION: TRAINED AND MANAGED ECO, EIA, EMPS, AUDITS, EROSION SPECIALIST

- SARGE Nobelsfontein Karoo Renewables project
- Ventusa Zen Wind Energy Facility
- Ventusa Sishen Solar Energy Facility
- Ventusa Gouda wind Energy Facility
- ACED Cookhouse WEF (Wind Energy Facility)
- Cennergy Tsitsikamma WEFs
- Cennergy Amakhala Emoyeni RE Project 1 WEFs
- Moyeng Energy West Coast One WEFs
- Biotherm Energy Golden Valley
- Abengoa Solar Pofadder and Upington CSP (Celestial Solar Power plant), Northern Cape
- Mainstream Renewable Energy Developers Loeriesfontein

SUMMARY OF OTHER EXPERIENCE

2011- 2013 (January – April) iSimangaliso Wetland Park Authority – Environmental Manager (GRADE 2 EMI)

2009 – 2010 (January - December) EZEMVELO KZN Wildlife – Chief Research Tech and Acting Ecologist North West and East Zululand.

2008 (Jan-December) : University of Pretoria – Lecturer and Assistant Cartographer

2001 - 2003 : Al Maha Desert Resort Dubai – Field Guide

1998 - 2001 : Wallers Camp, Karogwe conservancy, Tanda Tula Game Lodge – Game Ranger, Assistant Researcher and Hospitality

Manager

DECLARATION

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and willing to serve in the position indicated for me in the Proposal for Consulting Services for the project listed in the proposal, for the durations and the locations indicated therein.



Signature of Staff Member

23/08/2019

Date