

**APPENDIX 1:**  
**CURRICULA VITAE OF THE EIA PROJECT TEAM**





**STUART HEATHER-CLARK**  
**TECHNICAL DIRECTOR**  
**AFRICA POWER SECTOR LEAD**

**Environmental Management Planning & Approvals, Africa**

## QUALIFICATIONS

Masters	1996	Environmental Science
BSc (Hons)	1992	Civil Engineering
EAPASA	2019	Registered Environmental Assessment Practitioner # 2019/613

## EXPERTISE

- Environmental and Social Impact Assessment
- Environmental Management Plans/Programmes
- Public Participation & Facilitation
- Environmental & Social Due Diligence
- Environmental & Social Screening & Site Selection
- Training and Capacity Building
- Strategic Environmental Assessment

Stuart has over 24 years of environmental and social consulting experience in Africa. Having worked on over 130 development projects in Africa, his key strength is identifying and managing ESG risks for major capital projects from the concept phase through to the pre-feasibility, feasibility and implementation phases.

Through leading Environmental & Social Screening Studies, Environmental & Social Impact Assessments and Environmental & Social Due Diligences for major capital project in over 13 African countries; Stuart has developed a deep appreciation of key sustainability challenges facing development in Africa. He has excellent project management skills with the ability to manage projects from the concept phase through to project completion.

Stuart has worked for and with a number of IFI's, DFI's and PE firms to identify and managing ESG risks of their investments in Africa. He has an integral knowledge of the Equator Principles and IFC Performance Standards and understands the expectations of lenders and financial institutions when it comes to managing ESG risks.

Stuart has worked across various sectors including O&G, mining, infrastructure and power. Over the past ten years he has focussed on the power sector leading projects for wind farms, solar PV plants, hydropower plants and gas to power plants. More recently he has advised various clients on the regulatory challenges for green hydrogen projects in Southern Africa..

## PROJECTS

### All Sectors

**ESIA for a 2GW solar PV plant and associated Green Hydrogen Project, South Africa, Confidential Client (2021)**

Project Director for an ESIA for a Green Hydrogen project including 2GW solar PV generation, transmission, desalination plant, water pipeline, electrolysis and hydrogen storage, ammonia production and storage and associated port facilities.

**Environmental and Social Screening and constraints mapping for green hydrogen project, Namibia, Confidential Client (2021)**

Project Director for an environmental and social screening and constraints mapping for green hydrogen project in response to the Namibian Governments RFP to conduct feasibility activities within the Tsau//Khaeb (Sperrgebiet) National Park for Renewable Wind Energy. NIPDB/RFP/SCDI/2021-001.

<b>Regulatory Review for the permitting of green hydrogen and ammonia projects in South Africa, Confidential Client (2021)</b>	Project Director for the regulatory review for permitting of green hydrogen and ammonia projects in South Africa.
<b>Position Paper of the green hydrogen market in South Africa, Confidential Client (2021)</b>	Researcher and lead author for a position paper on the green hydrogen market in South Africa including global trends and South African environmental regulatory requirements.
<b>ESIA for four 250MW wind energy facilities and associated transmission lines, Confidential Client (2021)</b>	Project Director for the ESIA for 4 x 250MW wind energy facilities and associated transmission line. The ESIA includes terrestrial and aquatic biodiversity, avifauna and bat monitoring, visual, social and heritage baseline studies, stakeholder engagement and compilation of an ESIA Report and ESMP.
<b>Environmental and Social Screening Study for a Wind Energy Facility to provide power to a green hydrogen facility, Confidential Client (2021)</b>	Project Director for an Environmental and Social Screening Study for a Wind Energy Facility to provide power to a green hydrogen facility on the east coast of South Africa.
<b>E&amp;S Advisory (RMIPPPP) for the establishment of a 450MW OCGT Power Plant in Richards Bay, Confidential Client, (2020)</b>	Project Director for advisory services for the development of a 450MW LPG OCGT Power Plant in Richards Bay. Advisory services included the review of the Final Scoping Report and all associated documents.
<b>Environmental Authorisation Amendment (RMIPPPP) for a 1500MW OCGT/CCGT Power Plant in Atlantis, Confidential Client, South Africa (2020)</b>	Project Director for the Amendment of the Environmental Authorisation for the change of the project from an 1500MW OCGT/CCGT Power Plant using LNG as a fuel source, to a 400MW OCGT power plant using LPG as a fuel source. EA Amendment includes undertaking revised air quality, noise, risk assessment, climate change, flora and heritage studies. Process includes stakeholder engagement.
<b>Environmental Authorisation Review (RMIPPPP) for a 1507MW OCGT/CCGT Power Plant in Saldanha Bay, Confidential Client, South Africa (2020)</b>	Project Director for the review of the Environmental Authorisation for the change of Phase 1 of the project from OCGT Power Plant using LNG as a fuel source, to a OCGT power plant using LPG as a fuel source. EA Amendment includes undertaking revised air quality, noise, risk assessment, climate change, flora and heritage studies. Process includes stakeholder engagement.
<b>ESIA for 4 x 100MW solar PV plants and associated transmission lines, Freestate, South Africa, Confidential client, (2020 - 21)</b>	Project Director for the ESIA for 4 x 100MW solar PV Plants associated transmission line. The ESIA includes terrestrial and aquatic biodiversity, avifauna, visual, social and heritage baseline studies, stakeholder engagement and compilation of an ESIA Report and ESMP.

Environmental and Social Impact Assessment for a 20MW solar PV plant and transmission line, Gigawatt Global, Liberia, (2020)	Project Director for the ESIA a 20MW solar PV plant and associated transmission line. The ESIA includes biodiversity, social and heritage baseline studies, stakeholder engagement and compilation of an ESIA Report and ESMP. The ESIA will be aligned with the IFC Performance Standards.
ESIA for an 80-200 MW wind farm development, Mphepo Power, Zambia (2019-20)	Project Director for the ESIA for the development of a wind farm in Zambia. The ESIA included terrestrial and aquatic, social, heritage, noise and visual baseline studies, stakeholder engagement and compilation of an ESIA Report and ESMP. The ESIA was aligned with the IFC Performance Standards.
Environmental and Social Impact Assessment for a Road Upgrade, OGMII, Ghana, (2019-20)	Project Director for the Scoping Phase of the Environmental and Social Impact Assessment process for the proposed Winneba Obetsebi-Lamprey Flyover (Phase 2) project in Accra, Ghana in collaboration with local consultants. The project included additional visual impact assessment, air quality modelling and noise modelling. All work undertaken to IFC Performance Standards.
Environmental and Social Impact Assessment (ESIA) for the Gamsberg Mine Zinc Smelter, Black Mountain Mine (Vedanta), South Africa (2019-20)	Project Director for the ESIA for a new zinc smelter and associated infrastructure to beneficiate the 250 000 to 300 000 tpa of zinc concentrate produced at the Gamsberg Zinc Mine Phase-1 concentrator plant. The ESIA included extensive baseline studies including biodiversity, social, air quality, noise, visual, hydrology, geohydrology, and climate change. The process included extensive stakeholder engagement during the scoping and impact assessment phase.
ESIA Scoping Phase for the desalination plant and water carrier system, NamWater, Windhoek Namibia (2019-20)	Team member for the ESIA Scoping Phase for the proposed desalination plant and water carriage system to secure water supply to the central coast, Windhoek and en-route users. The Scoping Process included extensive stakeholder engagement and the Scoping Report was aligned with the KfW Sustainability Guidelines and World Bank Environmental and Social Standards.
Environmental & Social Due Diligence for 5MW solar PV plant, Confidential Client, Namibia (2019)	Project Director for an Environmental and Social (E&S) Due Diligence (Red Flags only) of a 5 MW solar PV facility located near Outapi, Namibia.
Environmental & Social Screening Study for 20MW solar PV plant, CIGenCo, Eswatini (2019)	Project Director for an Environmental and Social (E&S) Screening Study of two potential sites for development of solar PV projects as part of CIGenCo's bid as part of the Eswatini Independent Power Producers Policy (ESIPPP).
Permitting Strategy and Planning for the Rovuma LNG Project in Mozambique, ExxonMobil, Mozambique (2018-2019)	Team member supporting Exxon with the permitting strategy and plans for the Rovuma LNG Project in northern Mozambique.
Environmental and Social Impact Assessment (ESIA) Gap Analysis for a 50MW solar PV Plant, Volt Renewable, Zimbabwe (2018)	Environmental lead for the review of the locally approved EIA against the IFC Performance Standards. Gaps were identified and an Environmental and Social Action Plan (ESAP) developed to close the gaps.

Environmental and Social Impact Assessment (ESIA) Gap Analysis for a 5-star hotel development, Motal-Engil, Zimbabwe (2018)	Environmental lead for the review of the locally approved EIA against the IFC Performance Standards. Gaps were identified and an Environmental and Social Action Plan (ESAP) developed to close the gaps.
Environmental and Social Screening Study for a 100MW hybrid HFO and Solar PV Power Plant for a mine in Mali, Confidential client (2018)	Environmental lead for the screening of environmental and social risks for the development of a solar PV plant on a mine in Mali.
Environmental and Social Screening Study for 3 x 40MW solar PV plants, Confidential Client, GETFIT Zambia (2018)	Project Manager for an environmental and social screening study for 3 x solar PV sites in Zambia. The Screening Study included the review of desk top information and site visits to assess environmental and social risks. A comparative analysis was undertaken to select the site with the least environmental and social risks. This was combined with the technical analysis to select the preferred site to be taken into more detailed studies.
Environmental and Social Impact Assessment for a 40MW solar PV farm for Goldfield's South Deep Mine, Enel Green Power, South Africa (2017)	Project Director for an Environmental and Social Impact Assessment for a 40MW solar PV plant for Goldfield's South Deep Mine in South Africa. The study included scoping and stakeholder engagement, various specialist studies and the compilation of an ESIA Report and ESMP.
Environmental and Social Impact Assessment for 2 run-of-river Hydropower Plants and associated transmission lines in Northern Zambia, Globeleq, Zambia (2017)	Project Director for an Environmental and Social Impact Assessment for 2 run-of-river hydropower plants and associated transmission lines on the Kalungwishi River in Northern Zambia. The study included scoping and stakeholder engagement, various specialist studies including environmental flow, heritage, social, biodiversity, visual, noise and other studies. All work was undertaken to IFC Performance Standards. The project was put on hold after the baseline and Scoping Phase.
Environmental and Social Screening Study for an 212MW HFO Power Plant, Confidential Client, Angola (2017)	Project Director for an Environmental and Social Screening Study for a 212MW HFO Power Plant in Angola. The study included noise and air quality baseline sampling, soil and groundwater baseline sampling, community health screening, and the compilation of a detail legal register and compliance road map.
Environmental and Social Screening Study for a Hydropower Plant in Gabon, Confidential Client, Gabon (2017)	Environmental and Social Screening Study for a Hydropower Plant in Gabon, Confidential Client, Gabon, 2017
Environmental and Social Due Diligence (ESDD) for two Solar PV and two Wind Farm Projects South Africa, Confidential Client, South Africa (2017)	Project Director for the ESDD for two Solar PV and two Wind Farm Projects in South Africa.
Environmental, Health and Safety Risk assessment of four Solar PV sites in South Africa, Enel Green Power, South Africa (2017)	Project Director for the EHS Risk Assessments.



Environmental and Social Impact Assessment for a 100MW to 250MW solar PV Plant, Globeleq, Zambia (2016-17)	Project Director for an Environmental and Social Impact Assessment for a 100MW to 250MW solar PV plant in Zambia. The study included the analysis of key environmental and social impacts, compilation of an ESIA and ESMP reports and stakeholder engagement.
Environmental and Social Screening Study for a solar PV Plant, Confidential client, Zambia (2016)	Project Director for an Environmental and Social Screening Study for the establishment of solar PV power plant in Zambia. The study included the analysis of key environmental and social risks including regulatory, biodiversity and social risks.
Environmental and Social Due Diligence, Six Solar PV Farms, Confidential Client, South Africa (2016)	Project Director for an ESDD for six solar pv farms in South Africa. The ESDD was undertaken against SA Legislation and Regulations and IFC Performance Standards.
Environmental and Social Impact Assessment for a CCGT Power Plant, ArcelorMittal, South Africa (2016)	Project Director for an Environmental and Social Impact Assessment study for the establishment of a 1500MW CCGT power plant for ArcelorMittal in Saldanha Bay, South Africa. The ESIA includes detailed specialist studies including air emissions modelling, noise modelling, biodiversity and heritage assessment. Full stakeholder engagement is also part of the scope of work.
Environmental and Social Management Plans, Wind Farm Development, Confidential Client, Kenya (2016)	Project Director and involved in advising the client on various strategies including vantage point bird monitoring and management plan development.
Environmental and Social Screening Study of potential solar PV sites, Confidential Client, Ivory Coast (2016)	Environmental and Social Screening Study of potential solar PV sites, Confidential Client, Ivory Coast, 2016
Environmental and Social Impact Assessment for the Tete-Macuse Railway Line and Macuse Power Development, Italthai, Mozambique (2015-17)	Project Director for the Environmental and Social Impact Assessment (ESIA) for the proposed Tete-Macuse railway line and Macuse Port development for the export of coal from Tete Province in Mozambique. The project included the development of over 700km of railway line and a new port development.
Strategic Environmental Assessment for the supporting infrastructure for the Baynes Hydropower Project, Baynes PJTC, Namibia/Angola (2014-15)	Project Director for the Strategic Environmental Assessment of the associated infrastructure for the Baynes hydropower project. The SEA covered the assessment of access roads for construction, transmission lines routing in Angola and Namibia and locations of an airfield.
Cumulative Impact Assessment of the development of numerous hydropower plants on the Kwanza River, Odebrecht, Angola (2014-15)	Project Director for the Cumulative Impact Assessment of the development of a number of hydropower plants on the Cuanza River in Angola.
Environmental and Social Impact Assessment for the Batoka Gorge Hydropower Project, ZRA, Zambia/Zimbabwe (2014-15)	Advisor to the ESIA team undertaking the Environmental and Social Impact Assessment (ESIA) for the proposed Batoka Gorge Hydropower Plant on the Zambezi River below the Victoria Falls. The project includes the construction of a dam wall, hydropower plants, transmission lines and associated infrastructure. The ESIA is being conducted in alignment with the IFC Performance Standards and the World Bank Safeguard Policies.

Environmental and Social Impact Assessment for the Rehabilitation of the Kariba Dam Wall, ZRA, Zambia/Zimbabwe (2014-15)	Project Director for the Environmental and Social Impact Assessment (ESIA) for the proposed Kariba Dam Rehabilitation Project. The project includes the rehabilitation of the plunge pool and spillway of the dam wall. The project is being funded by the World Bank, African Development Bank and the EU.
Environmental and Social Due Diligence (ESDD) for a 98 MW wind farm in South Africa, Confidential Client, South Africa (2015)	Project Director for the ESDD.
Environmental and Social Due Diligence (ESDD) for a 2 x 75 MW solar pv farm in South Africa, Confidential Client, South Africa (2015)	Project Director for the ESDD.
Environmental and Social Due Diligence (ESDD) for a 74 MW wind farm in South Africa, Confidential Client (2015)	Project Director for the ESDD.
Environmental and Social Screening Study for a CCGT Power Plant, Confidential Client, South Africa (2015)	Project Director for an Environmental and Social Screening study for the establishment of a gas power plant in Saldanha Bay, South Africa. The screening study outputs included a permitting strategy, environmental opportunities and constraints maps, and input into the site selection process.
Environmental and Social Impact Assessment for Floating Power Plants in the Port of Richards Bay, Department of Energy IPP Office, South Africa (2015-16)	Project Director for the ESIA for the establishment of Floating Power Plants in the Ports of Richards Bay in South Africa. The ESIA includes detailed specialist studies including marine outfall modelling, air emissions modelling and marine ecology studies. Full stakeholder engagement is also part of the scope of work.
Environmental and Social Impact Assessment for Floating Power Plants in the Port of Richards Bay, Department of Energy IPP Office, South Africa, (2015-16)	Project Director for the ESIA for the establishment of Floating Power Plants in the Ports of Saldanha in South Africa. The ESIA includes detailed specialist studies including marine outfall modelling, air emissions modelling and marine ecology studies. Full stakeholder engagement is also part of the scope of work.
Environmental and Social Impact Assessment (Scoping Phase) for LNG Import Terminal in the Port Richards Bay for the Gas to Power Programme, Department of Energy IPP Office, South Africa (2015-16)	Project Director for the ESIA for the establishment of LNG Import Terminals as part of the DoE's Gas to Power Programme in South Africa. The ESIA (Scoping Phase) included scoping of detailed specialist studies including marine outfall modelling, air emissions modelling and marine ecology studies. Full stakeholder engagement is also part of the scope of work.
Environmental and Social Impact Assessment (Scoping Phase) for LNG Import Terminal in the Port Saldanha for the Gas to Power Programme, Department of Energy IPP Office, South Africa, (2015-16)	Project Director for the ESIA for the establishment of LNG Import Terminals as part of the DoE's Gas to Power Programme in South Africa. The ESIA (Scoping Phase) included detailed specialist studies including marine outfall modelling, air emissions modelling and marine ecology studies. Full stakeholder engagement is also part of the scope of work.

Environmental and Social Screening study for the establishment of a CCGT power plant in the Ports of Richards Bay, Confidential client, South Africa (2015)	Project Director for an Environmental and Social Screening Study for the establishment of a CCGT power plant in Richards Bay, South Africa. The study included the analysis of key environmental and social risks including air emissions, effluent emissions, biodiversity (terrestrial and marine) and social issues. The assessment applies to the power plant site, transmission line routing and pipeline routing and compares the opportunities and constraints associated with the two locations.
Environmental and Social Screening study for the establishment of an CCGT power plant in the Port of Saldanha, Confidential client, South Africa (2015)	Project Director for an Environmental and Social Screening Study for the establishment of a CCGT power plant in Saldanha Bay, South Africa. The study included the analysis of key environmental and social risks including air emissions, effluent emissions, biodiversity (terrestrial and marine) and social issues. The assessment applies to the power plant site, transmission line routing and pipeline routing and compares the opportunities and constraints associated with the two locations.
Environmental and Social Screening study for the establishment of an SCGT power plant in the Ports of Saldanha, Confidential client, South Africa (2015)	Project Director for an Environmental and Social Screening Study for the establishment of an SCGT power plant in the Port of Saldanha. The study included the analysis of key environmental and social risks including air emissions, effluent emissions, biodiversity (terrestrial and marine) and social issues. The assessment applies to the power plant site, transmission line routing and pipeline routing.
Environmental and Social Impact Assessment for the Burgan Oil Fuel Storage Depot in the Port of Cape Town, Burgan Oil, South Africa (2014-15)	Project Director for the ESIA for the Burgan Oil Fuel Storage Depot in the Port of Cape Town.
Millennium Challenge Account – Malawi: Infrastructure Development Project – Energy Sector (hydropower plants, transmission and distribution lines and substations), MCC, Malawi (2014-15)	Environmental Lead for the Independent Engineer to review all the Contracting Engineers environmental and social studies associated with the Infrastructure Development Project. The project includes the upgrade and development of new power infrastructure including hydropower plants, transmission lines, distribution lines and substations.
Strategic Environmental Assessment of the New Town Integrated Development Zone, TFM Mining, Katanga Province, DRC (2014)	Project Director for the Strategic Environmental Assessment of the New Town Integrated Development Zone undertaken for Tenke Fungurume Mining (TFM) in Katanga Province, DRC.
Environmental and Social Impact Assessment (ESIA) for the Gamsberg Zinc Mine, South Africa, Black Mountain Mine (Vedanta) (2012-13)	Project Director for the Environmental and Social Impact Assessment for a new Zinc Mine in the Northern Cape Province in South Africa. The ESIA includes the assessment of the mine and all associated infrastructure including waste rock dumps, tailing dams, processing plant, transmission lines, a new township development, upgrade of a water pipeline and associated water treatment facilities, and transport options to the Port of Saldanha via both road and rail. The ESIA is being undertaken as an integrative process to meet various environmental legal requirements including National Environmental Management Act (NEMA): EIA Regulations, NEM: Waste Act, NEM: Air Quality Act, NEM: Biodiversity Act, National Heritage Resource Act, National Water Act and the Minerals Petroleum Resources Development Act. The process includes various specialist studies, full stakeholder engagement as well as integration with a Biodiversity Off-sets process.

Environmental and Social Impact Assessment for the Expansion of Transnet's existing Manganese Ore Export Railway Line and Associated Infrastructure, South Africa (2012)	Project Director for the ESIA for the Expansion of Transnet's existing Manganese Ore Export Railway Line and Associated Infrastructure in the Northern and Eastern Cape, South Africa.
Ore Line Expansion Project for the Sishen-Saldanha Ore Line and Port of Saldanha, various Mining Companies and Transnet, South Africa (2011-2012)	Project Director for the Environmental and Social Screening Study for the Pre-feasibility Phase of the Ore Line Expansion Project. This included compiling a detail Environmental and Social Design Criteria Report together with initial Stakeholder Engagement. A detailed multi-criteria assessment for various port and stockpile options was undertaken. The project included upgrading over a 1000 km of railway line and upgrading the port facilities including stockpiles, stacker-reclaimers, conveyors and ship loading facilities. The stakeholder engagement process was specifically designed to obtain buy-in from stakeholder who were strongly opposed some components of the port and rail expansion.
Strategic Environmental Assessment for the Mozambican Regional Gateway Programme, MRGP, Mozambique, Malawi, Zambia, Zimbabwe (2012)	Project Director for the SEA of the MRGP. The MRGP aims to support the improvement of the Southern African transport (roads, rail and ports), regional infrastructure network, which uses Mozambique as a gateway for international trade. The MRGP geographic scope encompasses the Beira and Nacala Transport Corridors and the respective links to the Maputo and Limpopo Corridors. The SEA identified environmental and social issues that need to be considered in the long terms planning an implementation of the rail and port infrastructure that makes up the Beira and Nacala Transport Corridors.
Strategic Environmental Assessment (SEA) for the coastline of Mozambique, MICOA, Mozambique (2012)	Adviser on the SEA for the coast of Mozambique. The SEA aims to identify potential conflicts between various uses of the coastal zone and to recommend strategic interventions to facilitate sustainable development within the coastal zone. Various users of the coastal zone that are being considered include off-shore oil and gas operations, coastal mining, tourism, conservation and artisanal and industrial fishing.
Environmental and Social Screening Study for port options in Pemba Bay, Anadarko, Mozambique (2012)	Project Lead for an Environmental and Social Screening Study for various port options in Pemba Bay. The screening study includes a multi-criteria assessment of various port locations taking into account marine and terrestrial ecology, social issues, land ownership, legal aspects and physical marine conditions.
Environmental and Social Impact Assessment for a LPG import and distribution facility, Sunrise Energy, South Africa (2011-2012)	Project Director for the Scoping/EIA for a LPG importation, storage and distribution facility which includes a marine offloading facility in Saldanha Bay, a pipeline and a storage facility. The environmental permitting process required the liaison with local and provincial environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
Environmental and Social Screening Study for a Mine development in Angola, Confidential Client, Angola (2011-2012)	Project Director for the Environmental and Social Screening Study for the Concept Phase for a new mine development in Angola. The study included identifying environmental and social risks to the project and costing a full ESIA according to IFC Performance Standards and Equator Principles.
Equator Principles and IFC Performance Standards Training, Vedanta Resources Plc, Zambia (2012)	Lead facilitator of a 5-day training course on the implementation of the Equator Principles and IFC Performance Standards for a number of Vedanta's mining operations across Southern Africa, Europe and Australia.

Environmental and Social Impact Assessment for the upgrade of the Principe Airport, HBD, Principe (2011-2012)	Project Director for the Environmental and Social Impact Assessment for the upgrade of the airport in Principe.
EIA for a 380MW renewable energy facility north of Touwsrivier in the Western Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 170MW renewable energy facility east of Touwsrivier in the Western Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 670MW renewable energy facility south of Sutherland in the Western and Northern Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process requires the liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 500MW renewable energy facility south of Beaufort West in the Western Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 120MW renewable energy facility south east of Victoria West in the Northern Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 225MW wind farm in the Richtersveld, Western Cape (2011)	Project Director for the Scoping/EIA for a proposed wind farm. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 750MW wind farm in the Roggeveld, Western Cape and Northern Cape (2011) Director	Project Director for the Scoping/EIA for a proposed wind farm. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
EIA for a 225MW renewable energy facility between Vredenburg and Velddrif in the Western Cape (2010-2011)	Project Director for the Scoping/EIA for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies, public participation and impact assessment.
Environmental and Social Impact Assessment for the Lesotho Highland 150 MW Wind Power Project, Breeze Power, Lesotho (2011)	Project Director for the Scoping Phase of the Environmental and Social Impact Assessment for a 150MW wind farm development in Lesotho. The Scoping Phase included the analysis of available information to identify key environmental and social risks associated with the siting of the wind farm.

Environmental Screening Study for a Wind Farm Development in the Southern Cape, South Africa (2011)	Project Director for the Environmental Screening Study for a wind farm development in the Southern Cape.
Environmental and Social Due Diligence for a Wind Farm Development in Coega, Electrawinds, South Africa (2011)	Project Director for the Environmental and Social Due Diligence for a wind farm development in the Coega.
Environmental and Social Impact Assessment for Venetia Diamond Mine, De Beers, South Africa (2011)	Project Director for the Scoping and ESIA for the proposed new underground mine and EMP consolidation for existing mining activities. The ESIA was undertaken as an integrative process to meet various environmental legal requirements including National Environmental Management Act (NEMA): EIA Regulations, NEM: Waste Act, NEM: Air Quality Act, NEM: Biodiversity Act, National Heritage Resource Act, National Water Act and the Minerals Petroleum Resources Development Act.
Environmental and Social Impact Assessment for a river barging project on the Zambezi River, Riversdale Mining, Mozambique (2010-2011)	Project Director for the project which includes the assessment of environmental and social impacts associated with dredging over 500km of the Zambezi River. The project includes full stakeholder engagement, coordination of various specialist studies with extensive field work and the integration of all information into an ESIA report and ESMP.
EIA for two solar PV plant development, South Africa (2010)	Project Director of the EIA for the development of two solar PV plants in the Northern Cape and Free State Provinces of South Africa. ERM undertook the required studies to obtain environmental approval for these developments, including specialist studies such as landscape and visual and cultural heritage assessments, and stakeholder engagement.
Basic Assessment for the installation of wind measuring masts on six sites in the Western Cape and two sites in the Northern Cape (2010)	Project Director for the Basic Assessments to install wind measuring masts at eight sites in South Africa. The scope of work included the submission of the application, public participation, preparation of an EMP and submission of the Basic Assessment report.
EIA for a 100MW renewable energy facility north of Velddrif in the Western Cape (2010)	Project Director for the Scoping process for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required the liaison with local, provincial and national environmental authorities, co-ordination of specialist studies and public participation.
EIA for a 300MW renewable energy facility east of Lambert's Bay in the Western Cape (2010)	Project Director for the Scoping process for a proposed renewable energy facility incorporating wind and photovoltaic power generating technologies. The environmental permitting process required liaison with local, provincial and national environmental authorities, co-ordination of specialist studies and public participation.
External adviser and reviewer for an ESIA for a wind farm development in the Eastern Cape, Confidential Client, South Africa (2010)	Adviser and reviewer for an EIA for the development of a wind farm in the Eastern Cape.
Environmental Advisor Environmental and Social Impact Assessment for the Mphanda Nkuwa Hydropower Project in Mozambique (2010)	Advisor for the ESIA for the Mphanda Nkuwa Hydropower Project in Mozambique. The core service was to advise the project team on international standards such as the IFC Performance Standards and World Commission on Dams.

Environmental Sensitivity Study of the Durban Airport Site Expansion Project , South Africa, Transnet (2010)	Project Director for the Environmental Sensitivity Study for the proposed dig-out port currently being considered by Transnet at the Durban International Airport Site. The aim of this assessment was to determine the biophysical, natural and social opportunities and constraints to the development of the dig-out port, as well as provide a strategic overview of the environmental context of the site. In addition, the sensitivity study provided strategic guidance in terms of the environmental due process and licensing requirements with respect to the National Environmental Management Act, and associated legislation.
ESIA for a new high voltage overhead transmission power line in Cameroon, AES Sonel, Cameroon (2007- 2009)	Project Director for the Environmental and Social Impact Assessment and a full Resettlement Action Plan for a new electricity distribution project, comprising a 113km overhead power line, for AES Sonel. As Project Director, Mr Heather-Clark was responsible for client liaison, quality control and final review of all reports.
Advisor to the Environmental and Social Impact Assessment for the Baynes Hydropower Project in Namibia and Angola (2009)	Project Advisor for the Environmental and Social Impact Assessment for the proposed Baynes Hydropower Project on the Kunene River. The ESHIA process is being conducted in accordance to the Angolan EIA Regulations, the Namibian EIA Regulations, the World Bank Safeguard Policies and the IFC performance standards.
Environmental and Social Impact Assessment for the upgrade of a 1100 km railway line in South Africa, Transnet (2008- 2009)	Project Director for the Environmental and Social Impact Assessment for the upgrade of a commodities railway line across South Africa. The project included a number of specialist studies, managing subcontractors, interfacing with the railway engineering team, report writing, managing an extensive stakeholder consultation process, client liaison and management of project finances.
Environmental and Social Impact Assessment for the services corridor associated with the development of a greenfield CTL Plant, Sasol, South Africa (2009)	Project Director for an ESIA of a services corridor to support the development of a greenfield CTL plant development in South Africa. The ESHIA process was conducted in accordance to the South African EIA Regulations and the IFC performance standards.
Environmental and Social Impact Assessment for 2D seismic exploration project in the Rovuma Basin, Petronas, Mozambique (2009)	Project Director for the ESIA for the offshore seismic exploration activities in Blocks 3 & 6, situated in the Rovuma Basin off the coast of Mozambique. The exploration activities comprise 2D seismic surveys in deepwater.
Environmental and Social Screening Study for a river barging project on the Zambezi River, Riversdale Mining, Mozambique (2009)	Project Director for the project which included the assessment of environmental and social risks associated with dredging over 500km of the Zambezi River. The project included reviewing existing information, mapping key sensitivities and facilitating a specialist workshop in order to develop Terms of Reference for detailed baseline studies that will be required should the project proceed to a full ESIA.
Equator Principled and IFC Performance Standards Review and Training, African Housing Solutions, South Africa (2009)	Lead reviewer for the ESIA and Resettlement Policy Framework, for a housing development in Nigeria, against the Equator Principles and IFC Performance Standards. Mr Heather-Clark was responsible for reviewing the ESIA Report and for presenting a 2 ½ day training course on the Equator Principles and IFC Performance Standards.
Environmental Assessment for the dredging and disposal of dredge spoil at the Port of Saldanha, Transnet, South Africa (2008)	Project Director for this project and was responsible for guidance of technical studies which included dredging studies and marine sediment contamination characterization. The study included the assessment of dredge spoil dumping alternatives. Stakeholder engagement included an important component of the project.

Environmental and Social Screening Study, Port of Saldanha, Transnet, South Africa (2008)	Project Director for the screening study which included an assessment of alternative berth options for the export of iron ore at the iron ore terminal at the Port of Saldanha, South Africa. The work included ongoing interaction with the port engineering and design teams, together with stakeholder engagement.
ESIA for an Early Production System (EPS) and Power Plant for Kaiso-Tonya Area, Exploration Area 2, Tullow Uganda Operations Pty Ltd, Uganda (2007-08)	Project Director for the project which included a full ESIA for an Early Production System and associated Power Plant in the Kaiso-Tonya area on the banks of Lake Albert, Uganda. The intent of the project is to produce oil (and small amounts of gas) which will be converted into electrical power and distillate products (kerosene and diesel) for consumption within Uganda. The electrical power will be fed into the main grid supplementing the Ugandan electrical power grid while the distilled products (diesel and kerosene) will be used to displace the currently imported fuels. The ESIA included a detailed assessment of alternative sites for the proposed EPS and power plant, together with various environmental and social baseline studies and stakeholder engagement.
ESIA monitoring studies for Sasol's Off-shore gas exploration activities in Inhambane and Sofala Provinces, Mozambique, Sasol Petroleum Sofala & Empresa Nacional de Hidrocarbonetos (2007-08)	Project Director for an environmental monitoring survey programme for Sasol's offshore hydrocarbon exploration activities. Monitoring studies included seismic noise modelling and monitoring, dugong surveys, artisanal fish catch monitoring, coral reef surveys and monitoring, sea turtle monitoring and tourism monitoring.
Strategic Environmental and Social Overview and ESIA's for offshore exploration well drilling activities in Blocks 2 and 3A, Lake Albert, Uganda. Tullow Oil Plc and Heritage Oil and Gas Limited (2006- 2008)	Project Director for this project. The project involved undertaking a strategic overview study of Lake Albert that provided background information on the limnological (physical, chemical and biological) features of the lake as well as environmental and socio-economic resources (such as nature reserves, tourism nodes, prime fishing areas etc). It also presented areas of environmental risk and opportunity associated with oil explorations on, and immediately adjacent to, the lake. The strategic overview provided a framework within which ESIA's were undertaken for the offshore drilling project. A site selection study was undertaken for onshore support infrastructure. Baseline studies included shoreline sensitivity mapping, oil spill modelling, water and sediment quality surveys, fish and fisheries surveys, socio-economic surveys and terrestrial ecology surveys. An extensive public participation process was undertaken as part of the ESIA's.
Environmental and Social Baseline Assessment for a green fields coal mine and CTL plant development, Sasol, South Africa (2008)	Project Director the environmental and social baseline studies to support the evaluation of sites for potential development of a green field's coal mine and associated CTL Plant in South Africa. Mr. Heather-Clark has assisted with review and quality control of the various baseline studies.
Development of guideline document for the integration of environmental and social issues into the project lifecycle for mine development, De Beers, South Africa (2008)	Team member of the project team that assisted the client in developing a detailed guideline document for the integration of social and environmental issues into mine planning. This included all phases of the planning process from Concept through to Pre-feasibility, Feasibility and Implementation. Mr Heather-Clark, as lead facilitator, presented a 2 day training course on these guidelines, to mine planners and engineers.
EIA for a Metal Recovery Plant and Slag Crushing, Screening and Weathering facility at Arcelor Mittal Saldanha Works, MultiServ, South Africa (2007 – 2008)	Project Director for the EIA, including a public consultation process and the following specialist studies: air quality, groundwater, noise impact assessment, botanical and archaeology studies and a traffic impact assessment. Mr Heather-Clark was responsible for client liaison, quality control and final review of all reports.



Implementation of the Equator Principles for Standard Bank's Project Financing Processes, Standard Bank, South Africa (2008)	Lead facilitators for Equator Principles and IFC Performance Standards training to assist Standard Bank in adopting the Equator Principles. An assessment system (based on the IFC Performance Standards) to link with Standard Bank's project finance transaction life-cycle was developed. This involved the development of "tools" and guidance documents to form a system, together with training on the use of the system for all project finance staff.
Comparative review of EIAs undertaken by ERM globally for electricity utilities, Eskom, South Africa (2007)	Project Director for this project. The project included research to provide Eskom with an overview of different EIA governance systems and approaches to managing EIAs in other countries, as well as identifying trends in EIA practice.
Environmental and Social Screening and Qualitative Risk Assessment Western Ports and Rail Corridor, Transnet, South Africa (2007)	Project Director involved in identifying environmental and social risks associated with future port development in the Port of Saldanha, Port of Cape Town and Port of Mossel Bay. The scope of the study included the review of previous EIAs, SEAs and other planning documents to identify environmental and social drivers and assess their risk to future port planning, development and operations. As the environmental team, ERM interacted on a regular basis with the port engineering and design teams to develop a port development framework for a 30 year planning period.
Environmental and Social Screening and Qualitative Risk Assessment Central Ports and Rail Corridor, Transnet, South Africa (2007)	Project Director involved in identifying environmental and social risks associated with future port development in the Port of East London, Port of Port Elizabeth and Port of Ngqura. The scope of the study included the review of previous EIAs, SEAs and other planning documents to identify environmental and social drivers and assess their risk to future port planning, development and operations. As the environmental team, ERM interacted on a regular basis with the port engineering and design teams to develop a port development framework for a 30 year planning period.
Environmental and Social Screening and Qualitative Risk Assessment Eastern Ports and Rail Corridor, Transnet, South Africa (2007)	Project Director involved in identifying environmental and social risks associated with future port development in the Port of Durban and Port of Richards Bay. The scope of the study included the review of previous EIAs, SEAs and other planning documents to identify environmental and social drivers and assess their risk to future port planning, development and operations. As the environmental team, ERM interacted on a regular basis with the port engineering and design teams to develop a port development framework for a 30 year planning period.
EIA of the Moatize Coal Mine and associated railway line and deep water port infrastructure, CVRD, Tete Province, Mozambique (2006-2007)	Project Coordinator and Cost Controller on this project. ERM was commissioned by CVRD, a Brazilian Mining Company, to undertake environmental studies related to the green fields development of a coal mine in Tete Province, Mozambique. The project included the development of a power plant, railway line and port for the export of coal.
Corporate Social Responsibility Strategy development for a leading South African retailer, South Africa (2006)	Lead facilitator for this project. The project involved identifying and prioritising the company's sustainability issues and defining a strategy to address these issues. The process was driven by the need for the company to be listed on the Johannesburg Stock Exchanges SRI Index.
Research project on the effects of water scarcity on the fresh produce supply to a major South Africa retailer, South Africa (2006)	Project Leader coordinated a group of researchers to identify water scarce areas and to plot these against the location of fresh produce suppliers for a major retailer in South Africa. This researched form a core component of the companies Sustainability Strategy.
Independent Environmental Advisers to the Financing Parties of the Gautrain Rapid Rail Link project, Bowman Gilfillan (2006)	Independent Environmental Advisers to the Financing Parties, provided review and advisory services through Bowman Gilfillan on Environmental Management Plans for the Gautrain Rapid Link project.

ESIA for seismic surveys and exploration well drilling and testing in Blocks 16 and 19 off the coast of Mozambique, Sasol Petroleum Sofala & Empresa Nacional de Hidrocarbonetos (2005 – 2006)	Project Manager for the ESIA which involved undertaking an ESIA and compiling EMPs for offshore exploration activities in Blocks 16 & 19, situated to the east of the Bazaruto Archipelago National Park, off the coast of Mozambique. The exploration activities comprised 2D and 3D seismic surveys in deepwater and shallow water as well as exploration well drilling and testing activities.
EIA for the upgrade and expansion of the existing sinter plant at Vanderbijlpark, ArcelorMittal, South Africa (2006)	Project Director for the EIA and stakeholder engagement process to meet South African requirements. This included coordination of the technology review, air quality, health and waste management specialist studies and compilation of the integrated Scoping and EIA Report.
Review of Sustainability Report and Sustainability Management System, Confidential, South Africa (2004)	Lead reviewer of the Sustainability Report of a leading retailer in South Africa and providing adhoc advice on sustainability issues. This included compiling a monthly news letter to staff on relevant sustainability issues facing the retail industry in South Africa.
EIA of a proposed expansion of the Container Terminal Stacking area at the Port of Cape Town, National Ports Authority, South Africa (2003-2004)	Project Manager for this EIA. The project included the expansion of the Cape Town container terminal into the sea through dredging 1 million m3 of material for reclamation. The project included a detailed study on alternative sources for fill material and other studies which focused on marine archaeology, coastal erosion, marine hydrodynamics and water quality, visual, noise and traffic. The EIA included full stakeholder engagement throughout the EIA process.
Environmental Site Suitability Study for a manganese smelter, Asia Minerals Limited (2004)	Part of the project team that undertook a preliminary site selection process for a manganese smelter by identifying key environmental and social issues for potential sites within Southern Africa. Sites included the Belualane Industrial Park (Mozambique) and Richards Bay, the Coega Industrial Development Zone (IDZ) and Saldanha (South Africa).
DFID funded project to assess progress towards meeting the water relater targets of the Millennium Development Goals, DIFD, Zambia (2004)	Country Coordinator for Zambia on this project. The project included detailed stakeholder surveys secondary data analysis to establish the countries progress towards meeting the Millennium Development Goals, specifically related to water supply and sanitation.
Roll-out of ISO14001 and OHSAS18001 management systems to 2 industrial sites in South Africa, Confidential, South Africa (2004)	Project Manager responsible for undertaking ISO14001 training at two industrial sites. The project formed part of a global initiative to have several industrial sites throughout Africa and Europe ISO14001 certified.
Strategic Environmental Assessment (SEA) for the Port of Cape Town, National Ports Authority of South Africa, South Africa (2003)	Project Manager for this project and played a lead role in directing the course and outcome of the SEA. The SEA focussed on key environmental and social opportunities and constraint to the future long term development of the Port of Cape Town. A Sustainability Framework was developed to address key opportunities and constraints and to set up long terms monitoring programs. A key component of this study was to understand the Port-City linkages and developing mechanisms to ensure that port planning was supported by city planning and visa-versa.
Strategic Environmental Assessment (SEA) for the Port of Richards Bay, National Ports Authority of South Africa, South Africa (2003)	Project Adviser for this project and played a lead role in directing the course and outcome of the SEA. The SEA focussed on key environmental and social opportunities and constraint to the future long term development of the Port of Cape Town. A Sustainability Framework was developed to address key opportunities and constraints and to set up long terms monitoring programs. A key component of this study was to understand the Port-City linkages and developing mechanisms to ensure that port

	planning was supported by city planning and visa-versa.
E&S Due Diligence of the Phase 2 Maputo Port Revitalisation and Rehabilitation Project, Standard Corporate Merchant Bank, Mozambique (2003)	Environmental Adviser to the Standard Corporate Merchant Bank for the review of the EIA and Risk Assessment studies undertaken for the Phase 2 Maputo Port Revitalisation and Rehabilitation Project. The EIA was reviewed against the Mozambican and International Best Practice guidelines and detailed recommendation made on how to manage the environmental risks associated with the revitalisation project.
National Oil Spill Contingency Plan for Cameroon, funded by the World Bank, Cameroon Government, Cameroon (2003)	Part of the team that compiled a comprehensive Oil Spill Contingency Plan for Cameroon (OSCP). The OSCP form a core component of the Chad Cameroon Pipeline and included contingency plans for both on land and marine based spills. The OSCP was compiled according to the IPEACA guidelines and was reviewed by the World Bank.
EIA/SEA Capacity Building, Environmental Public Authority (EPA), State of Kuwait (2003)	Lead facilitator for a 2 day training course on SEA and EIA for the Environmental Public Authority (EPA) of the State of Kuwait.
Training Workshop on Strategic Environmental Assessment for South Eastern Africa and the Western Indian Ocean Island States, SEACAM, Mozambique (2003)	Lead course facilitator for the SEA training course funded by SEACAM. The training course included the principles of SEA, SEA process and case studies of SEA's in Southern Africa.
Improving the Effectiveness of EIA and the Potential of SEA in Southern Africa: Case Study on SEA of the National Commercial Ports Policy and SEA for the Port of Cape Town, World Bank/SAIEA, Namibia (2003)	Presenter of two case studies on SEA at a regional workshop funded by the World Bank and SAIEA.
Environmental Impact Assessment for the Eskom SABRE-GEN wind turbine test facility, Eskom, South Africa (2002)	Project Manager for the EIA. The EIA included stakeholder engagement throughout the process and included the following specialist studies: visual assessment, bird strike modelling and noise assessment.
Strategic Environmental Assessment: Scoping Phase Port of Richards Bay, National Ports Authority of South Africa, South Africa (2002)	Project Leader and integrative writer for the Scoping Phase of the SEA for the Port of Richards Bay. This phase included detailed stakeholder consultation to identify opportunities and constraints to long term port development at the Port of Richards Bay.
White Paper on National Commercial Ports Policy, National Ports Authority, South Africa 2002	Lead reviewer of the White Paper on National Commercial Ports Policy for South Africa. The review focussed on the integration of environmental and social issues into the port planning process. Mr Heather-Clark made a formal submission and presentation to the Portfolio Committee on Transport in the South African Parliament.

Environmental Liability and Risk Assessment for the Multi-Purpose Terminal at the Port of Saldanha, National Ports Operations, South Africa (2002)	Project Manager for the project. The purpose of the project was to identify key environmental risks associate with the material handling at the Multi-Purpose Terminal at the Port of Saldanha.
Environmental Overview of South Africa's major ports with special reference to future container terminal development, National Ports Authority Container Terminal Strategy, National Ports Authority, South Africa (2002)	Project Manager for the comparative assessment of the relative environmental sensitivity of the seven commercial ports in South Africa with reference to future container terminal development. The study included a detail review of secondary environmental information of all the ports, the identification of specific environmental criteria and the use of these criteria to rank each port in terms of its sensitivity to future container terminal development.
Review of the EIA undertaken for the Maputo Port Privatisation and Rehabilitation Project, Development Bank of Southern Africa (DBSA), South Africa (2002)	Environmental Adviser to the Development Bank of Southern Africa to review the Phase 1 EIA for the Maputo Port Privatisation and Rehabilitation Project. The review was undertaken against the Mozambican EIA Regulations and International Best Practice.
Oil Spill Contingency Plan, Agip Angola oil operations, Angola, (2002)	Team member of the team to develop an oil spill contingency plan according to the IPEICA International Guidelines.
Ecologically Sustainable Industrial Development Programme, United Nations Industrial Development Organisation (UNIDO), Tanzania (2002)	Team member of the project team appointed to review the Industrial Development Strategy for Industrial Development in Tanzania. The focus of the project was to integrate environmental and social issues into the programme.
Environmental Audit and Assessment of the Socio-economic Impacts of the Trans-Kgalagadi Highway, Botswana, Development Bank of Southern Africa, Botswana (2002)	Lead reviewer of the EIA and EMP implementation for the Trans-Kalagadi corridor in Botswana. The review included site visits, detailed interviews and review of secondary data and records.
World Bank EIA Project Management Training Course, World Bank/SAIEA, Zambia (2002)	Lead facilitator for the 5 day EIA Project Management Training Course. The course was presented to 20 African delegates from southern Africa. The course focused on the practical aspects of EIA project management including budgeting and scheduling an EIA, contract negotiations with clients, managing specialist studies, managing the public participation phase and compiling an integrated EIA report. The course formed part of a Southern Africa capacity building initiative lead by the SAIEA.
Environmental screening study for the establishment of a deep-water port at Ponta Dobela, Confidential Client, Mozambique (2001)	Team member of the project team who undertook a screening study to identify environmental, social and economic issues and show stoppers associated with the development of a deep-water port on the coast on Mozambique.
ESIA of the proposed seismic survey in licence area 2814a on the continental shelf of Namibia, Shell Exploration and Production Namibia B.V., Namibia (2001)	Team member of the ESIA for the offshore seismic exploration project. The ESIA included all issues associated with seismic surveys including seismic noise impacts on marine mammals, oil spill modelling and general environmental management issues.

Environmental Impact Review for the abandonment of the Cuntala Well Protector Platform off the coast of Angola (Block 2), Texaco Panama Inc., Angola (2001)	Team member of the project team who developed a decommissioning plan for a well protector platform off the coast of Angola.
Legal, Technical and Economic Feasibility Study for the Commercialisation of the SSF Association Milnerton Tank Farm and its links to the Port of Cape Town, SFF, Cape Town (2001)	Project Manager for this project.
ESIA of the Phase 2 expansion of the Mozal Aluminium Smelter and Matola Port Terminal in Maputo, BHP Billiton, Mozambique (2000-2001)	Project Manager and integrative writer for this ESIA. The EIA included an assessment of the expansion of the port terminal at the Port of Matola and a review of the Phase 2 expansion of the aluminium smelter. All reports together with the EIA process were reviewed and approved by the International Finance Corporation (IFC).
Scoping Phase of the Environmental Impact Assessment for the expansion of the Container Terminal at the Port of Cape Town, Portnet, South Africa (2000)	Project Manager for the EIA for the expansion of the container terminal at the Port of Cape Town. The project included the dredging of 1 million m3 dredge material to provide fill for the expansion of the port. Specialist studies that were required included coastal dynamic modelling, hydrodynamic modelling to assess water quality issues associated with dredging, marine archaeological issues, marine ecology issues, traffic, visual and noise.
Strategic Integrated Port Planning, Port of Saldanha, Transnet (1998)	Project Manager for the Strategic Integrated Port Planning process for the Port of Saldanha. The process culminated in the first Port Development Framework for the Port of Saldanha which integrated environmental and social issues into the port planning process. It included the identification and inclusion of environmental and social opportunities and constraints into the future port planning and development.
Environmental Impact Assessment for the PPC Slag Grinding Mill within the Saldanha Steel Complex, PPC (1998)	Project Manager for the EIA for PPC slag grinding mill. The EIA included a number of specialist studies and comprehensive stakeholder engagement.

MEMBERSHIPS

CEAPSA	Registered as an Environmental Assessment Practitioner with the Environmental Assessment Practitioners Association of South Africa (EAPASA)
IAIAsa	Member of the International Association for Impact Assessment South Africa
IAIA International	Member of the International Association for Impact Assessment

PUBLICATIONS

	Sep 2007: Co-author of case study for IIEDs 'User Guide' to effective tools and methods for integrating environment and development. South African case study: Role of environmental and social screening in informing the conceptual design and planning of large-scale projects in the pre-feasibility stage.
	Aug 2003: Author of a case study on the SEA for the Port of Cape Town, contained in "The Status and Potential of Strategic Environmental Assessment" by Barry Dalal-Clayton and Barry Saddler, DRAFT 17 September 2003.
	March 2002: Strategic Integrated Port Planning: Moving from EIA to SEA. International Conference on Coastal Zone Management and Development, Kuwait 18 to 20 March 2002.
	Nov 2000: Sustainable Port Development: Report on the preparatory seminar for Africa. 7th International Conference of the International Association for Cities and Ports, Marseilles – France.
	Mar 2000: The development of Strategic Environmental Assessment in South Africa: Journal of Impact Assessment and Project Appraisal, Vol 18, Number 3, pg 217-223. September 2000.
	April 1999: Integrating environmental opportunities and constraints into Port Planning, Development and Operation. 5th International Conference on Coastal and Port Engineering in Developing Countries, Cape Town, 19 to 23 April 1999.







## JEREMY BLOOD

### ASSOCIATE ENVIRONMENTAL CONSULTANT

Environmental Management, Planning & Approvals,  
South Africa

#### QUALIFICATIONS

MSc	2006	Masters in Conservation Ecology (Stellenbosch University). Cum Laude.
BSc (Hons)	1995	Honours in Botany (Rhodes University). Academic colours.
BSc	1994	Majors in Botany and Zoology (Rhodes University).

#### EXPERTISE

- Environmental & Social Impact Assessment
- Environmental Legislation
- Environmental Management Programmes
- Stakeholder Engagement
- Environmental compliance & monitoring
- Rehabilitation Planning
- Environmental Control Officer

Jeremy is a Senior Environmental Consultant and has been working as an Environmental Assessment Practitioner since 1999 and has project managed a number of large-scale projects covering a range of environmental disciplines, including Environmental Impact Assessments, Environmental Management Programmes, Stakeholder Engagement, Environmental Compliance and Monitoring and Environmental Control Officer related work in South Africa, Namibia, Mozambique and Kenya. Jeremy has also recently been involved in an Environmental and Social Due Diligence for a wind energy facility.

He has expertise in a wide range of projects relating to oil / gas and mining (heavy mineral mining and borrowpits), housing/industrial developments, renewables (solar PV) and infrastructure projects (e.g. roads, railway line, power lines and pipelines).

#### PROJECTS

	<b>Environmental and Social Due Diligence</b>
<b>Client confidential – ESDD for a Wind Energy Facility, South Africa (2018)</b>	ESDD for a 102 MW Wind Energy Facility near Copperton in the Northern Cape, South Africa. Jeremy's role included reviewing project-related and legislative information and report writing.
<b>Anadarko South Africa (Pty) Ltd - Environmental Due Diligence, Block 2C, West Coast, South Africa (2011)</b>	Environmental Due Diligence for Licence Block 2C, West Coast, South Africa. Jeremy's role included project management, review / auditing and report writing.
<b>Anadarko South Africa (Pty) Ltd - Environmental Due Diligence, Block 5/6, South-West Coast, South Africa (2011)</b>	Environmental Due Diligence for Licence Block 5/6, South-West Coast, South Africa. Jeremy's role included project management, review / auditing and report writing.

	<b>Oil and Gas</b>
<b>Searcher Geodata UK Limited – 2D/3D seismic surveys, West Coast, South Africa (2021)</b>	EMP for speculative 2D and 3D seismic surveys off the West Coast of South Africa. Jeremy was the assistant project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Tullow Namibia Ltd – 3D seismic survey in PEL 90, Namibia (2021 - 2022)</b>	EIA for a 3D seismic survey in Petroleum Exploration Licence 90 (PEL 90) in the Orange Basin off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Total E&amp;P Moçambique Area 1, Limitada – Management of Change (MOC) Procedure for Piling, Cabo Delgado Province, Mozambique (2021)</b>	Implement MOC Procedure and prepare Screening Framework and Technical Note for the expansion of the Diver Exclusion Zone for piling. Jeremy's role included managing the MOC process, specialist input and report writing.
<b>Total E&amp;P South Africa B.V. Exploration well drilling in Block 11B/12B, offshore South Coast, South Africa (2020 - 2021)</b>	EIA for additional exploration well drilling and associated exploration activities (CSEM and wave buoys) in Block 11B/12B, offshore South Coast. Jeremy's role included specialist report review and EIA report writing.
<b>Total E and P Namibia BV – 3D seismic survey in Blocks 2912 /2913B, Namibia (2020)</b>	EIA for a 3D seismic survey in Blocks 2912/2913B in the Orange Basin off the coast of southern Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Total E&amp;P Moçambique Area 1, Limitada – Management of Change (MOC) Procedure for expansion of Resettlement Village, Cabo Delgado Province, Mozambique (2020)</b>	Implement MOC Procedure and undertake EIA Addendum for the expansion of the Resettlement Village. Jeremy's role included managing the EIA Addendum process, specialist input and report writing.
<b>Total E&amp;P Moçambique Area 1, Limitada – Onshore Environmental Monitoring, Afungi Peninsula, in Palma District, Cabo Delgado Province, Mozambique (2020)</b>	Execute environmental field surveys and manage the subsequent data for a period of one year in the onshore environment in the vicinity of the Project. Jeremy's role included overall project management.
<b>Shell Namibia Upstream BV - Exploration well drilling in Petroleum Exploration Licence 39, Namibia (2020)</b>	Environmental Clearance Certificate (ECC) amendment application for exploration well drilling in Petroleum Exploration Licence 39 off the coast of southern Namibia. Jeremy's role included managing the ECC amendment process and public participation process, specialist report and legal register review and EIA amendment report writing.



<b>Total E&amp;P South Africa B.V. Social Baseline and SIA related to exploration activities in Block 11B/12B, offshore South Coast, South Africa (2019 - 2020)</b>	Social Baseline Study and Social Impact Assessment related to the impacts that exploration activities in Block 11B / 12B would have on the Mossel Bay area. Project management and review.
<b>Windhoek PEL23 BV - Exploration well drilling in Petroleum Exploration Licence 82, Namibia (2019)</b>	EIA for the drilling of up to two exploration wells in Petroleum Exploration Licence 82 (PEL82) in the Walvis Basin off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Windhoek PEL28 BV - Exploration well drilling in Petroleum Exploration Licence 83, Namibia (2019)</b>	EIA for the drilling of up to two exploration wells in Petroleum Exploration Licence 83 (PEL83) in the Orange Basin off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Anadarko Moçambique Área 1, Lda (AMA1) – Update Area 1 EMP for the Liquefied Natural Gas Project in Cabo Delgado, Mozambique (2018-2019)</b>	In June 2014 AMA1 received approval to develop the proposed LNG Project in offshore Area 1 and at the Afungi Peninsula of Cabo Delgado Province in northern Mozambique. Following project approval, the development of the project design continued through a process of optimization, resulting in further refinements to the Project Description. SLR was appointed to evaluate proposed project changes, to determine / confirm impact significance, and to update the approved EMP accordingly. Jeremy's role included the screening of project changes through an internal Management of Change Procedure to identify and evaluate the environmental implications of any changes arising from the design optimisation process, specialist report review and EMP report writing.
<b>Shell Namibia Upstream BV - Exploration well drilling in Petroleum Exploration Licence 39, Namibia (2017-2018)</b>	EIA for the drilling of up to two deep water exploration wells in Petroleum Exploration Licence 39 off the coast of southern Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Spectrum Geo Limited – 3D seismic survey in the Walvis Basin, Namibia (2017)</b>	EIA for a 3D seismic survey in the Walvis Basin of the coast of northern Namibia. Jeremy was the project manager and responsible for the public participation process, specialist report review and EIA report writing.
<b>Afro Energy (Pty) Ltd - Coal bed methane exploration, Free State and Mpumalanga Provinces (2016)</b>	Scoping Phase of an EIA for an Exploration Right application for Petroleum and Natural Gas (Coal Bed Methane) on various farms in a portion of the Free State and Mpumalanga Provinces. Jeremy was responsible for the management and undertaking of the scoping phase, which involved managing the public participation process and writing the scoping report.
<b>Spectrum Geo Ltd - 2D seismic survey, Namibia (2016-2017)</b>	EIA for a 2D seismic survey in the Orange Basin off the coast of southern Namibia. Jeremy was the project manager and responsible for the public participation process, specialist report review and EIA report writing.

<b>BHP Billiton Petroleum (South Africa 3B/4B) Limited - Relinquishment of Licence Block 3B/4B, West Coast, South Africa (2016)</b>	Application for a Closure Certificate and consolidated Environmental Risk Report and Closure Plan for the relinquishment of Licence Block 3B/4B (ER 12/3/23) off the West Coast of South Africa. Jeremy's role included managing the relinquishment process, report writing and liaison with the competent authority.
<b>Rhino Oil &amp; Gas Exploration South Africa (Pty) Ltd – Oil and gas exploration in Licence Blocks 3617 and 3717, South-West Coast, South Africa (2015-2016)</b>	Scoping and EIA for exploration activities in offshore Licence Blocks 3617 and 3717 off the South-West Coast of South Africa. Exploration activities included multi-beam bathymetry and 2D/3D seismic surveys. Jeremy was the project manager and responsible for the public participation process, specialist report review and report writing.
<b>Rhino Oil &amp; Gas Exploration South Africa (Pty) Ltd – Oil and gas exploration in various inshore licence blocks, South Africa (2015-2016)</b>	Scoping and EIA for exploration activities in various inshore licence blocks off the South-West Coast of South. Exploration activities included multi-beam bathymetry and 2D/3D seismic surveys. Jeremy was responsible for quality control and report review.
<b>PGS Exploration (UK) Ltd - 2D seismic survey, South Coast, South Africa (2015-2016)</b>	EMP Addendum for a speculative 2D seismic survey off the South Coast of South Africa. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Thombo Petroleum Ltd - Exploration well drilling in Block 2B, West Coast, South Africa (2014-2016)</b>	EIA and EMP Addendum for the drilling of up to five exploration wells in Block 2B off the West Coast of South Africa. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Murphy Oil Corporation - Exploration well drilling in Licence Blocks 2613A and 2613B, Namibia (2014-2016)</b>	EIA for the drilling of up to two exploration wells in Licence Blocks 2613A and 2613B off the coast of Namibia. Jeremy was the project manager and responsible for the public participation process, specialist report review and report writing.
<b>Cairn South Africa - Exploration well drilling in Licence Block 1, West Coast, South Africa (2013-2016)</b>	EIA and EMP Addendum for the drilling of up to five exploration wells in Block 1 off the West Coast of South Africa. Jeremy was the project manager and responsible for the public participation process, specialist report review and report writing.
<b>Sunbird Energy Ltd – Ibhubesi Gas Project (2013-2017)</b>	EIA and EMP Addendum for the proposed Ibhubesi Gas Project, Western and Northern Cape, South Africa. The project involved the development of the gas field in Block 2A, which included a 430 km production pipeline (offshore and onshore) to the Ankerlig Power Station. Jeremy was the project manager and responsible for the public participation process, specialist report review and report writing.

<b>PGS Exploration (UK) Ltd – 2D seismic survey compliance, South Coast, South Africa (2015-2016)</b>	EMP Compliance and audit services for a speculative 2D seismic survey off the South Coast of South Africa. Jeremy's role included managing the audit process and compiling the survey close-out report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues that arose during the survey.
<b>ExxonMobil Exploration and Production South Africa Ltd – Well drilling Roadmap and Permitting Plan, South Africa (2015)</b>	SLR was appointed to develop a high level Regulatory Roadmap and Permitting Plan for offshore exploration well drilling and associated onshore activities for ExxonMobil's South African licence areas, focusing on the Tugela South licence area off the East Coast. Jeremy was the project manager and responsible for the legal review and report writing.
<b>Anadarko South Africa (Pty) Ltd - Exploration Right renewal for Licence Blocks 5, 6 &amp; 7, South-West Coast, South Africa (2015)</b>	SLR was appointed to prepare an Environmental Compliance Report as part of the Exploration Right renewal for Licence Blocks 5, 6 & 7 (ER 12/3/224) off the South-West Coast of South Africa. Jeremy's role included managing the audit process and compiling the Environmental Compliance Report.
<b>Anadarko South Africa (Pty) Ltd - Relinquishment of a portion of Licence Blocks 5, 6 &amp; 7, South-West Coast, South Africa (2016)</b>	Application for a Closure Certificate and Consolidated Environmental Risk Report and Closure Plan for the relinquishment of Licence Blocks 5, 6 & 7 (ER 12/3/224) off the South-West Coast of South Africa. Jeremy's role included managing the relinquishment process, report writing and liaison with the competent authority.
<b>Nabirm Energy Services - 2D seismic survey compliance, Block 2113, Namibia (2014-2015)</b>	EMP Compliance and audit services for a 2D seismic survey in the offshore portion of Block 2113A in the Walvis Basin off the coast of Namibia. Jeremy's role included managing the audit process and compiling the survey close-out report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues that arose during the survey.
<b>ExxonMobil Exploration and Production South Africa Limited - Relinquishment of a portion of the Tugela South Block, East Coast, South Africa (2014)</b>	Application for a Closure Certificate and Consolidated Environmental Risk Report and Closure Plan for the relinquishment of a portion of the Tugela South Block off the East Coast of South Africa. Jeremy's role included managing the relinquishment process, report writing and liaison with the competent authority.
<b>CGG Services SA - 2D seismic survey compliance, East Coast, South Africa (2014)</b>	EMP Compliance and audit services for a speculative 2D seismic survey off the East Coast of South Africa. Jeremy's role included managing the audit process and compiling the survey close-out report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues that arose during the survey.
<b>Murphy Oil Corporation and TGS-Nopec Geophysical Company ASA – 3D seismic survey, Licence Blocks 2613A and 2613B, Namibia (2013-2014)</b>	EIA for a proposed 3D seismic survey in Licence Blocks 2613A and 2613B, Lüderitz Basin, off the coast of Namibia. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.

<b>Tullow Kudu Ltd - 3D seismic survey, Licence Blocks 2012B and 2112A, Namibia (2013-2014)</b>	EIA for a proposed 3D seismic survey in Licence Blocks 2012B and 2112A, Walvis Basin, off the Coast of Namibia. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Shell South Africa Upstream BV - Exploration well drilling in the Orange Basin Deepwater Licence Area, West Coast, South Africa (2013-2015)</b>	EIA for the drilling of up to two deep water exploration wells in the northern portion of the Orange Basin Deepwater Licence Area off the West Coast of South Africa. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>CGG Veritas Services (UK) Ltd – 2D seismic survey compliance, East Coast, South Africa (2013)</b>	EMP Compliance and audit services for a 2D seismic off the East Coast of South Africa. Jeremy's role included managing the audit process and compiling the survey close-out report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues that arose during the survey.
<b>Petroleum Geo-Services ASA – 2D seismic survey, South Coast, South Africa (2013)</b>	EMP for the proposed speculative 2D seismic survey off the South Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Anadarko South Africa (Pty) Ltd - Seafloor geochemical sampling programme, Licence Blocks 5/6 &amp; 7, South-West Coast, South Africa (2013)</b>	EMP Addendum for a seafloor geochemical sampling programme in Petroleum Licence Blocks 5/6 & 7 off the South-West Coast of South Africa. The sampling programme consisted of seafloor sampling (piston coring), seafloor heat flow measurements and a possible multi-beam bathymetry survey to refine target locations for seafloor sampling. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Anadarko South Africa (Pty) Ltd - Exploration programme, Licence Block 2C, West Coast, South Africa (2012-2013)</b>	EMP for a proposed exploration programme in Block 2C off the West Coast, South Africa. The exploration programme included 2D/3D seismic surveys, multi-beam bathymetry survey, seafloor sampling and seafloor heat flow measurements. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Impact Africa Limited - Exploration programme, Tugela North, East Coast, South Africa (2012-2013)</b>	EMP for a proposed exploration programme in the Tugela North area off the East Coast of South Africa. The exploration programme included Airborne geophysical acquisition (gravity and magnetics), 2D/3D seismic surveys, seafloor heat flow measurements, multi-beam bathymetry survey and seafloor sampling. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Sasol Petroleum International (Pty) Ltd – 2D seismic survey, Durban and Zululand Basins, East Coast, South Africa (2012)</b>	EMP for a proposed 2D seismic survey programme in the Durban and Zululand Basins off the East Coast of South Africa. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Petroleum Geo-Services ASA – 2D seismic survey, South and East Coasts, South Africa (2012)</b>	EMP for the proposed speculative 2D seismic survey off the South and East Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.

<b>PetroSA (Pty) Ltd – 3D seismic survey, Block 1, West Coast, South Africa (2012)</b>	EMP Amendment for the 3D seismic survey campaign in Block 1 off the West Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Spectrum Geo Ltd - 2D seismic survey, Lüderitz and Walvis Basin, Namibia (2012)</b>	EIA for a 2D seismic survey in various Blocks in the Lüderitz and Walvis Basin offshore areas, Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Bayfield Energy Ltd – 2D seismic survey, Pletmos Inshore Area, South Coast, South Africa (2012)</b>	EMP Amendment for a 2D seismic survey in the Pletmos Inshore Area off the South Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>CGG Veritas Services (UK) Ltd - 2D seismic survey, East Coast, South Africa (2012)</b>	EMP for a speculative 2D seismic survey off the East Coast of South Africa. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Spectrum Geo Ltd - 2D seismic survey, West Coast, South Africa (2012)</b>	EMP for a speculative 2D seismic survey off the West Coast of South Africa. Jeremy was the project manager and responsible for the public participation process, specialist report review and EMP report writing.
<b>Signet Petroleum Ltd - 2D/3D seismic survey, Block 2914B, Namibia (2011)</b>	EIA for a proposed 2D and 3D seismic survey in Block 2914B off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>PetroSA (Pty) Ltd - 2D/3D seismic survey, Blocks 5 &amp; 6, South Africa (2011)</b>	EMP for a 2D/3D seismic survey campaign in Blocks 5 & 6 off the South-West Coast of South Africa. Jeremy's role included managing the EMP process and public participation process, specialist report review and EMP report writing.
<b>UNX Energy Corp – 3D seismic survey, Licence Blocks 2713A/2713B and 2815, Namibia (2010-2011)</b>	EIA (including EMP for a proposed 3D seismic survey programme in the southern Orange Basin (Licence Blocks 2713A/2713B and 2815) off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>HRT Oil Gas Ltd - 3D seismic survey, Licence Blocks 2112B/2212A and 2813A/2814B, Namibia (2010-2011)</b>	EIA for a proposed 3D seismic survey programme in the central Walvis Basin (Licence Blocks 2112B/2212A) and southern Orange Basin (Licence Blocks 2813A/2814B) off the coast of Namibia. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>PetroSA (Pty) Ltd – Exploration well drilling, Block 1, West Coast, South Africa (2010-2011)</b>	Basic Assessment and EMP for the drilling of up to six exploration wells in Block 1 (ER83) off the West Coast of South Africa. Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.

<b>Bayfield Energy Ltd – 2D seismic survey, Pletmos Inshore Area, South Coast, South Africa (2010)</b>	EMP for a 2D seismic survey in the Pletmos Inshore Area off the South Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Silver Wave Energy (Pte) Ltd– 2D seismic survey, Tugela South, East Coast, South Africa (2010)</b>	EMP for a 2D seismic survey in the Tugela South area (Blocks 2931C, 2931D, 2932A and 2932C) off the East Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>BHP Billiton Petroleum – Seismic surveys and well drilling, Block 3A/4A, West Coast, South Africa (2009-2010)</b>	EMP amendment for conducting seismic surveys and exploration well drilling in Petroleum Licence Block 3A/4A, West Coast, South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>PetroSA (Pty) Ltd – Performance Assessments, South Coast, South Africa (2009)</b>	Compilation of offshore performance assessments for Block 9, Block 11a, F-A Gas Field, E-M Gas Field, South Coast Gas (SCG) Gas Field, Sable Oil Field and Oripi (E-BT)/Oryx (E-AR) Oil Fields. Jeremy's role included managing the audit process and compiling the Performance Assessment report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues.
<b>PetroSA (Pty) Ltd – F-O Gas Field development, South Coast, South Africa (2008-2012)</b>	EIA and EMP for the development of the F-O Gas Field in Petroleum Licence Block 9, South Coast, South Africa. The project included the drilling of up to 14 production wells in the F-O Gas Field and connecting the gas field to the existing F-A Platform via a new approximately 39 km subsea production pipeline. Jeremy's role included managing the EIA/EMP and public participation process, specialist report review and EIA report writing.
<b>PetroSA (Pty) Ltd – 3D seismic survey, Block 1, West Coast, South Africa (2008)</b>	EMP for a 3D seismic survey in Block 1 (ER83) off the West Coast of South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Forest Exploration International (SA) (Pty) Ltd - Ibhubesi Gas Field development (2006-2007)</b>	EIA and EMP for the proposed development of the Ibhubesi Gas Field and associated infrastructure in License Block 2A off the west coast of South Africa. The project involved the drilling of 99 wells and a 110 km production pipeline to an onshore gas receiving facility. Jeremy's role included managing the EIA/EMP and public participation process, specialist report review and report writing.
<b>PetroSA (Pty) Ltd – Well close-out report, E-M Gas Field, South Coast, South Africa (2005)</b>	Close-out report for a workover on well E-M03P in the E-M mining lease off the South Coast of South Africa. Jeremy was responsible for report writing.
<b>PetroSA (Pty) Ltd – South Coast Gas development project, Licence Block 9, South Coast, South Africa (2004-2006)</b>	EIA and EMP for the development of the South Coast Gas project in Petroleum License Block 9 off the South Coast of South Africa. Jeremy was responsible for specialist report review and report writing.

	Mining
<b>Gecko Cobalt Mining (Pty) Ltd - Opuwo Cobalt Project, Opuwo, Kunene Region, Namibia (2019)</b>	EIA for the proposed Opuwo Cobalt Project Near Opuwo in the Kunene Region of Namibia. Based on the results of exploration drilling undertaken since 2017, Gecko is proposing to apply for a Mining Licence (ML) to mine the ore (copper and cobalt mineralisation) through a combined open-pit and underground mine and to process this material on site within the proposed ML area, which is located within EPL 4346. Jeremy's role included managing the EIA and public participation process, specialist report review and EIA / EMP report writing.
<b>Belton Park Trading 127 (Pty) Ltd - Offshore diamond mining in Sea Concessions 2c and 3c, the West Coast, South Africa (2018)</b>	Amendment application to expand the approved diamond mining target area within Sea Concession 2C, as well as the Mining Right area to include Sea Concession 3C. Jeremy's role included managing the EIA and public participation process, specialist report review and EIA / EMP report writing.
<b>Velddrift Salt Company (Pty) Ltd - Salt mine, Velddrift, South Africa (2018)</b>	Update the Financial Provision for the salt mine on Portion 69 of Farm 110 near Velddrift, Western Cape, South Africa. Jeremy's role included project management, client liaison and report review.
<b>Alexkor RMC Pooling and Sharing Joint Venture - EMP amendment for mining rights, West Coast, South Africa (2017-2018)</b>	EMP Amendment for Mining Rights 554MRC, 10025MR, 512MRC and 513MRC (diamonds) located off the West Coast of South Africa, situated roughly between Kleinsee and Port Nolloth. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Velddrift Salt Company (Pty) Ltd - Salt mine, Velddrift, South Africa (2012)</b>	EMP amendment for a salt mine on Portion 69 of Farm 110 near Velddrift, Western Cape, South Africa. Jeremy's role included managing the EMP and public participation process, specialist report review and EMP report writing.
<b>Green Flash Trading 251 &amp; 257 (Pty) Ltd - Mineral prospecting, West and South-West Coasts, South Africa (2012)</b>	EMP amendment for the prospecting for minerals off the West and South-West Coast of South Africa. Jeremy was responsible for report writing.
<b>Umhlaba Environmental Consulting CC - Sand mine rehabilitation, Macassar, South Africa (2011)</b>	EMP for the rehabilitation of Afrisam's Sand Mine in Macassar, Western Cape, South Africa. Jeremy's role included managing the EMP process, specialist report review and EMP report writing.
<b>White Water Resources Limited - Heavy mineral prospecting, Namaqualand, South Africa (2009)</b>	EMPs for ten prospecting applications in an area north of the Olifants River. Namaqualand, South Africa. Jeremy's role included managing the EMP process, specialist report review and EMP report writing.
<b>Coega Brick - Brickworks, Eastern Cape, South Africa (2003)</b>	EMP amendment for operations at the Coega Brick brickworks. Jeremy was responsible for report writing.

<b>Corridor Sand Limitada - Corridor Sands Heavy Mineral Mining Project, Gaza Province, Mozambique (1999-2002)</b>	EIA and EMP for the Southern Mining Corporation's Corridor Sands Heavy Mineral Mining Project, Gaza Province, Mozambique. Jeremy's role included managing the EIA/EMP and public participation process, specialist report review and report writing.
<b>Kenmare Resources - Moma Titanium Minerals Project in Nampula Province, Mozambique (2002)</b>	EMP for the Kenmare Moma Titanium Minerals Project in Nampula Province, Mozambique. Jeremy was responsible for EMP report writing.
<b>Southern Mining Corporation Ltd - Corridor Sands Heavy Mineral Mining Project, Gaza Province, Mozambique (1999-2002)</b>	Vegetation and floristics specialist report for the Corridor Sands EIA, Gaza Province, Mozambique. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.
<b>BESC Consulting - Quarry, Willowvale, Transkei (1999)</b>	Biological survey for a quarry near Willowvale in the Transkei. Jeremy compiled the biological survey report.
	<b>Roads and related infrastructure</b>
<b>HHO Africa for the City of Cape Town - Broadway Boulevard Dualling Project, Western Cape, South Africa (2016)</b>	Basic Assessment for stormwater infrastructure required as part of the Broadway Boulevard Dualling Project, Strand, Western Cape. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.
<b>HHO Africa for WCG: Dept. of Transport and Public Works - Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2016-2017)</b>	Closure application for seven borrowpits used during Phase 3 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape. Jeremy's role included managing the closure application process, report writing and liaison with the competent authority.
<b>HHO Africa for WCG: Dept. of Transport and Public Works - Phase 3 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2013-2015)</b>	ECO for the third phase of construction (km 7.8 to km 36.0) of the road between Gansbaai and Bredasdorp, Western Cape. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>HHO Africa for WCG: Dept. of Transport and Public Works - Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2014)</b>	Basic Assessment for a causeway near Elim and a box culvert near Baardskeedersbos / Pearly Beach Intersection, Western Cape. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.



<b>EFG Engineers (Pty) Ltd for WCG: Dept. of Transport and Public Works – Hermanus – Stanford Road Upgrade Project, Western Cape, South Africa (2013-2014)</b>	Basic Assessment for the upgrading of Trunk Road 28 Section 2 (TR28/2) between Hermanus and Stanford, Western Cape. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.
<b>HHO Africa (Pty) Ltd – Borrowpits for the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2012)</b>	Screening, Basic Assessment and EMP for nine proposed borrowpits for Phase 3 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape. Jeremy's role included managing the Screening, Basic Assessment and public participation process, specialist report review and report writing.
<b>Bergstan South Africa for WCG: Dept. of Transport and Public Works – Repair of flood damaged bridges, Western Cape, South Africa (2010)</b>	Basic Assessment for the repair of two flood damaged bridges in the Worcester and De Doorns area. Jeremy's role included managing the Basic Assessment process and report review.
<b>HHO Africa for WCG: Dept. of Transport and Public Works –Phase 3 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2010)</b>	EMP for Phase 3 borrowpits required for the Gansbaai-Bredasdorp Road Upgrade Project. Jeremy acted as the project manager and was responsible for compiling the EMP.
<b>HHO Africa for WCG: Dept. of Transport and Public Works – Phase 2 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2009-2010)</b>	ECO for the second phase of construction (km 0 to km 7.8) of the road between Gansbaai and Bredasdorp, Western Cape. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>PD Naidoo &amp; Associates (Pty) Ltd for WCG: Dept. of Transport &amp; Public Works – Borrowpit development, Overberg District, South Africa (2006-2008)</b>	EMP for the development of 17 strategic borrowpits for the regravelling of trunk-, main- and divisional roads in the Overberg District. Jeremy's role included managing the EMP and public participation process, specialist report review and report writing.
<b>BKS (Pty) Ltd / Goba (Pty) Ltd JV for WCG: Dept. Transport and Public Works – Bridge and culvert rehabilitation, Western Cape, South Africa (2006-2008)</b>	ECO for the rehabilitation of bridges and major culverts in the Calitzdorp, Oudtshoorn and De Rust area. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.

<b>HHO Africa for WCG: Dept. of Transport and Public Works –Phase 2 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2010)</b>	EMP for Phase 2 of Gansbaai-Bredasdorp Road Upgrade Project. Jeremy acted as the project manager and was responsible for compiling the EMP.
<b>BKS (Pty) Ltd / Goba (Pty) Ltd JV for WCG: Dept. Transport and Public Works – Bridge and culvert rehabilitation, Western Cape, South Africa (2005)</b>	Construction EMP for the rehabilitation of bridges and culverts in the Calitzdorp, Oudtshoorn and De Rust area. Jeremy acted as the project manager and was responsible for compiling the EMP.
<b>HHO Africa for WCG: Dept. of Transport and Public Works – Phase 1 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2009-2010)</b>	ECO for the first phase of construction of the road between Gansbaai and Bredasdorp, Western Cape. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>HHO Africa for WCG: Dept. of Transport and Public Works –Phase 1 of the Gansbaai-Bredasdorp Road Upgrade Project, Western Cape, South Africa (2010)</b>	EMP for Phase 1 borrowpits required for the Gansbaai-Bredasdorp Road Upgrade Project. Jeremy acted as the project manager and was responsible for specialist report review and compiling the EMP.
<b>MBB Engineers – Kat River Causeway, Eastern Cape, South Africa (2000)</b>	Scoping study for the upgrading of a causeway over the Kat River, Fairbairn, Eastern Cape. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Prestedge, Retief, Dresner &amp; Wijnberg – Ngqura harbour dune stabilisation, Eastern Cape, South Africa (1999)</b>	Stabilisation specifications for work areas and roads within the proposed Ngqura (ex Coega) harbour area. Jeremy was responsible for report writing.
	<b>Renewables</b>
<b>Kokerboom Solar Generation (Pty) Ltd – Kokerboom Solar Project, Keetmanshoop, Namibia (2016)</b>	Scoping study for a solar (photovoltaic) power plant, near Keetmanshoop, Namibia. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Solarhybrid AG, Germany - Skeyfontein Photovoltaic Power Plant, Northern Cape, South Africa (2011-2012)</b>	Scoping study for the proposed Development of Skeyfontein Photovoltaic power plant and power lines near Postmasburg, Northern Cape. Jeremy's role included managing the Scoping and public participation process, specialist baseline report review and report writing.

<b>Business Venture Investments 1421 (Pty) Ltd - De Aar Photovoltaic Power Plant, Northern Cape, South Africa (2011-2012)</b>	EIA for the proposed Development of a Photovoltaic power plant and power line near De Aar & Prieska, Northern Cape. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>IlangaPower (Pty) Ltd - Solar Cell Manufacturing Factory, Western Cape, South Africa (2008)</b>	Basic Assessment for a proposed Solar Cell Manufacturing Factory, Sacks Circle, Bellville. Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.
	<b>Landfill sites and waste water treatment works</b>
<b>V3 Consulting Engineers - Bedford sewage works upgrade, Eastern Cape, South Africa (1999)</b>	Scoping study for Phase II of the upgrading of the Bedford reticulation system and current sewage works. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>V3 Consulting Engineers - Bedford sewerage reticulation system, Eastern Cape, South Africa (1999)</b>	Scoping study for the construction of a waterborne sewerage reticulation system in Nyarha and Goodwin Park, Bedford, and for the rehabilitation and upgrading of the sewerage treatment works. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Department of Public Works - Hole-in-the-Wall car park and ablution facilities, Eastern Cape, South Africa (1999)</b>	Scoping study for the proposed car park and ablution facilities at Hole-in-the-Wall. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Department of Public Works - Coffee Bay car park and ablution facilities, Eastern Cape, South Africa (1999)</b>	Scoping study for the proposed car park and ablution facilities at Coffee Bay. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
	<b>Water and sewage pipelines</b>
<b>SAB Maltings (Pty) Ltd - Water Supply Augmentation Project, Caledon, South Africa (2020)</b>	ECO for the SAB water pipeline to augment the supply of water to the SAB Maltings plant in Caledon. Jeremy was responsible for overall project management and QA/QC.
<b>SAB Maltings (Pty) Ltd - Water Supply Augmentation Project, Caledon, South Africa (2019)</b>	Basic Assessment for water supply augment project to ensure continued uninterrupted operation at the maltings plant. The project included a borehole and 12 km pipeline. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.

<b>Velddrift Salt Company (Pty) Ltd - Seawater Augmentation Project, Velddrift, South Africa (2003-2009)</b>	Scoping study, EMP and ECO for a seawater pump station and pipeline to augment water supply to the Velddrift Salt Company's operation north of Laaipelek, Western Cape. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing. Jeremy also acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>City of Cape Town: Tygerberg Region - Durbanville North Bulk Water Supply Project, Western Cape, South Africa (2004-2005)</b>	ECO for the Durbanville North Bulk Water Supply (Gravity Main Phase 2). Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
	<b>Rivers, dams and wetlands</b>
<b>Royal HaskoningDHV (Pty) Ltd for City of Cape Town - Phase 1H of the Lourens River Flood Alleviation Project, Western Cape, South Africa (2016-2018)</b>	ECO for Phase 1H of the Lourens River Flood Alleviation project, Western Cape. Jeremy acted as the project manager.
<b>Royal HaskoningDHV (Pty) Ltd for City of Cape Town - Phase 1G of the Lourens River Flood Alleviation Project, Western Cape, South Africa (2015)</b>	ECO for Phase 1G of the Lourens River Flood Alleviation project, Western Cape. Jeremy acted as the project manager.
<b>Royal HaskoningDHV (Pty) Ltd for City of Cape Town - Lourens River Stormwater Outlets, Litter Traps and Detention Pond, Western Cape, South Africa (2015)</b>	Basic Assessment for Lourens River Stormwater Outlets, Litter Traps and Detention Pond, Somerset West. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.
<b>SSI Engineers and Environmental Consultants (Pty) Ltd for City of Cape Town- Phase 1E of the Lourens River Flood Alleviation Project, Western Cape, South Africa (2011-2012)</b>	ECO for Phase 1E of the Lourens River Flood Alleviation project, Western Cape. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.



<b>SSI Engineers and Environmental Consultants (Pty) Ltd for City of Cape Town- Phase 1E of the Lourens River Flood Alleviation Project, Western Cape, South Africa (2008-2010)</b>	ECO for Phase 1D of the Lourens River Flood Alleviation project, Western Cape. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>Sujean Investments (Pty) Ltd - Kuils River Flood Alleviation Project, Western Cape, South Africa (2010-2011)</b>	Basic Assessment for the proposed Kuils River flood alleviation measures for Erf 38771, Bellville. Jeremy's role included managing the Basic Assessment and public participation process, specialist report review and report writing.
<b>Nsele Trading 44 (Pty) Ltd – Retention ponds, Western Cape, South Africa (2004-2006)</b>	Scoping study for the proposed diversion of a canalised stream into three new retention ponds on the remainder of farm 1407, Sunnysdale (Noordhoek). Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
	<b>General industries</b>
<b>Mortar SA (Pty) Ltd – Premixed dry mortar facility, Western Cape, South Africa (2018-2019)</b>	SLR was appointed to facilitate the Atmospheric Emission Licence (AEL) application process to the West Coast District Municipality and associated public participation process. Jeremy's role included managing the AEL and public participation process, specialist report review (Atmospheric Impact Report) and compilation of the Public Participation Report.
<b>Irvin &amp; Johnson Limited - Abalone Processing Facility, Western Cape, South Africa (2017-2019)</b>	Basic Assessment for an abalone processing facility at Danger Point near Gansbaai. Jeremy acted as the project manager and was responsible for report review.
<b>Irvin &amp; Johnson Limited - Abalone Expansion Project, Gansbaai, Western Cape, South Africa (2017-2019)</b>	EIA for an abalone expansion project at Danger Point near Gansbaai. The project involved expanding the facility's production from 500 tons per annum (t/a) to 1 700 t/a. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>Clay Industry cc - Atmospheric Emission Licence application (2015)</b>	Atmospheric Emission Licence amendment application in terms of the National Environmental Management: Air Quality Act. Jeremy acted as the project manager and was responsible for compiling the amendment application.
<b>Irvin &amp; Johnson Limited – Offshore aquaculture Project, Western Cape, South Africa (2007-2009)</b>	Basic Assessment for an aquaculture project in Mossel Bay. The project involved the develop of 18 floating flexible type cages within a concession area off the coast of Mossel Bay to produce indigenous line fish (namely yellow tail, dusky cob and silver cob). Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.

<b>Eskom Holdings Limited - Atlantis and Mossel Bay Open Cycle Gas Turbines, Western Cape, South Africa (2006-2008)</b>	Environmental compliance audits for the Atlantis and Mossel Bay Open Cycle Gas Turbines. Jeremy's role included managing the audit process and compiling the audit report, which outlined the implementation of the EMP (compliance) and highlighted any problems and non-compliance issues that arose during construction.
<b>Velddrift Salt Company (Pty) Ltd –Mining Right conversion application, Western Cape, South Africa (2006-2009)</b>	Conversion application from an old order mining right from the Velddrift Salt Company's saltworks. Jeremy acted as the project manager and was responsible for the conversion application and EMP report writing.
<b>PetroSA (Pty) Ltd – Refinery Conversion Project, Western Cape, South Africa (2003-2005)</b>	EIA for the conversion of the PetroSA Refinery, near Mossel bay, for 100% unleaded fuel production. Jeremy's role included managing the EIA process and public participation process, specialist report review and EIA report writing.
<b>East London Development Zone Corporation - East London IDZ, Eastern Cape (2000-2001)</b>	EIA for the rezoning of land from Agriculture to General Industry for the establishment of the East London Industrial Development Zone. Jeremy was responsible for managing the public participation process, specialist report review and report writing.
<b>East London Development Zone Corporation - East London IDZ, Eastern Cape (2001)</b>	Vegetation survey and sensitivity map of the land on the West Bank for the East London Industrial Development Zone. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.
<b>Coega Development Corporation - Coega IDZ, Eastern Cape (1999-2000)</b>	EIA for the Rezoning of the Core Development Area from Agriculture to Special Purposes for the establishment of the Coega Industrial Development Zone. Jeremy was responsible for managing the public participation process, specialist report review and report writing.
	<b>Power lines</b>
<b>Electricity Supply Corporation of Malawi – Mwanza to Pombeya Power line, Malawi (2003)</b>	Scoping study for the Mozambique – Malawi 220km interconnection 220 / 400kV power line from Mwanza to the substation at Pombeya, Malawi. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Eskom. East London IDZ power line, Eastern Cape, South Africa (2002)</b>	Scoping study for construction and operation of the East London Industrial Development Zone power line. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Eskom. Trollip power line, Eastern Cape, South Africa (2002)</b>	Scoping study for construction and operation of Eskom's Trollip scheme (22kV power line), Cape St. Francis, Eastern Cape. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Kenmare Resources. Kenmare Moma Power line (2002)</b>	Vegetation and floristics specialist report: Kenmare Moma Power line Environmental Impact Assessment, Nampula Province, Mozambique. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.

<b>Corridor Sands Limitada. Corridor Sands Power Line, Gaza Province, Mozambique (2001-2002)</b>	EIA for the SMC Corridor Sands Power Line from Chibuto to Maputo, Gaza Province, Mozambique. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>Corridor Sands Limitada. Corridor Sands Power Line, Gaza Province, Mozambique (2001)</b>	Corridor Sands Limitada. Vegetation and floristics specialist report: Corridor Sands Power line Environmental Impact Assessment, Mozambique. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.
<b>Eskom. Poseidon - Albany power line, Eastern Cape, South Africa (2002)</b>	Vegetation survey of the corridor for the proposed Eskom 400kV power line between Poseidon and Albany substations, Eastern Cape. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.
	<b>Railways</b>
<b>Corridor Sands Limitada - Corridor Sands Railway line, Gaza Province, Mozambique (2001)</b>	EIA for the Corridor Sands Rail link from Chibuto to Barragem, Gaza Province, Mozambique. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>Corridor Sands Limitada - Corridor Sands Railway line, Gaza Province, Mozambique (2001)</b>	Vegetation survey of the Corridor Sands Rail link from Chibuto to Barragem, Gaza Province, Mozambique. Jeremy undertook the baseline assessment and compiled the vegetation and floristics report.
	<b>Housing Developments</b>
<b>South African Dutch Development (Pty) Ltd - Beverley Estate and Jubilee Park residential developments, Western Cape, South Africa (2012)</b>	ECO services for the residential development on Erf 1366 (Beverley Estate) and Erf 5540 (Jubilee Park), Eerste River. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>Cape Town Community Housing Company (Pty) Ltd - Morgen's Village 3 and Westcape residential developments, Western Cape, South Africa (2012)</b>	ECO services for the Morgen's Village 3 and Westcape Precincts, Mitchell's Plain. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>City of Cape Town (Human Settlements) – Phase 2 to 4 of the Bardale Housing Scheme, Western Cape, South Africa (2009-2012)</b>	ECO for the construction of the Bardale Housing Scheme (Phases 2 to 4) on the Remainder of the Farm Stellenbosch No. 451 (Bardale), Mfuleni. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.

<b>Sovereign Seekers Investments 77 (Pty) Ltd – Karbonkelberg Housing Development, Western Cape (2007-2012)</b>	Basic Assessment for the proposed rezoning and subdivision of Erf 4870, Karbonkelberg, Hout Bay. Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.
<b>Hope of Africa Foundation – Eerste River housing development, Western Cape, South Africa (2007-2008)</b>	Basic Assessment for the proposed rezoning and subdivision of Erf 5540, Eerste River. Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.
<b>City of Cape Town (Directorate: Human Settlements) – Driftsands Housing Project (2006-2012)</b>	EIA for the proposed rezoning and subdivision a portion of the Driftsands Nature Reserve to consolidate and upgrade the existing informal settlements of Green Park and Los Angeles. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>Tech-Sure Fin cc – Eerste River rezoning and subdivision, Western Cape, South Africa (2006-2007)</b>	Basic Assessment for the proposed rezoning and subdivision of Erf 1366, Eerste River. Jeremy's role included managing the Basic Assessment process and public participation process, specialist report review and report writing.
<b>City of Cape Town (Human Settlements) – Phase 1 of the Bardale Housing Scheme, Western Cape, South Africa (2005-2007)</b>	Construction EMP and ECO for the construction of the Bardale Housing Scheme on the Remainder of the Farm Stellenbosch No. 451 (Bardale), Mfuleni. Jeremy compiled the EMP and acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>Target Shelf 151 cc – Hout Bay rezoning and subdivision, Western Cape, South Africa (2005-2006)</b>	EIA for the proposed rezoning and subdivision of Erf 1480, Hout Bay. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>Ahmed Janahi Architects – Hout Bay hotel development, Western Cape (2004-2005)</b>	EIA for the proposed rezoning and consolidation of Erf 1126, 1127 and 1128 for the development of a hotel, Hout Bay. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>Hope of Africa Foundation – Eerste River housing development, Western Cape, South Africa (2004-2005)</b>	Scoping Study for the proposed rezoning and subdivision of Erf 5540, Eerste River. Jeremy's role included managing the Scoping and public participation process, specialist report review and report writing.
<b>Lezmin cc – Hout Bay rezoning and subdivision, Western Cape, South Africa (2003-2005)</b>	EIA for the proposed rezoning and subdivision of Erf 1156, Hout Bay. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.

<b>Bellemar Properties - Hout Bay rezoning, Western Cape, South Africa (2003-2004)</b>	EIA for the proposed rezoning of Erf 1127 and 1128, Hout Bay. Jeremy was the project manager and responsible for the EIA and public participation process, specialist report review and EIA report writing.
<b>SRK Consulting – Sanderling Development, Western Cape, South Africa (1999)</b>	Biological survey of the wetland on the Sanderlings residential development site, Plettenberg Bay. Jeremy undertook the baseline assessment and compiled the vegetation report.
	<b>Resort and Tourism</b>
<b>Van Horsten Property Holdings Pty Ltd - elephant park resort, Maputo Special Reserve, Mozambique (2003)</b>	Pre-feasibility assessment for the proposed elephant park resort, Maputo Special Reserve, Mozambique. Jeremy compiled the pre-feasibility assessment report.
	<b>Other</b>
<b>Attfund Limited - Willowbridge Shopping Centre, Western Cape, South Africa (2011)</b>	EMP for Willowbridge North and South shopping centre, Kenridge, Bellville. Jeremy acted as the project manager and was responsible for EMP report writing.
<b>Bright Hardware – Brights Hardware car park, Western Cape, South Africa (2006-2007)</b>	Basic Assessment for the proposed rezoning of Portion of Erf 10565 (Public Open Space) for the development of a car park, Boston, Cape Town. Jeremy acted as the project manager and was responsible for report review.
<b>Mini-Cape Developments (Pty) Ltd – Bowling Club relocation, Western Cape, South Africa (2005-2006)</b>	Scoping Checklist and EMP for the proposed relocation of the Old Oak Bowling Club to a portion of public open space on Erf 2225, Bellville. Jeremy acted as the project manager and was responsible for compiling the Scoping Checklist and EMP.
<b>Attfund Limited - Willow Village Lifestyle Centre, Western Cape, South Africa (2005-2007)</b>	EMP and ECO for the construction and operation of the Willow Village Lifestyle Centre on Erf 1201 (portion of Erven 975 & 976) Kenridge, Bellville. Jeremy compiled the EMP and acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>Mini-Cape Developments (Pty) Ltd - Willow Village Lifestyle Centre, Western Cape, South Africa (2004-2007)</b>	ECO for the construction of the Willowbridge Shopping Centre, Kenridge, Bellville. Jeremy acted as the ECO and was responsible for ensuring the contractor complied with the Construction EMP.
<b>PUBLICATIONS</b>	
	Parsons, R., Eichstadt, L., Crowther, J. & Blood, J. (2008). "Application Procedure for the Development and Use of Groundwater". WRC Report No. 1510/1/08.

	Blood, J.R., Van Schalkwyk, S.J., Cloete, S.W.P. & Brand, Z. (1998). Embryonic deaths in relation to water loss of artificially incubated ostrich eggs. Proceedings of the Second International Ratite Congress.
	Salih, M.E., Brand, T.S., Van Schalkwyk, S.J., Blood, J., Brand, Z. & Akbay, R. (1998). The effect of dietary fibre level on the production of growing ostriches. Proceedings of the Second International Ratite Congress.
	Salih, M.E., Brand, T.S., Van Schalkwyk, S.J., Blood, J.R., Pfister, B. & Akbay, R. (1998). Number of cellulolytic bacteria in the gastro-intestinal tracts of ostriches fed diets with different fibre levels. Proceedings of the Second International Ratite Congress.
	Brand, Z., Van Schalkwyk, S.J., Cloete, S.W.P. & Blood, J.R. (1998). The effect of pre-heating of ostrich eggs prior to storage and setting in commercial hatcheries. Proceedings of the Second International Ratite Congress.
	Van Schalkwyk, S.J., Brand, Z., Cloete, S.W.P. & Blood, J.R. (1998). The influence of different disinfection protocols on the hatching performance of ostrich eggs. Proceedings of the Second International Ratite Congress.
<b>MEMBERSHIPS</b>	
<b>EAPASA</b>	Registered Environmental Assessment Practitioner: Number 2019/1368
<b>Pr.Sci.Nat.</b>	Registered as a Professional Natural Scientist - Environmental Scientist (Reg. no. 400164/06)
<b>IAIAsa</b>	Member of the International Association for Impact Assessment South Africa





JESSICA HUGHES

BIODIVERSITY

Technical Discipline Manager, Cape Town

## QUALIFICATIONS

MPhil (Env. Sci)	1993
MSc (Zoology)	1990
BSc. Hons	1987
Pr. Sci. Nat	

## EXPERTISE

- IFC Performance Standard 6 for Biodiversity
- Baseline biodiversity and ecosystem service studies
- Biodiversity management and monitoring plans
- Biodiversity offsets
- Biodiversity Due-Diligence
- Environmental and Social Due Diligence
- Environmental flow assessments
- ESIA's in renewable energy, hydropower, dams, mining, roads, powerlines, pipelines
- Strategic environmental assessment
- Cumulative impact assessment
- Environment and social screening studies
- Project Management

Jessica Hughes has considerable expertise in environmental and biodiversity management on a wide range of project types across Africa. She has coordinated and compiled ecological baselines, biodiversity management plans, ecological flow assessments, monitoring, and environmental impact assessment (EIA) in alignment with international good practice. She is based in Cape Town, South Africa.

Jessica has over 25 years of experiences as an environmental and biodiversity consultant working mainly on EIAs, with a specialisation in coordination of biodiversity studies to international lender standards. She holds a Masters of Philosophy in Environmental Science (1993) from the University of Cape Town and a Masters of Science degree in Zoology (1990) (obtained based on a year of fieldwork in the Namib Desert). She is accredited as a Professional Natural Scientist with the South African Council of Natural Scientific Professions (SACNASP).

She has worked on a wide range of projects in Africa in many sectors including power (hydropower and renewable energy), mining, oil and gas, dams and linear infrastructure in alignment with IFC Performance Standards for biodiversity. Jessica has been involved in the compilation of biodiversity guidelines for major oil and gas client based on IFC, IPIECA and other benchmark standards; has participated in an IFC lessons learned initiative on practical application of IFC PS6 guidance on biodiversity, and contributed to the Good Practice Note on Environmental Flows for the World Bank.

She has worked in Angola, Botswana, Cameroon, Democratic Republic of Congo, Lesotho, Mozambique, Namibia, Republic of Congo, Sierra Leone, South Africa, Tanzania and Zambia, and has conducted desktop studies for projects in Kenya and Uganda.

## PROJECTS

[Environmental and Social supplementary studies and Environmental Flows Study for Kakono hydropower plant, Kagera River, Tanzania](#)  
French Development Agency  
(Dec 2019-Aug 2021)

Biodiversity lead for supplementary studies to update the ESIA and compile an EFlows study for the hydropower project to World Bank Environmental and Social Safeguard standards, contracted to SLR by the French Development Agency (AFD). Work involved desktop review and two site visits to western Tanzania; the first to evaluate the ecological risks and determine scope of additional studies to align reporting with international standards (AFD, IFC & World Bank), and the second to coordinate the aquatic survey. Reporting included an assessment of the key ecological issues and risks and recommendations for proposed studies; integrated aquatic and terrestrial biodiversity reporting, including detailed critical habitat assessment to IFC standards, and impact assessment.

[ESIA of Gamsberg Smelter Project, Northern Cape, South Africa](#)  
(2020-2021)

Biodiversity lead for coordinating the ecology inputs into the ESIA of a smelter to process zinc at the Gamsberg Mine. The mine is situated in a desert environment with sensitive habitat comprising several endemic succulents and in a critical biodiversity area. The work involved interpretation of impacts on flora from air emissions and the smelter footprint in the context of the existing biodiversity offset prepared for the mine.

[Vegetation Mapping and Onshore Monitoring Programme, LNG Project Cabo Delgado, Mozambique](#)  
(2020 – Apr 2021)

Biodiversity lead for coordinating the preparation of remote sensing derived vegetation mapping with GeoTerralimage and Ecorex (2019) and management of the onshore ecological monitoring tasks for the Northern Mozambique LNG Project. The ecology monitoring included water quality, wildlife, vegetation, wetlands, herpetofauna, fish and macroinvertebrates and wetland birds. All data was managed and quality controlled and analysed to record trends and report against monitoring thresholds for EMP compliance.

[Gap analysis of proposed 100MW solar PV plant, Kolwezi, DRC](#)  
(2019)

SLR was contracted for a gap analysis study involving desktop review and site visit to Katanga Province, DRC to evaluate the environmental and social risks and data gaps of a proposed solar PV plant required to align reporting with IFC Standards. Jessica's role involved a site visit and an assessment of the key issues and risks and compilation of an Environmental and Social Action Plan (ESAP).

[Environmental Project Brief \(EPB\) of two 20MW solar PV plants, Globeleq, Zambia](#)  
(2019)

SLR undertook an Environmental Project Brief for two 20MW Solar PV Projects in Kafue District Zambia. Jessica's role involved a site visit, and coordination and reporting for the preparation of the EPB report to meet regulatory and IFC Standards, as well as approval under Zambia's GETFIT Strategy. The study involved specialist studies (ecology, social and public participation), and reporting including a livelihood restoration framework.

[Biodiversity Advisor and Coordinator, Anadarko LNG Project, Mozambique](#)  
(2018 – 2019)

Biodiversity advisory and review role contracted to SLR in support Anadarko's early development of the LNG project, Afungi Peninsula, Mozambique. Involved review and inputs of critical habitat assessment, residual impact assessment, biodiversity action plan, and coordination of the vegetation map and reporting.

[Ecological compliance monitoring and Biannual Environmental Performance Reporting of Anadarko LNG Project, Mozambique](#)  
(2018 – 2019)

Ecological coordinator for the onshore ecological monitoring programme for the early works of the development of a new LNG facility on Afungi Peninsula, Cabo Delgado Mozambique. This involved a site visit, coordination of specialists, and review and editing of ecology reports. It also involved compilation of the six-monthly regulatory Environmental Compliance Reports for Feb-July 2018 and Aug 2018-Jan 2019 periods involving review of available contractor and monitoring data and preparation of reports for different license areas.

[Critical Habitat Assessment & Biodiversity Management Plan for onshore oil and gas project, Sasol, Mozambique](#)  
(2018 - 2019)

Ecological team lead responsible for a re-evaluation of a proposed critical habitat located within an oil and gas license area on the coastline of central Mozambique, and compilation of a generic biodiversity management plan for ongoing exploration, appraisal and development. The study involves field survey, categorization of habitat status against IFC Performance Standard 6 requirements; habitat and sensitivity and constraints mapping; workshops with conservation stakeholders, and preparation of reporting.

Solar farm, Northern Cape, South Africa (2018)	Internal reviewer of a Biodiversity Management Plan for the proposed Redstone solar farm in the Northern Cape of South Africa.
Polihali Reservoir and Advanced Infrastructure (PRAI) and Western Access Road & Powerline, Lesotho Highlands Development Authority Lesotho (2016-8)	Ecologist for the WBG aligned ESIA and EMPs of the Polihali Dam, and Project Manager for the ESIA of the Access Road and Powerline in the Lesotho Highlands. Role: coordination of the terrestrial and aquatic ecological studies (wetlands, birds, flora, mammals, herpetofauna and aquatic ecology) and inputs into the overall ESIA over 14 months. The infrastructure included the proposed dam covering an area of 55 km <sup>2</sup> at the confluence of the Khubelu and Senqu Rivers and a 38km road and powerline.
Bird Survey Monitoring and Biodiversity Conservation and Management Plan for Proposed 100 MW Wind Farm, Kenya (2015 – 2016)	Project manager of bird surveys and monitoring at a proposed wind farm site of 63 turbines to establish the presence and abundance of collision prone birds – particularly vultures and other raptors - on and near the proposed site. The study involved liaison with potential equity investors on critical habitat issues and mitigation of bird collision risk and was required to meet IFC standards. Study for a potential equity investor. A biodiversity management and monitoring plan was compiled to meet lender requirements based on desktop information including an approved EIA.
ESIA of onshore & offshore Pipeline and FSO platform, Sasol, Mozambique (2015 - 2016)	Ecological lead for an ESIA of a 55 km onshore, 50 km offshore pipeline and FSO platform off the coast of Mozambique, aligned with IFC performance standards. The biodiversity studies involved seasonal surveys of vegetation, birds, mammals, herpetofauna and aquatic ecology by a team of specialists; mapping of vegetation types and habitat status, evaluation of alternatives; critical habitat assessment; assessment of impacts on biodiversity and identification of management requirements.
Cumulative Impact Assessment (CIA) of Hydropower Development for the Kwanza River, Odebrecht, Angola (2015)	Project Manager for a Cumulative Impact Assessment of current and future hydropower project development on the Kwanza River. The project involved assembly of baseline information, key informant meetings in the floodplain, conceptual modelling of potential inundation and downstream impacts of hydropower scenarios on a cascade of the river, including DRIFT EFlows modelling. The project was required to meet lender (IFC) standards.
Biodiversity and Ecosystem Services Studies for a Proposed Coastal Road, Mozambique. Oil & Gas client. (2013 – 2014)	Project Manager for a biodiversity and ecosystem services study of a coastal road in Cabo Delgado aligned with IFC performance standards and commissioned by an oil and gas client. The project involved seasonal field surveys along 233 km road corridor covering vegetation, mammals, birds, herpetofauna, fish and aquatics; remote sensing-based habitat mapping and its use in alternatives analysis, and compilation of integrated reporting (baseline, critical habitat assessment, and biodiversity impact assessment and management plan). A portion of the road corridor was recommended as a biodiversity offset under a conservancy arrangement due to its high conservation value. The road was not built.
Biodiversity Management Plan (BMP) of Raising of Cambambe Dam, Angola (2013)	Biodiversity coordinator for a BMP of a hydropower project involving the raising of Cambambe Dam wall and expansion of the inundation area on the Kwanza River, Angola. The BMP included all biodiversity-related management and monitoring measures and recommendations for a nature reserve areas as a biodiversity compensation measure.
EIA and Biodiversity Management Plan of Letseng Diamond Mine Expansion and Bulk Power Supply, Lesotho (2012)	Project manager for the two EIAs and EMPs, with various specialist sector plans including waste, water, energy, biodiversity and monitoring plan for the expansion of an existing diamond mine and power supply in the subalpine eastern highlands of Lesotho. The team worked closely with mine management and closure planning consultants to ensure all reporting was aligned with mine staff responsibilities and activities.
Environmental Screening Study of Proposed Diamond Mine & Hydropower Scheme, Angola (2011)	Project manager for an environmental and social screening study to identify risks associated with the proposed development of a new diamond mine and associated hydropower scheme in Northern Angola. The study entailed two site visits to identify the key issues with the client, sociologist and hydrologist, and reporting. The mine was not developed.

EIA of Proposed Wind Farm Development in the Lesotho Highlands, Lesotho (2011)	Project manager for a sensitivity assessment and Scoping Phase of an EIA for a 150MW wind farm in the alpine area of the Lesotho Highlands. The project involved coordination of baseline studies (e.g. birds, general ecology, bats, social, economic, visual, noise, and traffic studies) and associated editing and integration of reports for the preparation of scoping and draft EIA reports and a public / stakeholder consultation process with local Lesotho consultants. The study was undertaken in alignment with IFC and Lesotho requirements. Controversial project with high risks to biodiversity -project cancelled.
Sensitivity Assessment of a Proposed Wind Farm near Mossel Bay, Western Cape (2011)	Project manager for a sensitivity assessment of a wind farm at Vleesbaai near Mossel Bay. The project involved undertaking baseline studies on birds, general ecology and bats to define areas of varying sensitivity and key stakeholder engagement in order to define the optimal layout of the wind turbines.
Review of EIAs of Three Proposed Wind Farms, Western Cape, G7 (2011)	Internal reviewer of the specialist reports for three proposed wind farms and the integration of these into the EIAs, and compilation of the EMPs.
Maloti Drakensberg Transfrontier Park (MDTP); Spatial Conservation Planning (2005-2007)	Project Manager for a systematic conservation planning study of the Lesotho Highlands over 30 months. The study involved a range of biodiversity baseline data gathering and remote sensing derived mapping with a large team of specialists from Lesotho and South Africa. Role included client liaison, team coordination, engagement with Lesotho ministries and South African counterparts for the MDTP, contract and financial administration, and production and quality control of all reporting. The spatial data was integrated using systematic conservation planning tools to identify conservation priorities for Lesotho.
EIA of Irrigation and Lake Rehabilitation Project in Caprivi Region, Namibia Ministry of Agriculture (2004-2005)	Environmentalist responsible for the EIA and EMP components of the two year study of irrigation and lake rehabilitation in Caprivi, Namibia. She was involved in all aspects of the project, with key responsibilities in data collation, stakeholder meetings, coordinating the specialist ecologists, reviewing specialist inputs and compiling the overall EIA & EMP.
EIA of Sendelingsdrif Irrigation Project, Namibia, Ministry of Agriculture Terrestrial Ecologist (2004)	Terrestrial ecologist for a proposed irrigation project in the Southern Namib Desert on the Orange River. Responsibilities included the assembly of all relevant faunal information, reporting, and focus meetings with conservation stakeholders on the Ais Ais Richtersveld Transfrontier Park, and other water users along the Orange River.
EIA of Water Abstraction from Tsumeb Aquifer Ministry of Agriculture Terrestrial Ecologist (2004)	Environmental coordinator, involving site visits and stakeholder engagement, and compilation of the inputs into the environmental assessment of the potential impacts of water abstraction from the karst aquifer system near Tsumeb and Etosha in Namibia. Project contracted to AfriDev Associates (Pty) Ltd.
<b>PUBLICATIONS</b>	Contributor to: IFC Good Practice Note for Environmental Flows for Hydropower Projects: Guidance for the Private Sector in Emerging Markets (2018)
	Paper: Achieving an environmentally sustainable outcome for the Gulpur Hydropower Project in the Poonch River Mahaseer National Park, Pakistan. International Journal of Sustainable Water Resources Management (2018). Authors: Brown, C, Zakaria V, Joubert, A. Rifique M, Murad J, King J, Hughes J, Cardinale P, Alonzo, L.
	Paper & Presentation: Using Biodiversity Plans to Guide Mitigation and Offsets for Zinc Mine in Northern Cape, South Africa. Authors: Hughes J, Ahuja L, Brownlie S, Botha M, Desmet P & Heather-Clark S. IAIA 2016 Conference Paper.
	Paper & Presentation: Spatial Conservation Planning for Wind Farm Siting in Lesotho. Authors Hughes J, Jenkins A, Allan D and Heather-Clark S). IAIA 2016 Conference Paper.
	Paper: Habitat Mapping in a Subtropical Environment using Remote Sensing. (Authors Rusmini M, Hughes J, Poli S, Bertole L). IAIA 2016 Conference Paper.





## DYLAN MOODALEY

### JUNIOR ECOLOGIST

Environmental Specialist Services, Africa

#### QUALIFICATIONS

MSc	2020	Biodiversity and Conservation Biology, Marine Sciences
BSc Hons	2016	Biodiversity and Conservation Biology, Marine Sciences
BSc	2014	Biodiversity and Conservation Biology

#### EXPERTISE

- Marine Biology
- Marine Taxonomy
- Fundamental and Applied Research
- Field data collection (aquatic and terrestrial)
- GIS mapping

#### PROJECTS

<b>Projects Undertaken for SLR Consulting Africa</b>		
<b>Hyphen Hydrogen Energy (Pty) Ltd – Green Hydrogen Project, Namibia: Phase 1 and Met Mast EIA (2022 – Ongoing)</b>	Dylan is the assistant Project Manager, and coordinated a workshop between Specialists, SLR and the client.	Dylan is also providing Biodiversity support on the overall project.
<b>Ruzizi III Energy (Ltd) – Hydroelectric Power Project, Rwanda: Update of the ESIA, Gap Analysis and Scoping Report (2021 – Ongoing)</b>	Dylan provided Biodiversity Inputs, logistical support to the field team and Mapping support.	
<b>Vygekraal Cemetery Board – Vygekraal Cemetery Dewatering: Part 2 EA Amendment (2021 – Ongoing)</b>	Dylan was responsible for the site assessment, compiling the Notice of Intent (NOI), Public Participation Plan (PPP), Site Sensitivity Verification Report (SSVR) and placing site notices.	

<b>Richmond Park Internal Services: Burgundy Drive Extension and Tygerberg Valley Intersection (2021 - Ongoing)</b>	ECO services: Dylan is the designated ECO for the construction of the road and intersection ensuring contractor compliance with CEMPr
<b>SSB Sauerwein &amp; Schaefer Bau AG – Ankara-Izmir Railway Project: Biodiversity studies (2021 – Ongoing)</b>	Dylan was the junior ecologist on this ongoing project assisting the biodiversity lead with reviewing baseline data, research, analysis, writing and mapping for the Critical Habitat Assessment (CHA), Biodiversity Management Plan (BMP) and Biodiversity Action Plan (BAP)
<b>Pacifico Petrochemical Holdings LLC – “Mexinol” Methane Project (Sinaloa, Mexico): Supplementary Lenders Information Package (SLIP) in Complement of Manifestación de Impacto Ambiental (2021)</b>	Dylan provided Biodiversity Inputs to Critical Habitat Assessment (CHA) and the Environmental Social Due Diligence (ESDD)
<b>Confidential client – Development and usage plan Environmental impact study, Lüderitz, Namibia (2021)</b>	Dylan’s role on this project was mainly desktop research and mapping, he also wrote and compiled the marine component
<b>ZAA Engineering - Gordons Bay Slope Stabilisation and Rehabilitation along Protea Drive (2021)</b>	ECO services: Monitoring construction activities and implementation of EMP specifications
<b>Richmond Park Internal Services: Southern Precinct Bulk Earthworks Phase 2 and Circle (2021)</b>	ECO services: Dylan acted as an ECO for the construction of Bulk Earthworks ensuring contractor compliance with CEMPr
<b>Shell Downstream South Africa (Pty) Ltd – Shell NERA (2021)</b>	Dylan acted as a field consultant, conducting NERA site interviews with retailers and conducting Hydro Census within a 1km radius of retail sites
<b>Shell Downstream South Africa (Pty) Ltd – Shell GESS (2021)</b>	Dylan acts as an ad hoc Field Consultant for the LQR Team who manages the Shell GESS Portfolio. He assists in executing GW sampling and ecological risk assessments
<b>Total Downstream Beaufort West, South Africa (Pty) Ltd – Total GW monitoring and sampling (2021)</b>	This BW site is a remediation site and Dylan is the lead Field consultant doing routine quarterly GW monitoring and collecting samples.

<b>FFI: Environmental &amp; Social Desktop Constraints Mapping for Green Energy Projects – Namibia (2021)</b>	Dylan wrote up the Freshwater section, and assisted on the technical aspects involving the mapping and reporting
<b>Total E &amp; P South Africa B.V.: ESIA for additional exploration activities in Block 5/6/7 (2021)</b>	Dylan compiled the Site Sensitivity Verification Report and is currently assisting with the Public Participation Process by engaging with relevant stakeholders and I and AP's
<b>SAB Maltings (Pty) Ltd – Water Use License Audit (2021)</b>	Dylan provided technical support to the Freshwater Specialist in the field as well as with reporting
<b>Total - Onshore Monitoring Programme, LNG Project Cabo Delgado, Mozambique (2020 - 2021)</b>	Dylan's responsibilities included co-ordinating all routine data collection (included air quality: passive and active gas sampling) as well as all specialist fieldwork and providing overall project support with regards to technical and logistical aspects.
	<b>Work Experience outside of SLR</b>
<b>CSIR, TRANSNET Port Authorities (2015 - 2017)</b>	Long-term ecological monitoring of the seven main ports (Richards Bay; Durban; East London; Coega; Port Elizabeth; Mossel Bay; Cape Town)
<b>CSIR, Richards Bay &amp; eThekweni municipality (2015 - 2017)</b>	Coastal and Offshore marine pollution monitoring of Richards Bay, Durban, and Cape Town outfalls
<b>2<sup>nd</sup> International Indian Ocean Expedition (2017)</b>	A member of the biological oceanography team on the research cruise aboard the RV SA <i>Agulhas II</i> , 2 <sup>nd</sup> International Indian Ocean Expedition, Mozambique channel, Tanzania, Southwest Indian Ocean.
<b>MEMBERSHIPS</b>	
<b>IAIASa</b>	Member of the International Association for Impact Assessment South Africa
<b>PUBLICATIONS</b>	
	<b>DS Moodaley</b> , D Kuyper, V Ras, AE Engelbrecht & MJ Gibbons ( <i>submitted</i> ) <i>Catostylus azanii</i> , sp. nov. (Scyphozoa: Discomedusa): a new jellyfish from South Africa. <b>Zootaxa</b>
<b>AWARDS</b>	
<b>NRF SA (2015)</b>	Recipient of Honours Innovation Scholarship
<b>NRF SA (2017)</b>	Recipient of Masters Innovation Scholarship





## WARREN MCCLELAND

### BIODIVERSITY

Principal Ecologist, Cape Town

### QUALIFICATIONS

NDip: Nat.Cons 1993

Pr. Sci. Nat

Cape Peninsula University of Technology, Natal Parks Board (practical year)

Registered Professional Natural Scientist (Ecological Science)

### EXPERTISE

- International lender performance standards for biodiversity
- Baseline terrestrial ecology assessment, impact assessment, ecosystem service assessment
- Biodiversity management plans, action plans, monitoring plans
- Critical habitat assessments, offset plans
- Biodiversity due diligence
- ESIA's in mining, oil & gas, hydropower, renewable energy, linear infrastructure, dams
- IUCN Red-list Assessments
- Exposure to projects in 19 countries in Africa, covering all the continent's biomes

Warren McCleland has been conducting terrestrial ecology surveys for ESIA's through Africa for the past 17 years. He specialises in botany and ornithology, although he is also able to conduct mammal and herpetology surveys and is frequently called upon to lead biodiversity teams for large projects. He has experience with writing reports to lender specifications, particularly IFC Performance Standard 6, World Bank ESS6 AfDB Operational Safeguard 3. Warren has expertise in conducting baseline surveys, impact assessments, biodiversity management plans and action plans, critical habitat assessments and offset strategies, and contributing to environmental flow assessments. He is based in Betty's Bay in the Western Cape, South Africa.

Warren is a member of the IUCN Species Survival Commission Southern African Plant Specialist Group (IUCN SSC SAPSG) where he is responsible for species Red-list assessments. He is co-lead author of the new South African Guidelines for the Implementation of the Terrestrial Flora (3c) and Terrestrial Fauna (3d) Species Protocols for Environmental Impact Assessments.

He is co-author of the Field Guide to Trees and Shrubs of Mpumalanga & Kruger National Park (Jacana Publishers, 2002), for which he received the Marloth Medal from the Botanical Society of South Africa in 2014. Co-author of the Historical Vegetation Map and Red List of Ecosystems Assessment for Mozambique (Wildlife Conservation Society, 2021)

Warren has extensive experience in projects for the mining industry, particularly copper, coal and gold mining, and in the last few years has conducted numerous surveys for projects in the oil & gas, hydropower and renewable energy industries.

Warren has worked in 19 countries in Africa, namely South Africa, Lesotho, eSwatini, Namibia, Botswana, Zimbabwe, Angola, Zambia, Mozambique, Malawi, Democratic Republic of Congo, Tanzania, Kenya, Rwanda, Mali, Republic of Guinea, Sierra Leone, Liberia and Morocco. He has also conducted desktop studies for projects in Turkey and Afghanistan.

### PROJECTS

**Supplementary ESIA studies for Ruzizi III Hydropower Project, Ruzizi River, Rwanda**  
(Dec 2021-ongoing)

Conducting terrestrial ecology studies for a supplementary ESIA of Ruzizi III hydropower project to meet lender standards. Work involved flora and fauna surveys conducted alongside local specialists, preparation of the baseline ecology report, critical habitat assessment, identification of biodiversity impacts, and mitigation and monitoring requirements. Surveys covered the reservoir inundation zone, associated infrastructure and a transmission line with access road.

**Supplementary biodiversity baseline studies and Environmental Flow Assessment for the Kakono HPP, Kagera River, Tanzania**  
(2020-2021)

Terrestrial ecologist for terrestrial flora and fauna surveys for the supplementary ESIA and EFlows study (riparian component) for the hydropower project to meet lender standards (IFC, AfDB). The work was done on behalf of the French Development Agency (AFD). Reporting included an assessment of the terrestrial biodiversity baseline, critical habitat assessment to IFC PS6, and impact assessment and mitigation. Surveys and reporting assessed the dam inundation zone, associated infrastructure and a transmission line with access road.

**Vegetation Mapping and Onshore Monitoring Programme, LNG Project Cabo Delgado, Mozambique**  
(2019-2021)

Botanical lead responsible for designing and implementing a vegetation monitoring protocol for onshore infrastructure and operations for an LNG project on the Afungi Peninsula, northern Mozambique (2020-2021). Also assisted with remote sensing derived vegetation mapping with GeoTerralimage (2019). Vegetation monitoring data were statistically analysed to determine vegetation community types and to enable future detection and interpretation of any changes in floristic composition.

**Biodiversity baseline studies and impact assessment, Copper Mine Project, Springbok, Northern Cape**  
(2022)

Biodiversity team lead for baseline studies to support an IFC-compliant ESIA for an open-cast copper mine project in Springbok District in the Northern Cape. Responsible for botanical component and integration of the other disciplines into a report to align with IFC PS6 requirements. Deliverables included a biodiversity baseline report (including an ecological sensitivity assessment) and impact assessment.

**Ecology baseline studies, ESIA and CHA for a Copper Mine in Taroudant District, Morocco** (2019-2021)

Biodiversity team lead for a compliance audit for a copper mine project in central Morocco according to IFC PS6 (2019) and baseline studies to support an updated ESIA for the project (2020). Deliverables included a comprehensive biodiversity baseline report, impact assessment, biodiversity management plan and critical habitat assessment.

**Baseline studies for ESIA for a gas pipeline in Mazar-i-Sharif, Afghanistan** (2020-2021)

Biodiversity team lead for the baseline studies and impact assessment for a gas pipeline from Sheberghan to Mazar-i-Sharif in northern Afghanistan. Work involved remotely training and management of a team of local biodiversity technicians to collect field data. Post-fieldwork, data was collated and the baseline report and impact assessment compiled according to IFC PS6 (project lender was World Bank).

**IFC PS6 Compliance audit for an ESIA for a Copper-Zinc Mine in Ispir, Turkey** (2020)

Conducted a review and gap analysis of in-country biodiversity baseline studies according to IFC PS6 for an ESIA for a copper-zinc project in a biodiverse and highly sensitive region in north-western Turkey, including recommendations for further work needed to achieve compliance with IFC PS6.

<b>Screening studies for Solar PV and Wind projects in central and northern Malawi (2021-2022)</b>	Biodiversity screening studies and fatal flaw analysis for three renewable energy projects during the pre-feasibility project assessment. Projects were situated in Mzuzu, Kasungu and Salima districts, Malawi. Fieldwork involved collection of floristic and avifaunal data in order to characterise habitats and faunal assemblages. Work involved direct liaison with the lender appointed reviewers in response to IFC-compliance audit and received approval for the studies conducted.
<b>Botanical and avifaunal surveys for ESIA for several mining concessions in Grand Cape Mount, Liberia (2018-2021)</b>	Part of a multi-disciplinary biodiversity team conducting multi-season baseline surveys and impact assessments for six Greenfields mining concessions and a 15 km haul road in western Liberia. Responsible for botanical and avifaunal components and contributed to critical habitat assessments for each report.
<b>Baseline studies, impact assessment, CHA and BAP for a gold mine in Kankan district, Republic of Guinea (2017-2020)</b>	Biodiversity team lead for baseline studies to support an IFC-compliant ESIA for the gold mine project. Deliverables included a comprehensive biodiversity baseline report, impact assessment, biodiversity action plan and critical habitat assessment. Discovered a new country record for an Endangered plant species ( <i>Lepidagathis epacridea</i> ) and assisted Kew Gardens with an updated IUCN assessment of this species. Conducted additional surveys to search for other <i>Lepidagathis</i> populations and provided site support for the relocation of vulnerable populations of this species. Liaised directly with the lender-appointed reviewer and with the lender (Societe Generale) on critical habitat issues.
<b>Environmental Flow Assessment for several rivers in the Tana River catchment, Embu district, Kenya (2019)</b>	Conducted riparian vegetation and avifauna studies along several rivers in the vicinity of Mt Kenya for the Environmental Flows Assessment of portions of the upper Tana River catchment. Provided ecology baseline inputs and contributions to the EFAs for each site.
<b>Baseline studies and impact assessment for an ESIA for gold mine project in Foroko district, western Mali (2019)</b>	Biodiversity team lead for baseline ecology studies to support an ESIA for the gold mine project in Mali. Deliverables included a comprehensive biodiversity baseline report and impact assessment according to IFC PS6 specifications.
<b>Baseline studies for an ESIA for an oil and gas project in Lokichar district, northern Kenya (2018)</b>	Conducted baseline studies of flora and avifauna for an oil and gas pipeline between Turkwel Dam and Lokichar, Kenya in arid savannah and semi-desert in northern Kenya. Provided baseline reports for inclusion in an IFC-compliant ESIA.
<b>Baseline studies, impact assessment and site support for a copper mine project in Lubumbashi district, DRC (2008-2022)</b>	Biodiversity team lead for multi-disciplinary ecology baseline studies over several seasons in support of an IFC-compliant ESIA for a copper mine project in DRC. Conducted a critical habitat assessment and provided long-term site support for the project regarding translocation of threatened plants and restoration of sensitive copper-rich grasslands.
<b>Baseline studies for several hydropower projects along the Kalungwishi River, northern Zambia (2018)</b>	Part of a multi-disciplinary biodiversity team conducting multi-season baseline surveys and impact assessments for four run-of-river hydropower projects along the Kalungwishi River and its tributaries, northern Zambia. Responsible for botanical and avifaunal components.

<b>Baseline studies and Environmental Flow Assessment for a hydropower project at the Ngonye Falls, Zambia (2015-2017)</b>	Part of a multi-disciplinary biodiversity team conducting multi-season baseline surveys, impact assessment and an Environmental Flow Assessment for a run-of-river hydropower project at Ngonye Falls along the Zambezi River, western Zambia. Provided flora baseline inputs and riparian vegetation contributions to the EFA.
<b>Avifauna monitoring along the Nacala – Tete Railway, Nampula and Tete provinces, Mozambique (2018)</b>	Conducted multi-season avifauna surveys at selected sites along approximately 45 km of the railway line between Nacala and Tete, central Mozambique. Surveys involved compiling species lists in the full range of habitats represented and describing avifaunal assemblages based on dominant and diagnostic species.
<b>MEMBERSHIPS</b>	
<b>IUCN SSC SAPSG</b>	IUCN Species Survival Commission Southern African Plant Specialist Group (2021-2025)
<b>SAAB</b>	South African Association of Botanists (Associate Member)
<b>SACNASP</b>	South African Council for Natural Scientific Professions (Reg. No. 003973)
<b>IAIA(SA)</b>	International Association of Impact Assessment (South Africa)
<b>PUBLICATIONS</b>	
	Lötter, M., Burrows, J., McClelland, W., Stalmans, M., Schmidt, E., Soares, M., Grantham, H., Jones, K., Duarte, E., Matimele, H. & Costa, H.M. 2021. Historical vegetation map and red list of ecosystems assessment for Mozambique – Version 1.0 – Final report. USAID / SPEED+. Maputo. 371pp.
	Manning J., Goldblatt, P., McClelland, W.L. & Wightman, N. 2019. <i>Zygotritonia atropurpurea</i> (Iridaceae: Crocoideae), a new local endemic species from northern Zambia of this small tropical African genus. <i>South African Journal of Botany</i> 124:20-22.
	McClelland, W.L. & Massingue, A. 2018. New populations and a conservation assessment of <i>Ecbolium hastatum</i> Vollesen. <i>Bothalia</i> 48(1).
	Cheek, M., Lawrence, P. & McClelland, W.L. 2018. <i>Cola dorrii</i> sp. nov. (Sterculiaceae) a threatened Maputaland Forest endemic of South Africa. <i>Kew Bulletin</i> 73(2).
	Darbyshire, I., McClelland, W.L. & Froneman, W. 2017. <i>Barleria lebomboensis</i> (Acanthaceae), an endangered new species from the Lebombo Mountains of Swaziland. <i>Phytotaxa</i> 323(2):173-181.
	Schmidt, E., Lötter, M.C. & McClelland, W.L. 2002. <i>Field Guide to Trees and Woody Shrubs of Mpumalanga &amp; Kruger National Park</i> . Jacana Publishers, Houghton.
<b>AWARDS</b>	
<b>Marloth Medal (2014)</b>	Awarded for co-authoring the Field Guide to the Trees and Shrubs of Mpumalanga & Kruger National Park



## ROBYN CHRISTIANS

SENIOR ENVIRONMENTAL CONSULTANT

EMPA, Africa

## MEMBERSHIPS

Environmental Assessment  
Professionals of Namibia

Ordinary Member - Application pending

## QUALIFICATIONS

LLB	2016	University of Cape Town, Cape Town, South Africa
BSc	2007	Murdoch University, Perth, Western Australia

## EXPERTISE

- Conducting Public Participation Processes
- Advisory: legal compliance

Robyn has 5 years direct work experience in the mining sector within Namibia, assisting international companies in their liaison with local stakeholders and government directorates and conducting EIA processes. Robyn has acted as the primary environmental contact for a Namibian mining operation, implementing the EMP, liaising with government and stakeholders and reporting on mining activities and environmental compliance.

## PROJECTS

<b>HDF Energy Renewable® Project (2022)</b>	HDF Renewable® Swakopmund Project combines solar Photovoltaic (PV) power along with hydrogen production to generate stable, detachable power to the national grid
<b>Hyphen Hydrogen Energy – Green Hydrogen Project Namibia (2022)</b>	Hyphen Hydrogen Energy is proposing a green hydrogen project located in the Tsau//Khaeb National Park, requiring a full Environmental Impact Assessment process. Project assistant as needed, focusing on Public Participation process, local government engagement where required.
<b>Weatherly Mining Namibia (2018-2020)</b>	Tschudi Copper Mine (Tsumeb, Namibia): Environmental Officer undertaking all environmental related work on-site: Field work, data analysis, public participation, training, writing of bi-annual environmental reports, ensuring audit compliance and validity of environmental clearance certificate
<b>Jindal Resources (2013)</b>	Jindal Resources wished to undertake exploration and drilling activities on their EPLs. Project lead: public participation, field assessment, specialist management, submission of ECC application, Scoping Report and EMP
<b>Rössing Uranium Ltd – Z20 Expansion Project (2013)</b>	Rössing Uranium Ltd wished to conduct a scoping exercise into the viability of an expansion into the Z20 resource. Scoping Team Member: Responsible for coordinating specialists, liaison with stakeholder, public participation arrangements, report writing and general project administration.
<b>Swakop Uranium – Husab Mine EIA (2012)</b>	Swakop Uranium wished to develop their Husab Mine project, requiring and EIA process. EIA and EMP Project Team Member: Primary responsibilities: project and team coordination and public participation organization



# CURRICULUM VITAE

## WERNER PETRICK

### QUALIFICATIONS

B.Eng	-	Civil Engineering	1995
Masters	-	Environmental Management	2004

### EXPERTISE

- Environmental Management
- Environmental (and Social) Impact Assessments (EIA's)
- Environmental Feasibility Studies
- Stakeholder Management
- Environmental Management Systems (EMS)
- Environmental Auditing
- Environmental Training and capacity building
- Mine Closure

Werner has over 24 years of work experience. He started out as a Civil Engineer (first 3 years) but soon became involved with environmental related projects. The following 21 years (+) he has been working in the environmental field with experience in Environmental Impact Assessments (EIA's), general environmental management and implementation, Environmental Management Systems (EMS), waste management, environmental compliance, training, stakeholder engagement and capacity building, mine closure and rehabilitation, environmental auditing and monitoring as well as due diligence.

Werner's experience is based on work conducted as a consultant (current position) as well as working for industry (i.e. implementing environmental requirements, etc.)

Sectors of his experience include: exploration or production phases of small, medium and large mining projects, power generation including renewable power initiatives and hybrid power plants, transmission lines, water supply, (small to large scale) desalination & sanitation, petrochemical industry, linear infrastructure including roads and rail, port related projects, off-shore oil and gas exploration, off-shore mining (i.e. exploration) projects, aquaculture activities, chemical handling and storage, large irrigation projects and other.

### EMPLOYMENT RECORD

Year	Company	Responsibility
1996-1998	Africon Engineering International	Engineer – working for the Environmental and Geotechnical Division
1999-2004	Sasol Technology (Environmental and Risk Engineering Division)	Lead Project Environmental Coordinator
2004-2009	Independent Environmental Consultant (Natura Environmental Practitioners)	Managing own Company - Environmental Practitioner
	Sub-contracted to Golder Associates	Environmental Project Manager
	Sub-contracted to Bombela	Environmental Manager for the Turn-Key Contractor for the Gautrain Raid Rail Link
2009-2012	Sub-contracted to Hatch Africa	Environmental Project Manager
	Langer Heinrich Uranium Mine	Environmental Specialist (Overseeing the Environmental Department)
2012-2018	SLR Environmental Consulting (Namibia)	Technical Director and Manager: Environmental Assessment Practitioners (Namibia)
2018-present	Independent Environmental Consultant (Namisun Environmental Projects and Development)	Managing own Company - Environmental Consultant

<b>EXCERPT OF PROJECTS</b>	
<b>Kelp Blue Namibia (Pty) Ltd - THE PROPOSED KELP CULTIVATION PILOT PROJECT NEAR LÜDERITZ, KARAS REGION (2020)</b>	EIA applications process for Kelp Blue's proposed Kelp Cultivation Pilot Project. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).
<b>Total E and P Namibia B.V. - PROPOSED 3D SEISMIC SURVEY IN LICENCE BLOCKS 2912 AND 2913B, NAMIBIA (2020)</b>	EIA process for TEPNA's proposed off-shore 3D seismic survey activities. Werner was the in-country coordinator for the EIA process (including stakeholder engagement, PPP and document review).
<b>NamWater's Environmental and Social Impact Assessment (Scoping) process for the Desalination Plant and Water Carriage System to Secure Water Supply to the Central Coast, Windhoek and En-route Users (2019 – 2020)</b>	EIA Scoping process as part of NamWaters' Feasibility study for the supply of potable water, derived from seawater desalinated at the coast, through a pipeline system to the central coastal area and to Windhoek, as well as to en-route users including Arandis, Usakos, Karibib and Okahandja.  Werner was the in-country coordinator for the EIA process (including stakeholder engagement, PPP and report compilation and review).  The Feasibility Study for the Project is financed by the Government of the Federal Republic of Germany, through the KfW Development Bank. As a result, the ESIA process is also required to meet the KfW Sustainability Guideline (KfW, 2019) requirements as well as the World Bank's Environmental and Social Standards (World Bank, 2018).
<b>Ongopolo Mining and Processing Tsumeb West mine Rehabilitation Plan (2020)</b>	Ongopolo Mining and Processing (Ongopolo), which is owned by Weatherly Mining Namibia Ltd (Weatherly), owns a dormant, underground mine near Tsumeb, called the "Tsumeb West Mine". Werner was the Lead Environmental Assessment Practitioner managing the process to develop an Environmental Rehabilitation Plan for the old mine.
<b>Shell Namibia Upstream BV – EIA amendment for proposed offshore well drilling (2020)</b>	Shell Namibia Upstream BV holds PEL 39, which is located adjacent to the southernmost Namibian offshore border with South Africa. Shell obtained an ECC for the proposed activities but requires an amendment to the ECC due to a proposed change in the well drilling target area. Werner was the in-country coordinator for the EIA process (including stakeholder engagement, PPP and document review).
<b>Walvis Bay Salt Holdings –Environmental Screening (2019)</b>	Environmental Screening for additional infrastructure development at the Walvis Bay Salt Works. Werner is the Lead Environmental Assessment Practitioner managing the Screening process (including stakeholder engagement, PPP and report compilation).
<b>Areva (now Orano Mining Namibia) – EIA renewals (2019)</b>	ECC renewal applications for the Trekkopje Mine (which is on Care and Maintenance) and the Erongo Desalination Plant.
<b>Namib Lead and Zinc – EIA Amendment process (2019)</b>	EIA amendment process for the proposed changes to the final product transportation method and soil excavation for the mine access road resurfacing. Werner was the Lead Environmental Assessment Practitioner

<b>Cathral Investments and Tulela Processing Solutions' Sinclair Mining Project - Environmental Impact Assessment (2019)</b>	EIA for small scale mining & processing activities and ongoing exploration at the Sinclair mine. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report compilation, specialist management and specialist report review).
<b>Galp off-shore exploration projects - Environmental Impact Assessment (2019)</b>	EIA for offshore exploration projects in two separate Petroleum Exploration License areas of the coast of Namibia. In-country EIA project manager, Public participation, review reports, liaison with Authorities, etc.
<b>Gecko Cobalt Mining - Environmental and Social Impact Assessment (2019)</b>	EIA for Gecko Cobalt Mining (Pty) Ltd proposed cobalt and copper mining project on EPL 4346, located approximately 25 km northwest of Opuwo.  In-Country Project Manager, Report review and Facilitate the public participation process.
<b>Walvis Bay Salt Holdings –Environmental Screening (2018 - 2019)</b>	Environmental Screening for further expansion (i.e. bittern benefaction ponds and associated infrastructure) at the Walvis Bay Salt Works. Werner was the Lead Environmental Assessment Practitioner managing the Screening process (including stakeholder engagement, PPP and report compilation).
<b>Shell Namibia Upstream BV – EIA for proposed offshore well drilling (2017 -2018)</b>	Shell Namibia Upstream BV holds PEL 39, which is located adjacent to the southernmost Namibian offshore border with South Africa. Shell is proposing to drill one or possibly two exploration wells in the northern portion of the licence area. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
<b>Gecko Cobalt Mining - Environmental and Social Screening process (2018)</b>	Gecko Cobalt Mining (Pty) Ltd conducted reconnaissance drilling over a stretch of 24 km length over the cobalt and copper mineralisation in EPL 4346, located approximately 25 km northwest of Opuwo. Depending on the outcome of further exploration activities and the feasibility study, GCM and CR are proposing to apply for a ML to ultimately mine the ore and process it on site.  Internal Environmental (and Social) Screening exercise. Lead Environmental Assessment Practitioner managing an internal Environmental and Social Screening process.
<b>Swakop Uranium – Husab Mine Closure plan (2018)</b>	Development of the Husab mine Draft Closure Plan (MCP): In Country Manager and reviewer of the process and the draft MCP.
<b>Areva (now Orano Mining Namibia) (annually)</b>	Annual Environmental (relating to the EMP) Compliance audits for the Trekkopje Mine (which is on Care and Maintenance) and the Erongo Desalination Plant.
<b>Manila Investments – Kombat Copper Mine EIA (2017 - 2018)</b>	Manila Investments (Pty) Ltd holds Mining Licences 73B, 16, 9 (collectively the old Kombat Copper mine, which is currently under care and maintenance). The mine is a past-producing copper, lead and silver mine. Manila is considering implementing the following activities upon completion of the Environmental Impact Assessment process and acquiring the relevant permits and approvals for: Open pit (surface) mining in ML 73B (also referred to as "Asis") and associated activities; Processing of the ore at the existing process plant, currently being refurbished, and associated activities; and Dewatering the "Asis Far West" (AFW) Shaft and conducting further underground exploration activities in ML 16. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).



<b>Swakop Uranium Waste Rock Dump Amendment and Incinerator - EIA amendment</b> (2017 - 2018)	Swakop Uranium owns and operates the Husab Mine in the Erongo Region of Namibia; they propose an amendment to their Waste Rock dump and also to implement a new on-site waste incinerator. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report review).
<b>EIB and NamPower Encroacher Bush Biomass Power Project – EIA</b> (2017 - busy)	European Investment Bank and NamPower: Environmental Impact Assessment (EIA) for the proposed Encroacher Bush Biomass Power Project in Namibia. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. The EIA process assessed the impacts of the proposed project in terms of the relevant Namibian environmental legislative requirements. Furthermore, the EIA process followed considered had to conform to the Equator Principles and IFC Performance Standards as well as the Namibian Forest Stewardship Council (FSC) Standards.
<b>Alten Energy - 37 MW Hardap Solar (Photo Voltaic (PV)) Power plant, near Mariental (end of 2017 – October 2018).</b>	Project Manager and provides ongoing support to the on-site Environmental Manager (who provide full time Environmental and Social Management Support on site) and conducts environmental performance audits.
<b>Igneous Mining (Pty) Ltd – Application for Environmental Clearance</b> (2016)	Igneous Mining (PTY) LTD Environmental is seeking a Clearance Certificate (ECC) Renewal for small scale mining activities on ML 135 in Sarusus Area, Skeleton Coast Park. Lead Environmental Assessment Practitioner managing the ECC Renewal Process including an audit of their onsite activities.
<b>LK Mining EIA for K Mining's Offshore Diamond Exploration Activities on Exclusive Prospecting License 5965</b> (2016)	LK Mining is proposing to conduct offshore exploration activities within marine Exclusive Prospecting License (EPL) 5965 by means of geophysical remote sensing and seabed sampling to explore the marine diamond resources. EPL 5965 is an area over Hottentots Bay, approximately 60 km north of Lüderitz. Management of the process, team members and other stakeholders. Report compilation. Review.
<b>Manila Investments – Kombat Copper Mine Environmental Due Diligence</b> (Sep 2016)	Lead Environmental Assessment Practitioner managing and conducting the due diligence audit (including site inspection, review of 'environmental management system' and documentation, gap analysis and recommendations for Environmental compliance) and report compilation.
<b>City of Windhoek Gammams Waste Water Treatment Works Upgrade EIA</b> (2017)	The Gammams Waste Water Treatment Plant (GWWTP) located in the Wanaheda suburb of Windhoek, is the City of Windhoek's (CoW) largest wastewater treatment plant. Develop an environmental Scoping Report (including Impact Assessment) for the planned GWWTP upgrade. Lead Environmental Assessment Practitioner managing the completion of the EIA process, report compilation / review.
<b>B2Gold Otjikoto Gold Mine Closure plan</b> (2017)	Development of the Otjikoto Gold Mine Draft Closure Plan (MCP): In Country Manager and reviewer of the process and the draft MCP.
<b>NAMPARKS Facility Amendments at Mudumu NP – EIA amendment</b> (2016 - 2018)	NAMPARKS Environmental Scoping Report for Infrastructure Development: Amendment for the proposed addition of an Entrance Gate, Tourist Reception and Staff Housing at Mudumu National Park. Lead Environmental Assessment Practitioner for the EIA amendment process required for infrastructure development. Report review.

<b>Gecko Salt (Pty) Ltd Cape Cross Salt Project - EIA</b> (2016 - 2018)	Gecko Salt (Pty) Ltd Environmental Impact Assessment for the proposed Cape Cross Salt Project. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and review reports.
<b>Namibia Construction (Pty) LTD Sand Mining Project – 20 km South West of Okahandja</b>	Namibia Construction (Pty) Ltd (NC) is mining sand in the upper reaches of the Swakop River on Farm Osona 65, located approximately 20 km south-west of Okahandja town and 6 km East of Gross Barmen Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.
<b>Namibia Rare Earths – Proposed Lofdal Mine and linear infrastructure – EIA</b> (2015 - 2016)	NRE holds the EPL at Lofdal located west of Khorixas, exploring for rare earth. They wish to apply for a mining license in 2016, for which an EIA would be required. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.
<b>Rössing Uranium – Impacts of the TSF on biota and desert ecology – Management of study</b> (2015 - 2016)	Impacts of the TSF at Rössing Uranium and related dust dispersion on biota and desert ecology. Managing the process and coordinating various specialists for input into the study (i.e. vegetation, air quality, biological soil crust, invertebrates and hyperspectral work). Compiling consolidated report summarising all the findings.
<b>High Speed Railway Lines – Environmental Screening Process</b> (2015 - 2016)	Feasibility studies for a railway line between Windhoek and Katutura, as well as a study for a railway line between Windhoek and Okahandja. Lead Environmental Assessment Practitioner managing the environmental Screening process (including limited stakeholder engagement, managing specialists, etc.) and compiling reports.
<b>Swakop Uranium Reagents – EIA for storage at the Manica facilities</b> (2015)	Swakop Uranium is developing the Husab Mine in the Erongo Region of Namibia (70 km north-east of the Walvis Bay port). The reagents and chemicals that will be used in the processing plant will be imported through the port of Walvis Bay. It will be sourced in advance and stored in Manica warehouse facility (on a temporary basis – "phase 1 project") and container yard in the industrial area of Walvis Bay. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports
<b>Sand Miners Association of Swakopmund – EIA for sandmining in the Swakop River</b> (2015 – 2018)	The members of the Sand Miners Association have been mining sand from the Swakop River, within the Swakopmund Municipal boundaries, for many years. The sand they mine supplies Swakopmund, Long Beach and Walvis Bay with sand for construction purposes. The Sand Miners Association has had to look for an alternate source of sand for construction activities in their area and EIA had to be done. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.
<b>Swakop Uranium Reagents storage at a new facility in the Port of Walvis Bay – EIA</b> (2015)	Swakop Uranium is developing the Husab Mine in the Erongo Region of Namibia (70 km north-east of the Walvis Bay port). The reagents and chemicals that will be used in the processing plant will be imported through the port of Walvis Bay. It will be sourced in advance and stored in a warehouse facility within the boundaries of NamPort's harbour area (long term – "phase 2" project). Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.

<b>Namibia Rare Earths – Lofdal mine – Environmental baseline development (2015)</b>	<p>NRE holds the EPL at Lofdal located west of Khorixas, exploring for rare earth. They wish to apply for a mining license in 2016, for which an EIA would be required. The baseline environment needs to be described in detail to feed into such an EIA process.</p> <p>Compile the environmental baseline project plan. Manage specialists and develop Baseline data/report with input from various specialists.</p>
<b>Swakop Uranium – Husab Mine amendments - EIA (2015)</b>	<p>Swakop Uranium is developing the Husab Mine in the Erongo Region of Namibia (70 km north-east of the Walvis Bay port). The EMP needs to be implemented during construction Swakop Uranium and their contractors. It further needs to be rolled out into a management system for operations.</p> <p>The Strategic Environmental Assessment (SEA) for the “Uranium Rush” in the Erongo Region had to be considered and incorporated into the EIA.</p> <p>Lead Environmental Assessment Practitioner managing the various EIA processes and compiling reports. Provide guidance and support to Environmental Control Officer(s), training to ECOs and contractors. Develop EMS procedures and other relevant documentation.</p>
<b>B2Gold – Otjikoto Gold Mine landfill site - EIA (2013 – 2014)</b>	<p>B2Gold is developing the Otjikoto (gold mine) Project, located approximately 70 km north-east of Otjiwarongo in the Otjozondjupa Region of Namibia. B2 Gold proposed to develop a landfill site (waste disposal facility) on site to cater for non-hazardous waste. They also proposed to construct and operate an on-site (heavy fuel oil) Power Plant.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<b>B2Gold – Otjikoto Gold Mine development - EIA (2012 – 2013)</b>	<p>B2Gold applied for Mining Licence (ML 169) to develop the Otjikoto (gold mine) Project, located approximately 70 km north-east of Otjiwarongo in the Otjozondjupa Region of Namibia. As part of the ML application process, a detail EIA process needs to be conducted.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. The Scoping phase was already completed by another company.</p> <p>Completed the EIA process – i.e. assessment phase. Develop Mine Closure Framework.</p> <p>The EIA had to conform with World Bank / IFC Standards.</p>
<b>Arandis Power Plant - EIA amendment (2014)</b>	<p>Arandis Power proposed to construct and operate a ‘hybrid’ thermal/PV plant with the maximum output capacity of 120 MW.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p> <p>The EIA had to conform with World Bank / IFC Standards.</p>
<b>EPL’s for exploration activities – various EIA’s (2013 – 2015)</b>	<p>Various exploration companies planning to conduct exploration activities on the EPLs they hold. Prior the activities commencing, and EIA process needs to be conducted.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. Also review of reports.</p>

<b>Commissiekraal Coal Mine – EIA Scoping Report (2015)</b>	<p>Development of the proposed Commissiekraal Coal Mine including services and associated infrastructure in South Africa.</p> <p>Compiled EIA Scoping Report.</p>
<b>Various Mining and Exploration companies - various services (2012 – 2015)</b>	<p>Various Mining and exploration companies across Namibia sought assistance.</p> <p>Provided various services and support to various mining and exploration companies, including amongst others external audits, training, rehabilitation planning, compiling EMS procedures and other relevant documents, compile environmental performance reports, etc.</p>
<b>Various Mining, Exploration and Infrastructure Projects – various services (2012 – 2015)</b>	<p>Various Mining and exploration projects as well as infrastructure projects across Namibia sought assistance with EIAs, EMPs and review processes.</p> <p>Review process and reports for various projects managed by other environmental practitioners, including amongst others rail sidings; Nanomill which will produce 150,000 tons rebar’s and billets per year from scrap steel; Okorusu Fluorspar Mine expansion; Offshore exploration drilling (Murphy); water and waste water treatment facilities EIA and EMPs; Dundee Precious Metal Tsumeb Hazardous Waste Site expansion; Walvis Bay Salt Holdings Expansion; and others.</p>
<b>Pietersite Mining License – EIA (2013)</b>	<p>Mining Pietersite (gemstone) on Mining License (ML) 57 in the Kunene Region, north-central Namibia.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<b>TransNamib – sulphuric acid transport – EIA (2014)</b>	<p>TransNamib plans to transport sulphuric acid by rail from Dundee Precious Metals (Tsumeb) to Rössing Uranium Mine and to Walvis Bay.</p> <p>Lead Environmental Assessment Practitioner managing the EIA processes and compiling reports.</p>
<b>Rössing Uranium Z20 deposit – EIA (2012 – 2014)</b>	<p>It is envisaged that the Z20 uranium deposit would be mined as a satellite open pit as it contains uranium bearing alaskite rocks, utilising conventional blast, load and haul methodology. An infrastructure corridor would need to be established to link the Z20 site to the existing Rössing Uranium Mine across the Khan River.</p> <p>Managing the EIA processes and compiling reports in a ‘joint venture’ with Aurecon.</p>
<b>Rössing Desalination Plant – Managing SEIA processes (2014)</b>	<p>A new Desalination Plant (located approximately 6 km north of Swakopmund, at the premises of the existing Swakopmund Salt Works.) to supply water to the for Rössing Uranium Mine. The plant will have a design capacity of 8,800 m<sup>3</sup>/day.</p> <p>Managing the SEIA processes and compiling reports in a ‘joint venture’ with Aurecon.</p>
<b>Coal Storage at Walvis Bay Harbour – EIA (2012)</b>	<p>Environmental Screening/ fatal flaw analysis for the proposed expansion of coal storage at the Walvis Bay Harbour.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>



<p><b>Arandis Power HFO and recycled oil power plant - EIA (2012)</b></p>	<p>Arandis Power proposes to develop an independent power generation plant east of the town of Arandis, located in the Erongo Region, Namibia. Arandis Power is proposing a power station with a nominal output capacity of approximately 120MW which utilises reciprocating engines. Arandis Power will utilise a residual fuel known as heavy fuel oil (HFO) and recycled oil from a waste oil recycling plant.</p> <p>Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p> <p>The EIA had to conform with World Bank / IFC Standards.</p>
<p><b>Langer Heinrich Uranium Mine – expansion projects – Specialist environmental support (2009 – 2012)</b></p>	<p>Langer Heinrich is an operational Uranium Mine in Namibia Naukluft National Park.</p> <p>Specialist environmental support to ensure EIAs for expansion projects are correctly managed and implemented. Incorporate SEA commitments (SEMP) for the “Uranium Rush” in the EMS. Also to provide support, guidance and management in terms of environmental management implementation at the mine i.e. EMS development and implementation; environmental training; etc.). .</p> <p>Developed the draft Mine Closure and restoration strategy and Draft Mine Closure plan.</p>
<p><b>Port Expansion Projects in SA – Project environmental management (2008 - 2009)</b></p>	<p>Port expansions and development (Port Elizabeth, Coega and Richards Bay).</p> <p>Project Environmental Manager - managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p><b>Gautrain Rapid Rail Link - EIA (2006 - 2007)</b></p>	<p>Development of the Gautrain Rapid Rail Link.</p> <p>Appointed (on contract basis) to provide specialist input into the very challenging EIA processes and EMP development for the project. Also appointed as the Environmental Manager for the Bombela Turnkey Contractor, the managing contractor, for the Gautrain Rapid Rail Link Project.</p>

## TRAINING AND AWARENESS

- Numerous training and awareness (i.e. EIA) campaigns at Industry level between 2009 and 2019.
- “EIA, management and protection training” (i.e. presentation) at a Petroleum Upstream Training Seminar in 2016
- EIA training at Educational Institutions:
  - o Geology Department of the University of Namibia in 2014
  - o Various lectures at the University of Pretoria in 2006.

## MEMBERSHIPS

<p><b>EAPAN</b></p>	<p>Certified as a Lead Environmental Practitioner and a Reviewer under the Environmental Professionals of Namibia (Membership No. 114)</p>
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## PUBLICATIONS

Paper on the integration of the EIA process with the project execution model through the University of Pretoria.



# Antje Burke



**Address:** 10 Ursula Street, PO Box 90230, Windhoek, Namibia

**Nationality:** German, Permanent Resident in Namibia since 1991

**Maiden name:** Günster:

**Birth date:** 2 March 1962

**Contact details:** Telephone/fax: +264-61-211729  
Cellphone: +264-81-2456341  
Email: enviroscience@gmx.com

## Qualifications

**University:** Westfälische Wilhelms-Universität, Münster, Germany

**1989-1993:** **Dr rer nat** (Ph D equivalent), Major: **Landscape Ecology**, Minors: Botany, Geography;  
Degree conferred cum laude

**1984-1987:** **Diplom** (M Sc equivalent), Major: **Geography**, Minors: Botany, Geology  
Degree conferred cum laude

**1982-1984:** First degree (B Sc equivalent): Geography, Botany, Geology

**School**

**1972-1981:** Rhein-Wied Gymnasium, Neuwied, Germany: **Abitur**

**1968-1972:** Primary school, Irlich, Germany

## Overview of work experience

**Countries:** Namibia, Germany, Israel, Botswana, South Africa

**Fields:** Conservation- and regional planning, closure and sustainability planning, environmental management and assessment, rehabilitation and restoration, biodiversity inventory and research, natural resource assessments, rangeland management

**Skills:** Project management, data management, photojournalism, popular and scientific writing, teaching, GIS, multivariate statistics, vegetation analysis and mapping, publishing, word- and image processing, graphic design, excellent knowledge of Namibian flora and environment, experienced off-road driver

**Working years:** 33

Dr. Burke has 33 years of professional experience in environmental research and management in Namibia, Germany, Israel, South Africa and Botswana. Holding a Ph D in landscape ecology, she has participated in various projects at environmental planning institutions in Germany. In Namibia she coordinated and participated in over 50 Environmental Impact Assessments, Management Plans, Audits, Sectoral Reviews and Natural Resource Assessments – the majority in the mining and infrastructure sector. She has coordinated conservation planning initiatives for various parks of Namibia's protected area network, such as the Tsau//Khaeb (Sperrgebiet), Ai-Ais Hotsprings Game Park and the Greater Fish River Canyon Landscape and has contributed to other national and cross-boundary conservation planning initiatives. Dr Burke also coordinated and contributed to many environmental research programmes of Namibia's Ministry of Environment and Tourism. She is author of over 70 scientific publications, 50 of these in peer-reviewed, international journals and books, and over 100 popular and educational publications. As a scientific reviewer for fifteen international journals, Dr Burke is a scientist widely recognised in her field of expertise. Her current research interests are biogeography of mountain floras and restoration ecology.

Antje has a very strong research background in environmental sciences, combined with in-depth practical experience. She always maintains an exceptionally high standard while at the same time adopting a realistic and creative approach in all her assignments.

## Employment history

2009 to recent: **Environmental Consultant**, Sole proprietor and Director EnviroScience

2005 – 2008: **Environmental Scientist Rehabilitation**, Namdeb Diamond Corporation

1995 – 2005: **Environmental Consultant**, Proprietor: EnviroScience

1994 – 1995: **Head of Department**, Biology, University of Namibia

1992 – 1995: **Lecturer** in Ecology and Plant Taxonomy, Biology Dept., Univ. Namibia

1988 – 1991: **Research Associate**, Desert Ecological Research Foundation Namibia

1986 – 1988: **Research Assistant**, Mitrani Center for Desert Ecology, Sede Boqer, Israel and Institute for Landscape Ecology, University Münster, Germany

1986: **Trainee**, Planungsgemeinschaft Mittelrhein-Westernwald (Regional Planning Commission), Koblenz, Germany

1985: **Research Assistant**, Lehrstuhl Bodenkunde, München (Soil Research Institute), Germany

1985: **Trainee**, Untere Landespflegebehörde (District Council, Division for Landscape and Nature Conservation), Neuwied, Germany

1981-1982: **Trainee**, Stadtgärtnerei (Municipal Gardens), Neuwied, Germany

## Languages

Language	Proficiency
German	Excellent
English	Excellent
Afrikaans	Basic

## Hobbies

Hiking, cycling, photojournalism, biogeography research, sketching, needlecraft

## Work experience

2021	<ul style="list-style-type: none"> <li>▪ Training in biodiversity monitoring. Client: MEFT</li> <li>▪ Environmental Impact Assessment for Life of Mine. Client: Namdeb</li> </ul>
2020	<ul style="list-style-type: none"> <li>▪ Biodiversity monitoring for Tsau//Khaeb (Sperrgebiet) National Park. Client: MEFT.</li> <li>▪ Closure plan for Trekkopje Mine. Client: Orano Mining Namibia.</li> <li>▪ Vegetation monitoring. Client: Namdeb</li> <li>▪ Biophysical closure plan. Client Namdeb</li> <li>▪ Biodiversity Action Plan and Cultural Heritage Management Plan. Client Namdeb</li> </ul>

### Curriculum Vitae

	<ul style="list-style-type: none"> <li>Vegetation monitoring. Client: Namdeb</li> </ul>
2019	<ul style="list-style-type: none"> <li>Botanical specialist study for the Environmental Impact Assessment for the African Millimetre Telescope (AMT) on the Gamsberg. Client Environmental Independent Consultants, Windhoek.</li> </ul>
2018	<ul style="list-style-type: none"> <li>Management zoning of the Tsau//Khaeb (Sperrgebiet) National Park. Client: Ministry of Environment &amp; Tourism.</li> <li>Biodiversity framework for the Tsau//Khaeb (Sperrgebiet) National Park. Client: Ministry of Environment &amp; Tourism.</li> </ul>
2017	<ul style="list-style-type: none"> <li>Restoration monitoring at Trekkopje Mine. Client: Areva Namibia.</li> <li>Ecological specialist input to extension of environmental clearance for NamibLead, Erongo Region. Client: Colin Christian &amp; Associates.</li> <li>Environmental Impact Assessment for Obib Resource Integration. Client: Namdeb.</li> <li>Environmental and social screening for the Southern Coastal Mines Extension Project concept study. Client: Namdeb</li> </ul>
2016	<ul style="list-style-type: none"> <li>Update of Namdeb's Environmental Management Programmes for ML 44, 46 and ML 128 in the Tsau//Khaeb (Sperrgebiet) National Park. Client Namdeb.</li> <li>Rehabilitation and closure plan for Walvis Bay Salt Works. Client: Walvis Bay Salt Holdings.</li> <li>Restoration monitoring at Rössing Uranium in the central Namib. Client: Rössing Uranium.</li> <li>Restoration monitoring at Trekkopje Mine. Client: Areva Namibia.</li> </ul>
2015	<ul style="list-style-type: none"> <li>Update of Namdeb's Environmental Management Programmes for ML 42, 43, and 45 in the Tsau//Khaeb (Sperrgebiet) National Park. Client Namdeb.</li> <li>Sites of Special Scientific Interest in Namdeb's licence areas. Client: Namdeb</li> <li>Life of Mine closure costs for Namdeb's operations. Client: Namdeb</li> <li>Restoration monitoring for Trekkopje Mine. Client: Areva</li> </ul>
2014	<ul style="list-style-type: none"> <li>Review and update of Namdeb's rehabilitation plan for Southern Coastal Mines and Elizabeth Bay. Client: Namdeb</li> <li>Environmental input to Environmental Assessment for exploration on Kanabeam, Karas region. Client: SLR Consulting</li> <li>Environmental evaluation and rehabilitation requirements for MTC installations and access roads on the farms Arasab, Pockenbank and Swartpunt, Karas Region. Client: Loja Investments.</li> </ul>
2013	<ul style="list-style-type: none"> <li>Biodiversity zonation of the Greater Fish River Canyon Landscape. Client: Nam-place, Ministry of Environment and Tourism</li> <li>Review and update of Namdeb's rehabilitation plan for selected components of Southern Coastal Mines and Daberas. Client: Namdeb.</li> <li>Input to rehabilitation of Pitchstone's exploration programme in the central Namib. Client: Rio Tinto Exploration.</li> <li>Flora baseline study for Namib Lead mining prospect in the central Namib Desert. Client: Colin Christian &amp; Associates.</li> </ul>
2012	<ul style="list-style-type: none"> <li>Rehabilitation and sensitive areas along the Orange River in the Ai-Ais Hot Springs Game Park. Client: Environmental Investment Fund of Namibia.</li> <li>Environmental Assessment for exploration in EPL 4568. Client: Zebra Investments Seven.</li> <li>Restoration monitoring at Trekkopje Mine. Client: Areva Resources Namibia</li> <li>Input to closure plan for Skorpion Mine, Karas Region. Client: Vendeta Resources.</li> <li>Revision of restoration programme for Langer Heinrich Mine. Client: Langer Heinrich Uranium.</li> </ul>
2011	<ul style="list-style-type: none"> <li>Habitat Management Plan for /Ai-/Ais Hot Springs Game Park. Client: SPAN Programme, Ministry of Environment and Tourism</li> <li>Rehabilitation mapping of the Upper Dome Gorge. Client: Rössing Uranium.</li> <li>Updated biotope assessment for Rössing Mine. Client: Rössing Uranium.</li> <li>Restoration monitoring for Rössing Mine. Client: Rössing Uranium.</li> <li>Restoration monitoring for Skorpion Mine, Karas Region. Client: Skorpion Zinc.</li> <li>Restoration monitoring at Trekkopje Mine. Client: Areva Resources Namibia.</li> <li>Closure cost update for Trekkopje Mine. Client: Areva Resources Namibia.</li> <li>Flora and habitat specialist study for exploration in the Walvis Bay area. Client: Rio Tinto Exploration.</li> </ul>
2010	<ul style="list-style-type: none"> <li>Closure plan for Trekkopje Mine. Client: Areva Resources Namibia.</li> <li>Environmental Impact Assessment for Southern Deflation Deposits, Sperrgebiet. Client: Namdeb.</li> <li>Biodiversity assessment for Southern Khan Exploration Programme. Client: Rössing</li> </ul>

### Curriculum Vitae

	<ul style="list-style-type: none"> <li>Uranium.</li> <li>Restoration programme for Rössing Mine. Client: Rössing Uranium.</li> <li>Restoration programme for Skorpion Zinc Mine. Client: Skorpion Zinc.</li> </ul>
2009	<ul style="list-style-type: none"> <li>Biodiversity Action Plan for Skorpion Zinc, Karas Region. Client: Skorpion Zinc.</li> <li>Restoration framework for Langer Heinrich Uranium Mine. Client: Langer Heinrich Uranium.</li> <li>Rehabilitation planning and closure cost provision for Trekkopje Mine. Client: Areva Resources Namibia.</li> <li>Biodiversity specialists for biotope assessment for Khan river mountains. Client: Rössing Uranium</li> <li>Environmental specialist for development of rehabilitation guidelines for exploration. Client: Ambase</li> <li>Biodiversity specialists for biotope assessment for Trekkopje Mine. Client: Areva Resources Namibia</li> <li>Environmental specialist for assessment of indigenous fruit tree populations in the Caprivi Region. Client: Integrated Rural Development and Nature Conservation (IRDNC)</li> <li>Guest lecturer for rehabilitation. Client: Polytechnic of Namibia</li> </ul>
2005-2008	<ul style="list-style-type: none"> <li>Rehabilitation specialist for compiling corporate, group-wide rehabilitation guidelines. Client: De Beers</li> <li>Project co-ordinator rehabilitation programme. Client: Namdeb.</li> <li>Project co-ordinator rehabilitation plan for Namdeb's licence areas, Sperrgebiet. Client: Namdeb</li> <li>Biodiversity specialist to De Beers Group of Families biodiversity strategy development.</li> <li>Rehabilitation specialist for mine closure framework for the Namibian Chamber of Mines.</li> </ul>
2007	<ul style="list-style-type: none"> <li>Environmental specialist advisor to Namdeb Environmental Section</li> <li>Biodiversity specialist for development of Biodiversity Strategy. Client: Rössing Uranium</li> <li>Environmental Specialist for road construction MR 118. Client: Roads Authority and VKE</li> </ul>
2006	<ul style="list-style-type: none"> <li>Advisor to SKEP Namibia programme. Client: Namibia Nature Foundation</li> <li>Development of Biodiversity strategy for Rössing Uranium Mine. Client: Rössing</li> <li>Co-ordinator rehabilitation plan for Namdeb's licence areas, Sperrgebiet. Client: Namdeb.</li> <li>Environmental Specialist road construction MR 118. Client: Roads Authority and VKE</li> </ul>
2005	<ul style="list-style-type: none"> <li>Amendment to pocket beach areas environmental impact assessment and environmental management plan. Client: Namdeb</li> <li>Advisor to Succulent Karoo Ecosystem Programme (SKEP) in Namibia. Client: Namibia Nature Foundation</li> <li>Field assessment for biodiversity strategy. Client: Rössing</li> </ul>
2004	<ul style="list-style-type: none"> <li>Environmental Management Plan for Namib Coast Biodiversity Conservation and Management (NACOMA) project. Client: World Bank and Regional Council Erongo</li> <li>Project Co-ordinator: Development of Biodiversity Strategy for Rössing Mine. Client: Rössing Uranium</li> <li>Environmental specialist for review of greenhouse gas emission factors for Namibia. Client: CSIR and MET</li> <li>Environmental Assessment and Management Plan for horticulture project in Oranjemund. Client: Oranjemund Spar</li> <li>Contribution to World Heritage Site application for the Richtersveld, South Africa. Client: EcoAfrica</li> <li>Rehabilitation specialist input to the determination of environmental liability of Alexcor Mine, South Africa. Client: EEU-UCT and Legal Resources Centre.</li> <li>Review of tree distributions in Namibia. Client: RAISON</li> <li>Project Co-ordinator: Environmental Impact Assessment for Sonberg extended mining programme in the Sperrgebiet. Client: Sonberg Diamonds.</li> <li>Project Co-ordinator: Environmental Impact Assessment for Multi-Media Communications Backbone, Sperrgebiet. Client: Namdeb.</li> <li>Environmental consultant: Upgrading of M118 (Aus-Rosh Pinah). Client: VKE and Roads Authority.</li> <li>Environmental specialist: central area water supply study. Client: EcoPlan and Namwater.</li> <li>Environmental specialist: rehabilitation guidelines for quarrying in the Klein Windhoek River, Eisenheim. Client: EnviroSolutions and Barloworld.</li> <li>Project Co-ordinator: Vegetation survey of the Auas Mountains, Windhoek. Client: Namibia National Biodiversity Programme (MET).</li> </ul>
2003	<ul style="list-style-type: none"> <li>Botanical specialist: Lower Orange River Management Study. Client: NNF and Department</li> </ul>

## Curriculum Vitae

	<p>of Water Affairs.</p> <ul style="list-style-type: none"> <li>▪ Project Co-ordinator: Environmental baselines and Environmental Management Programme for Gobabis exploration. Namdeb, Oranjemund.</li> <li>▪ Project Co-ordinator: Red data assessment for <i>Juttadinteria albata</i>. Client: Namdeb in cooperation with National Botanical Research Institute.</li> <li>▪ Project Co-ordinator: Rehabilitation plan for Orange River Mines. Client: Namdeb.</li> <li>▪ Project Co-ordinator: Environmental Baseline and Environmental Impact Assessment for Elizabeth Bay Extension, Diamond Area 1. Client: Namdeb.</li> <li>▪ Project co-ordinator: Training and research programme for track rehabilitation in the Sperrgebiet. Client: Ministry of Environment and Tourism.</li> <li>▪ Project Co-ordinator: Vegetation map of the Sperrgebiet. Client: Ministry of Environment and Tourism</li> <li>▪ Botanical specialist for Wet Overburden Mining System project. Client: Namdeb, Anchor and Pisces.</li> <li>▪ Botanical specialist for the Spitzkoppe Area Management Plan and lodge development. Client: NNF and WWF.</li> <li>▪ Environmental specialist for Rössing's tailings dam extension project. Client: Rössing Uranium</li> <li>• Project Co-ordinator: Research programme: Inselbergs as conservation islands in Namibian Nama Karoo. Funding agency: European Community</li> </ul>
2002	<ul style="list-style-type: none"> <li>• Environmental Specialists for M 118 Aus – Rosh Pinah road development. Client VKE &amp; Roads Authority.</li> <li>• Project Co-ordinator: Sperrgebiet Conservation Planning study, stakeholder assessment and implementation strategy. Client: Conservation International and Ministry of Environment and Tourism.</li> <li>▪ Research needs assessment for Sperrgebiet Conservation Planning study. Client: Conservation International and Ministry of Environment and Tourism.</li> <li>▪ Project Co-ordinator: Environmental Baselines for Sendlingsdrift, Diamond Area 1. Client: Namdeb.</li> <li>▪ Project Co-ordinator: Environmental Impact Assessment for Daberas Mine slimes dam. Client: Namdeb</li> <li>▪ Review: Restoration and rehabilitation research framework for Namdeb's Licence Areas. Project Co-ordinator: Environmental Impact Assessment for the pocket beach areas feasibility study, Diamond Area 1, Namibia. Client: Namdeb</li> <li>• Botanical specialist for Tschudi Mine. Client WSP Walmsley and Ongopolo Mining.</li> <li>• Environmental specialist for Kudu gas development, Oranjemund. Client Centre for Marine Studies and Shell.</li> <li>• Review: Preliminary site description of strategic forests in Namibia. Client: Directorate of Forestry.</li> <li>• Environmental Impact Assessment for new road to Grotten Island, Diamond Area 1. Client: Diaz Point Exploration</li> <li>• Review: Impacts of fire on vegetation of the Kavango Region. Client: Kavango Environmental Profiles Project</li> <li>• Project Co-ordinator: Environmental Impact Assessment Oranjemund airport extension. Client: Namdeb</li> <li>• Project Co-ordinator: Environmental Impact Assessment Multi Media communications Backbone Daberas - Oranjemund. Client: Namdeb</li> </ul>
2001	<ul style="list-style-type: none"> <li>• Botanical Specialist for Skorpion Zinc Project dust and SO<sub>2</sub> monitoring programme. Client: WSP Walmsley and Skorpion Zinc Project</li> <li>• Botanical Specialist for Rosh Pinah Landfill selection study. Client: WSP Walmsley and Roshkor</li> <li>• Botanical Specialist for Tsos Water Supply Scheme. Client: NamWater</li> <li>• Environmental Specialist for Aussenkehr Bulk Water Supply Scheme. Client: Windhoek Consulting Engineers and NamWater</li> <li>• Project Co-ordinator: Environmental Impact Assessment for Hohenfels recreational area. Client: Namdeb</li> <li>• Project Co-ordinator: Environmental Impact Assessment for Chameis pocket beach area. Client: Namdeb</li> <li>• Environmental specialist for Rural Water Supply Master Plan of Kunene region. Client: Windhoek Consulting Engineers and Directorate of Rural Water Supply</li> </ul>

## Curriculum Vitae

	<p>Project Co-ordinator: Environmental Impact Assessment for Multi-gain wireless tower at Swartkop, Sperrgebiet. Client: Telecom Namibia</p> <p>Project Co-ordinator: Environmental Impact Assessment for MTC Base transmitter station at Rosh Pinah. Client: MTC and Seelenbinder Consulting Engineers</p> <p>Advisor for indicator development to Environmental Forestry Programme of Namibia-Finland Forestry Programme. Client: Directorate of Forestry</p> <ul style="list-style-type: none"> <li>• Review of Environmental Impact Assessment guidelines for small-scale water supply schemes for Directorate of Rural Water Supply.</li> </ul>
2000	<ul style="list-style-type: none"> <li>• Advisor to Namdeb Environmental Office for Rehabilitation and Closure Plan Development of Orange River Licence area. Client: Namdeb</li> <li>• Project Co-ordinator: Environmental Impact Assessment for the Oranjemund Link Road Feasibility Study, Diamond Area 1, Namibia Client: Ministry of Works, Transport and Communication</li> <li>• Botanical specialists for the kV220 Windhoek – Walvis Bay power line. Client: Walmsley Environmental Consultants and NamPower.</li> <li>• Project Co-ordinator: Restoration ecology in the southern Namib Desert. Client: Namibian National Biodiversity Programme, Directorate of Environmental Affairs</li> <li>• Project Co-ordinator: Baseline survey and preliminary Environmental Impact Assessment for diamond sampling programme of pocket beaches near Bogenfels, Diamond Area 1, Namibia. Client: Namdeb</li> <li>• Environmental specialist for 400 kV power line from Kokerboom to Oranjemund, Namibia. Client: Walmsley Environmental Consultants and Nampower</li> <li>• Review of pasture resources in Namibia for FAO country profile Client: FAO <a href="http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPC/doc/Counprof/namibia.htm">www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPC/doc/Counprof/namibia.htm</a></li> <li>• Review of Sperrgebiet Land Use Plan for Ministry of Environment and Tourism</li> <li>• Environmental training course for road team supervisors Client: Ministry of Works, Transport and Communications</li> <li>• Environmental specialists for rural water supply development plan for the Caprivi region. Client: Windhoek Consulting Engineers and Department of Water Affairs</li> <li>• Field assessment to contribute to Namibian vegetation mapping project Client: National Botanical Research Institute via Biodiversity Programme</li> <li>• Botanical specialist for Namibian Environmental Atlas Project Client: Directorate of Environmental Affairs</li> <li>• Environmental management guide for power line construction Client: Nampower</li> </ul>
1999	<ul style="list-style-type: none"> <li>• Project Co-ordinator: Re-location programme of plants of conservation importance at Daberas, Orange River, Namibia. Client: Namdeb</li> <li>• Botanical specialist for Skorpion Zinc Project, Diamond Area 1, Namibia Client: Walmsley Environmental Consultants and Reunion Mining</li> <li>• Vegetation specialist for Kavango Environmental Profiles Client: Ministry of Environment and Tourism, Environmental Profiles Programme</li> <li>• Review of Forest Biodiversity in Namibia Client: Ministry of Environment and Tourism, Biodiversity Programme</li> <li>• Environmental specialist: Preliminary Environmental Impact Assessment for the feasibility study of the northern railway extension for Namibia Client: Ministry of Works, Transport and Communication</li> <li>• Project Co-ordinator: Review of forest conservation within the protected areas network system of Namibia. Client: Directorate of Forestry</li> <li>• Environmental Impact Assessment for gravel and sand quarrying in the Kleinwindhoek River, Namibia. Client: NRC and Precast Industries</li> </ul>
1998	<ul style="list-style-type: none"> <li>• Environmental Specialist for Lüderitz Port Development, Namibia Client: CSIR and NAMPORT</li> <li>• Environmental Specialist for Kudu gas power plant feasibility study, Diamond Area 1, Namibia. Client: Walmsley Environmental Consultants and NAMPOWER</li> <li>• Project Co-ordinator: Environmental Impact Assessment and Management Plan for diamond mining of Orange River terraces (Daberas), Diamond Area 1, Namibia. Client: Namdeb.</li> <li>• Trainer for rangeland resource assessments in Kunene, North Central and Kavango region. Client: Ministry of Agriculture, Water and Rural Development</li> </ul>

## Curriculum Vitae

1997	<ul style="list-style-type: none"><li>• Project Co-ordinator: Baseline study and Initial Environmental Impact Assessment diamond mining of pocket beaches, Diamond Area 1 Client: Namdeb</li><li>• Project Co-ordinator: Environmental Impact Assessment for diamond mining of Orange River terraces at Daberas, Obib and Sendlingsdrift, Diamond Area 1, Namibia. Client: Namdeb</li><li>• Floral Specialist for Environmental Impact Assessment Skorpion Mine, Diamond Area 1, Namibia. Client: Walmsley Environmental Consultants and Reunion Mining</li><li>• Floral Specialist for Environmental Impact Assessment Haib Copper Mine, Karas Region. Client: Parkman Namibia</li><li>• Project Co-ordinator: Environmental Impact Assessment for reconnaissance drilling in the Engo Valley, Skeleton Coast Park. Client: NAMCOR</li><li>• Project Co-ordinator: Ecological baseline and Preliminary Management Plan for Avis Dam area, Windhoek. Client: Windhoek Municipality and Greenspace</li><li>• Pilot study on rangeland resource assessment in Caprivi and North Central Client: Ministry of Agriculture, Water and Rural Development</li><li>• Environmental advisor: Environmental capacity enhancement project Client: Canadian International Development Agency (CIDA)</li></ul>
1996	<ul style="list-style-type: none"><li>• Environmental Specialist for Sossusvlei transport study, Hardap region Client: Windhoek Consulting Engineers and Ministry of Environment and Tourism</li><li>• Environmental Specialist for Impact Assessment Rundu-Grootfontein pipeline project. Client: Department of Water Affairs</li><li>• Ecological Baseline Study Klein Windhoek River Valley project Client: Windhoek Municipality</li><li>• Biodiversity Ecologist to the National Forest Inventory Programme Client: Ministry of Environment and Tourism</li></ul>
1995	<ul style="list-style-type: none"><li>• Environmental Specialist for Environmental Impact Assessment Olushandja Dam, North Central. Client: Ministry of Agriculture, Water and Rural Development</li><li>• Assessment of remedial measures: Ogongo-Oshakati water supply project Client: Ministry of Agriculture, Water and Rural Development</li></ul>

### Volunteer work and other relevant experience

- Scientific reviewer for international journals, including American Journal of Botany, Arid Land Research and Management, Biological Journal of the Linnean Society, Ecology and Evolution, Environmental Management, Journal of Applied Vegetation Science, Journal of African Ecology, Journal of Arid Environments, Journal of Biogeography, Journal of Environmental Management, Journal of Vegetation Science, Journal of Tropical Ecology, Plant Ecology, Restoration Ecology and South African Journal of Botany.
- Assessor for eco-awards Namibia (environmental certification of tourism establishments)
- External examiner for University of Stellenbosch, South Africa and Namibian University of Science and Technology
- Member of Programme Advisory Committee of Namibian University of Science and Technology
- Mine Closure Working Group at the Namibian Chamber of Mines
- Member of the De Beers Family of Companies Biodiversity peer group
- Member of Succulent Karoo Ecosystem Plan Technical Working Group and Biodiversity Advisory Committee
- Member of Succulent Karoo Ecosystem Programme Namibia Advisory Committee
- Member of BIOTA (German Research Programme)-liaison-, and Long-term Ecological Research committees
- Reviewer Millennium Assessment Gariep Basin
- Member of Millennium Assessment advisory group Gariep Basin
- Core member of the Namibian Biodiversity Task Force, Directorate of Environmental Affairs
- Chair of restoration working group, Namibian National Biodiversity Programme
- Member of Mountain Ecosystem Working Group, National Namibian Biodiversity Programme
- Contributor to internationally reviewed books on southern African flora and deserts
- Co-author of educational books on Namibian environment and plants and their uses

## Curriculum Vitae

- Author of some 85 scientific publications, 54 in internationally reviewed journals and books
- Author of more than 100 popular articles and books on Namibian environment, flora and fauna
- Contributor to UNEP country study on Biodiversity in Namibia
- Member of scientific review board for Haseltonia
- Member of the scientific grant review board of the Israel Research Foundation and National Geographic Society

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### Professional memberships

- Namibian Chamber of Environment
- International Society for Ecological Restoration
- International Association of Vegetation Science
- Association for the Taxonomic Study of the Flora of Tropical Africa (aetfat)
- Namibia Scientific Society
- Namibia Environment and Wildlife Society

### References

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Michael Sibalatani, Senior project coordinator, Namparks 5, Ministry of Environment & Tourism, Michael.Sibalatani@namparks.org

Dr Mary Seely, former director of Gobabeb Training and Research Centre and Desert Foundation of Namibia, M.K.Seely@gmail.com



## Research record

## Publications in internationally reviewed journals

- 1 **Günster, A.** (1992) Aerial seed banks of the central Namib: The distribution of serotinous plants in relation to climate and habitat. *Journal of Biogeography* 19:563-572.
- 2 **Günster, A.** (1993a) Does the timing and intensity of rain events affect resource allocation in serotinous desert plants? *Acta Oecologia* 14:153-159.
- 3 **Günster, A.** (1993b) Microhabitat differentiation of serotinous plants in the Namib Desert. *Journal of Vegetation Science* 4:585-590.
- 4 **Günster, A.** (1994a) Variability of life history parameters of serotinous plants in the Namib Desert. *Vegetatio* 114:149-160.
- 5 **Günster, A.** (1994b) Phenological niches of coexisting serotinous plants in the Namib Desert. *Journal of Tropical Ecology* 10:531-544.
- 6 **Günster, A.** (1994c) Seed bank dynamics - longevity, viability and predation of seeds of serotinous plants in the central Namib. *Journal of Arid Environments* 28:195-205.
- 7 **Günster, A.** (1995a) Grass cover distribution in the central Namib - a rapid method to assess regional and local rainfall patterns in arid regions? *Journal of Arid Environments* 29: 107-114.
- 8 **Burke, A.** (1995) *Geigeria alata* in the Namib Desert: Seed heteromorphism in and extreme arid environment. *Journal of Vegetation Science* 6: 473-478.
- 9 Tenbergen, B., **Günster, A.** & Schreiber, K-F. (1995) Harvesting runoff: the minicatchment technique - an alternative to irrigated tree plantations in semiarid regions. *Ambio* 24: 72-76.
- 10 **Burke, A.** (1997) The impact of large herbivores on floral composition and vegetation structure in the Naukluft Mountains, Namibia. *Biodiversity and Conservation* 6: 1203-1217.
- 11 **Burke, A.** (1997) Is the grass always greener at some sites? - A contribution to patch dynamics in arid regions. *Tropical Ecology* 38: 125-127.
- 12 **Burke, A.**, Jürgens, N. & Seely, M.K. (1998) Floristic affinities of an inselberg archipelago in the southern Namib Desert - relic of the past, centre of endemism or nothing special? *Journal of Biogeography*, 25: 311-317.
- 13 **Burke, A.** (2000a) Classification and ordination of plant communities of the Naukluft Mountains, Namibia. *Journal of Vegetation Science* 11: 53-60.
- 14 **Burke, A.** (2001a) Determinants of inselberg floras in arid Nama Karoo landscapes. *Journal of Biogeography*, 28: 1211-1220.
- 15 **Burke, A.** (2001b) Determining landscape function and ecosystem dynamics to contribute to ecological restoration in the southern Namib Desert. *Ambio* 30: 31-36.
- 16 **Burke, A.** (2002a) Properties of soil pockets on arid Nama Karoo inselbergs – The effect of geology and derived landform. *Journal Arid Environments*, 50: 219-234.
- 17 **Burke, A.** (2002c) Island – matrix relationships in Nama Karoo inselberg landscapes. Part I: Do inselbergs provide a refuge for matrix species? *Plant Ecology*, 160: 79-90.
- 18 **Burke, A.** (2002b) Island – matrix relationships in Nama Karoo inselberg landscapes. Part II: Are some inselbergs better sources than others? *Plant Ecology*, 158: 41-48.
- 19 **Burke, A.** (2002d) Plant communities of a central Namib desert inselberg landscape. *Journal of Vegetation Science*, 13: 483-492.
- 22 **Burke, A.** (2002f) Are Namibian inselbergs conservation islands? A floral perspective. *South African Journal of Science*, 98: 560-562.
- 20 **Burke, A.** (2003a) The role of inselbergs in contributing to local and regional plant species richness. *Biodiversity and Conservation*, 12: 469-486.
- 21 **Burke, A.**, Esler, K., Pienaar, E. & Barnard, P. (2003) Species richness and floristic relationships between mesas and their surroundings in southern African Nama Karoo. *Diversity and Distributions*, 9: 43-53.
- 23 **Burke, A.** (2003e) How special are Etendeka mesas? Flora and elevation gradient in an arid landscape in north-west Namibia. *Journal of Arid Environments* 55: 747-764.
- 24 **Burke, A.** & Mannheimer, C. (2003) Towards a density measure for assessments of arid plant populations - Examples from the southern Namib Desert. *African Journal of Ecology*, 41: 254-256.
- 25 **Burke, A.** (2003c) The role of inselbergs in a changing world – global trends. *Diversity and Distributions*, 9: 375-383.
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- management of the Nama Karoo. Paper presented at the International Rangeland Conference, Durban, 26 July - 1 August 2003.
- 27 **Burke, A.** (2003f) Practical measures in arid land restoration after mining- a review for the southern Namib. *South African Journal of Science* 99: 413-417.
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  - 29 **Burke, A.** (2004b) From plains to inselbergs – Species in special habitats as indicators for climate change? *Journal of Biogeography* 31: 831-841.
  - 30 **Burke, A.** (2004a) A preliminary account of patterns of endemism in Namibia's Sperrgebiet, succulent karoo. *Journal of Biogeography* 31: 1613-1622.
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  - 32 **Burke, A.** (2004c) Conserving tropical biodiversity: the arid end of the scale. *Trends in Ecology and Evolution* 19: 225-226.
  - 33 **Burke, A.** & Cloete, J. (2004) Restoring tire tracks: lessons from the southern Namib. *Ecological Restoration* 22: 269-274.
  - 34 **Burke, A.** & Mannheimer, C. (2004b) The Sperrgebiet – a diversity hotspot of desert plants. *Desert Plants* 20: 19-25.
  - 35 **Burke, A.** (2005a) Endemic plants of the arid succulent karoo in Namibia – towards hypotheses for their evolution. *Ecography* 28: 171-180.
  - 36 **Burke, A.** (2005b) Biodiversity patterns in arid, variable environments – a case study of central Namib inselbergs and mountain floras. *Mountain Research and Development*, 25 (3): 228-234.
  - 37 **Burke, A.** (2005c) Status of succulent shrubs in the southern Namib Desert, Succulent Karoo Biome. *African Journal of Ecology* 43: 325-331.
  - 38 **Burke, A.** (2005d) Vegetation types of mountain tops in Damaraland, Namibia. *Biodiversity and Conservation* 14: 1487-1506.
  - 39 **Burke, A.** (2006) Savanna trees in Namibia - Factors controlling their distribution at the arid end of the spectrum. *Flora* 201: 189-201.
  - 40 **Burke, A.** (2007a) Plant endemism in the central Namib Desert. *Evolutionary Ecology Research* 9: 283-297.
  - 41 **Burke, A.** (2007c) How sampling effort affects biodiversity measures in an arid succulent karoo biodiversity hotspot. *African Journal of Ecology* 46: 488-499.
  - 42 **Burke, A.** (2008b) The effect of topsoil treatment on the recovery of rocky plain and outcrop plant communities in the succulent karoo. *Journal of Arid Environments* 72: 1531-1536.
  - 43 **Burke, A.** (2007b) Recovery in naturally dynamic environments – A case study from the Sperrgebiet, southern African arid succulent karoo. *Environmental Management*, 40: 635-648.
  - 44 **Burke, A.**, Kyläkorpi, L., Rydgren, B. & Schneeweiss, R. (2008) Testing a Scandinavian biodiversity assessment tool in an African desert environment, *Environmental Management* 42: 698-706.
  - 45 Boyce, D., Newton, R., **Burke, A.** & Kolberg, H. (2008) Determination of *Salsola nollothensis* seed germination for habitat restoration of Namibian sandy beaches. Presentation at 9th ISSS Conference for Seed Biology, 6-11 July 2008, Olsztyn, Poland.
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  - 47 **Burke, A.**, Newton, R., Boyce, D., Kolberg, H. & Brunner, I. (2011) Re-establishing a keystone species in an arid coastal environment: Saltbush (*Salsola nollothensis*) in Namibia. *Ecological Restoration* 29: 25-34.
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  - 49 **Burke, A.** (2013) Succulent plants on arid inselbergs. *Flora – Morphology, Distribution, Functional Ecology of Plants* 208 (5-6): 321-329.
  - 50 **Burke, A.** (2014) Natural recovery of dwarf shrubs following topsoil and vegetation clearing on gravel and sand plains in the southern Namib Desert. *Journal of Arid Environments* 100-101: 18-22.
  - 51 **Burke, A.** (2015) Rare plants in a Succulent – Nama Karoo ecotone in southern Africa. *African Journal of Ecology* 53: 93-102.
  - 52 **Burke, A.** (2017) New plant distribution records for southern Namibia. *Bothalia* 47(1), a2251. <https://doi.org/10.4102/abc.v47i1.2251>
  - 53 **Burke, A.** (2017b) Factors influencing colonisation processes in two contrasting mine sites in the Namib Desert. *Journal of Arid Environments*. Online early view. doi.org/10.1016/j.jaridenv.2017.09.012.

- 54 **Burke, A.** (2019) How important is patch size relative to patch isolation in an arid inselberg landscape? South African Journal of Botany 127: 1-11.

#### Publications in locally reviewed journals

- 1 **Günster, A.** (1994d) A contribution to the algal phytogeography of the southern African west coast - a case study at Elizabeth Bay, Namibia. *Dinteria* 24:29-37.
- 2 **Günster, A.** (1994e) Retaining seeds - a winning or a losing battle. *Veld & Flora* 80:113.
- 3 **Günster, A.** (1995b) The multiseasonal desert plant *Codon royenii*. *Cimbebasia* 14:23-30.
- 4 **Burke, A.** (1997) Vegetationskundliche Studien in Namibia. Arbeitsberichte der Landschaftsökologie, Universität Münster.
- 5 **Burke, A.** (2000a) Living diamonds – contributing to restoration of southern Namib flora. *Veld & Flora*, December 2000: 180-181.
- 6 **Burke, A.** & Strohbach, B. (2000b) Review: Vegetation studies in Namibia. *Dinteria* 26: 1-24.
- 7 **Burke, A.** (2000c) Plant diversity of a man-made wetland – The Olushandja Dam in north central Namibia. *Dinteria* 26: 25-44.
- 8 **Burke, A.** (2001c) Southern Namib restoration ecology – a research and monitoring framework for appropriate rehabilitation and restoration. In: Proceedings of the Symposium on Co-management of resources off the southwestern coast of Africa, Lüderitz, Namibia (ed. A.T. Critchley), 21-24 June 2000, Namibian Ministry of Fisheries and Marine Resources, pp. 22, 260 pp.
- 9 **Burke, A., Dauth, H. & Louw, M.** (2001a) The Skorpion Zinc Project – Balancing development and conservation. Poster presented at Symposium on Co-management of resources off the southwestern coast of Africa, Lüderitz, Namibia, 21-24 June 2000, Namibian Ministry of Fisheries and Marine Resources.
- 10 **Burke, A., Dauth, H. & Louw, M.** (2001b) Balancing Conservation and Development. Presented by M. Louw at the Conference on Environmentally Responsible Mining in Southern Africa, 25-27 September 2001, Gauteng, South Africa.
- 11 **Burke, A.** (2002e) Present vegetation in the Kavango Region. *Journal of the Namibia Scientific Society* 50: 133-145.
- 12 **Burke, A.** (2003b) Floristic relationships between inselbergs and mountain habitats in the central Namib. *Dinteria* 28: 19-38.
- 13 **Burke, A.** (2003d) Vegetation types of the Brukkaros Mountain – A hide-out for some winter-rain related species and range resources? *Journal of the Namibia Scientific Society* 51: 97-113.
- 14 **Burke, A. & Mannheimer, C.** (2004) Plant species of the Sperrgebiet (Diamond Area 1). *Dinteria* 29: 79-109.
- 15 **Burke, A., Cooper, T. & Noli, D.** (2004) Spatial and temporal patterns of rain in the Sperrgebiet, south-west Namibia. *Journal of the Namibia Scientific Society* 52: 117-122.
- 16 **Burke, A.** (2005) Environmental planning and rehabilitation in the Sperrgebiet. Proceedings of the De Beers Group Enviro Conference 2005, Johannesburg 23-25 August 2005, (ed. by Watson, I. & Wickens, P.): 53-59.
- 17 **Burke, A.** (2006) Setting rehabilitation standards in a future National Park – Namdeb's licence areas in the Sperrgebiet, Namibia. In: De Beers Family of Companies 2006, Annual Environmental Conference Proceedings, Johannesburg, 20-22 September, 397 pp. (ed. by Maree, S.): 82-90.
- 18 **Burke, A.** (2008c) The vegetation of the Spitzkoppe area – 2115CC. *Dinteria* 30: 93-131.
- 19 **Burke, A. & Witteben, M.** (2008) The vegetation of the Auas Mountains. *Dinteria* 30: 41-91.
- 20 **Burke, A.** (2008) Biodiversity strategy in "brown fields" operations. Paper presented at De Beers Family of Companies Environment and Community Workshop, Johannesburg, 20-21 October 2008.
- 21 **Burke, A.** (2012) Rekultivierung in der Wüste - Verpflanzung von Sukkulente als eine praktische Massnahme in der Namib? *Avonia* 154-158.
- 22 **Burke, A.** (2012) Determining carrying capacities in highly variable and unpredictable environments – A Namibian perspective. *Dinteria* 32: 70-77.
- 23 **Burke, A.** (2012) Beyond species lists – endemics and their use in environmental management in Namibia. *Dinteria* 32: 81-90.
- 24 **Burke, A., Rügheimer, S., Nanyeni, L. & Klaasen, E.** (2013) An annotated plant checklist of the southern Nubib Mountains (2516AA). *Dinteria* 33: 66-76.
- 25 **Burke, A.** (2014) Plant species of the Naute Game Park – an annotated inventory. *Dinteria* 34: 3-11.

- 26 **Burke, A., Rügheimer S. & Nanyeni L.** (2015) A plant checklist for the Bismarckberge in the central highlands of Namibia. *Dinteria* 35: 3-12.
- 27 **Burke A.** (2017) Biodiversity zoning in the Greater Fish River Canyon Landscape in southern Namibia. *Namibian Journal of Environment* Vol. 1, Section A: 60-71.

#### Contributions to books

- Günster, A., Hadley, N.F., Mitchell, D., Nobel, P.S. & Seely, M.** (1994) Form and function. *Deserts - The illustrated Library of the Earth, Weldon Owen Publ., Sydney*. pp. 66-79.
- Jürgens, N., **Burke, A., Seely, M. & Jacobsen, K.** (1997) Desert. In: Cowling & Richardson (eds.), *Vegetation of Southern Africa*, Cambridge University Press pp. 189-214.
- Jürgens, N. & **Burke, A.** (2000) The arid scenario: Inselbergs in the Namib desert are rich oases in a poor matrix (Namibia and South Africa). In: Porembski, S. & Barthlott W. (eds.), *Vegetation of Inselbergs, Ecological Studies*, Springer Verlag, Berlin, pp. 237-258.
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#### Popular and educational publications

- 1 **Günster, A.** (1992). Masters of minimum moisture. *Flamingo* 4(34):31-33.
- 2 **Günster, A.** (1993). Dune plants. *Flamingo* 5 (47):16-19.
- 3 **Günster, A.** (1993). Fairy circles - What causes them? *Flamingo* 5(50):13-15.
- 4 **Günster, A.** (1994). Plants from the ocean. *Flamingo* 6(58):39-40.
- 5 **Günster, A.** (1994). Namib Desert plants - survival strategies. *Rössing Magazine*, April 1994:12-17.
- 6 **Günster, A.** (1994). Fatal attraction: Plant-insect interactions can be beneficial or detrimental for plant, insect or man. *Flamingo*, October 1994:24-29.
- 7 **Günster, A.** (1994). Namib fairy tales. *Getaway*, December 1994.
- 8 **Günster, A.** (1995). Between land and sea: Fauna and flora of the Namibian coastline. *Rössing Magazine*, May 1995:6-12.
- 9 **Günster, A.** (1995). Journey through time. *Flamingo*, September 1995:8-11.
- 10 **Burke, A.** (1996). The mountain of fountains. *Flamingo*, February 1996:39-41.
- 11 **Burke, A.** (1996). Plant lore - Plants are manufactured into a variety of products. *Flamingo*, June 1996:40-43.
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- 13 **Burke, A.** (1996). Threatened or threatening - Lilies in Namibia. *Flamingo* August 1996:24-26.
- 14 **Burke, A.** (1996). Conserving biodiversity at all levels. *Flamingo* September 1996: 36-39.
- 15 **Burke, A.** (1996). Wealth of the veld. *Flamingo* November 1996: 18-24.
- 16 **Burke, A.** (1996). Where are all the forests gone? *Flamingo* December 1996: 28-35.
- 17 **Burke, A.** (1997). Cultivating veld fruits. *Flamingo* October 1997: 15-22.
- 18 **Burke, A. & Burke, J.** (1996). Mountains between desert and escarpment. *Flamingo*, May 1996:28-32.
- 19 **Günster, A., Maggs, G. & Kolberg, H.** (1994). Conserving wild crops. *Flamingo* 6:30-31.
- 20 **Burke, A., Du Toit, A., Karita & T. Sguazzin** (1995). Let's look at seaweeds. *Enviroteach Resource Material for Teachers*. Typoprint, Windhoek, 55 pp.
- 21 **Günster, A. & Burke, J.** (1995). Damaraland. *Flamingo*, July 1995:49-53.
- 22 **Günster, A. & Burke, J.** (1995). Nature walk in the Namib-Naukluft Park. *Flamingo*, September 1995:36-39.
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- 24 **Sguazzin, T. & Burke, A.** (1996). Let's look at grasses. Typoprint, Windhoek, 81 pp.
- 25 **Burke, A. & Burke, J.** (1998). Across the sea to Ireland. *Flamingo*, January 1998.
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## Curriculum Vitae

- 33 **Burke, A.** (1999). The wondrous Welwitschia. Flamingo, November 1999: 8-10.
- 34 **Burke, A.** (1999). Conservation of biodiversity in practice. AgriViews 2(4): 8-9.
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- 117 Ministry of Environment and Tourism (2018) Training manual for the biodiversity monitoring framework for the Tsau/Khaeb (Sperrgebiet National Park. Directorate of Wildlife and National Parks, Windhoek, 71 pp.

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- Burke, A.** (2011) Coexistence of mining and conservation –a case study from the Sperrgebiet National Park. Presentation at the "Mining in Protected Areas Conference" in Swakopmund, 24-25 November 2011.
- Burke, A.** (2013) Rehabilitation and sensitive areas along the Orange River in the /Ai-/Ais Hotsprings Game Park – A conservation biology case study. Presentation to Polytechnic Nature Conservation students, March 2013.
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CURRICULUM VITAE (abridged) - JESSICA KEMPER

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 Surname Kemper  
 Date / place of birth 4 April 1967, Buenos Aires, Argentina  
 Sex Female  
 Marital status Married  
 Nationality South African, German, Permanent Resident in Namibia  
 Home language English, German  
 Other languages Afrikaans (speak, read, write and understand adequately)  
 Criminal offences None  
 Health Excellent

Educational Qualifications

School

Last school attended German School Johannesburg, Gauteng, South Africa (1984-1987)  
 Highest standard passed Matric (1986), German post-matric (Abitur) (1987)  
 Matric subjects passed English, German, French, Afrikaans, Mathematics, Biology, History

Higher Education

University attended University of the Witwatersrand (1988-1992)  
 Degrees passed BSc (Zoology and Botany majors)  
 BSc Honours (Zoology)  
 Distinctions obtained Zoology Honours  
 Honours research projects Biogeography of *Bradypodion* (Chamaeleonidae)  
 Comparative skeletal anatomy of *Falco*

University attended University of Cape Town (1994-1997)  
 Degree passed MSc (Botany), Institute for Plant Conservation, Department of Botany, June 1997  
 Title of thesis The effects of fragmentation of South Coast Renosterveld on vegetation patterns and processes  
 Supervisors Prof. R.M. Cowling  
 Dr. D.M. Richardson

University attended University of Cape Town (2001-2006)  
 Degree PhD, Avian Demography Unit, Department of Statistical Sciences.  
 Title of thesis Heading towards extinction? Demography of the African Penguin in Namibia  
 Supervisors Prof. L.G. Underhill, Avian Demography Unit, UCT  
 Dr. J-P. Roux, Ministry of Fisheries and Marine Resources, Namibia  
 Dr. R.J.M. Crawford, Marine and Coastal Management, Cape Town, South Africa

Employment History

Jan. 2010 – present Freelance biologist  
 Activities include  
 (a) continued research on African Penguin demography and foraging ecology,  
 (b) monitoring of coastal birds on the Lüderitz Peninsula,  
 (c) conducting (avi)faunal specialist studies for environmental assessments,  
 (d) designing and conducting bird monitoring programmes for (future) wind energy installations,  
 (e) assisting with the identification and description of "Ecologically or Biologically Significant marine Areas" in Namibia,  
 (f) writing and editing scientific / popular texts,  
 (g) photographically documenting the biodiversity of the Lüderitz Peninsula.

Feb. 2008 – Jan. 2010 Ministry of Fisheries and Marine Resources (MFMR), Namibia  
 Senior biologist and head of section: Seabirds and Islands. This was a two-year contract post; I headed a team of up to ten staff, conducting a range of monitoring and research activities on a number of seabirds breeding in Namibia and was responsible for the management of Namibia's offshore islands, as well as the management of the MFMR seabird rehabilitation facility.

I assisted with the design and proposal for the declaration of the Namibian Islands' Marine Protected Area (NIMPA) for MFMR, co-wrote the first draft of NIMPA's management plan and assisted with the drafting of the envisaged monitoring and evaluation programme in NIMPA.

March 2005 – June 2007 BCLME Project LMR/EAF/03/02 (Top Predators as Biological Indicators of Ecosystem Change in the BCLME)  
 Co-chair of Seabird Task Group. This part-time contract involved the collation and analysis of historical seabird time series, setting up and maintenance of seabird databases, as well as the coordination of seabird surveys and new time series.

March 1998 - March 1999 Botanical Society of South Africa  
 Conservation officer. I co-ordinated a project investigating incentives to encourage private landowners to protect conservation-worthy land. I also evaluated development proposals, structure plans and environmental policy issues, and provided input on impact studies. This was a one-year contract post.

Nov. 1997 - Feb. 1998 Western Cape Nature Conservation, Scientific Services  
Researcher on Dassen Island. My main function was to collect data for an ongoing monitoring project to evaluate the rehabilitation success of African penguins after the Apollo Oil Spill in 1994. This involved regular population size monitoring, recording of ringed birds, evaluating breeding success in rehabilitated penguins and search and rescue of sick and oiled penguins. This was a 4-month contract post.

Feb. 1997 - Oct. 1997 Institute for Plant Conservation, University of Cape Town  
Research and administrative assistant, producing papers for publication from MSc thesis, co-organising an international workshop on Namaqualand plant ecology during July 1997, maintaining and updating the reference database.

#### Other Seabird Experience

March 1998 – March 1999: Regular volunteer at SANCCOB (Southern African Foundation for the Conservation of Coastal Birds); volunteer during the *Treasure* oil spill (August 2000).

June 2000 to present: Managing MFMR's seabird rehabilitation centre (entirely voluntary).

#### The African Penguin Conservation Project (May 2000 to present)

I initiated the African Penguin Conservation Project as a means of improving the conservation status of the African Penguin in Namibia. It is run purely on a voluntary basis. The project focuses on seabird rehabilitation, the use of artificial nests for improving breeding success of African Penguins, as well as on monitoring and conservation research projects of African penguins and other coastal bird species in Namibia.

The project has been endorsed by the Namibian Nature Foundation (NNF) as a conservation-worthy initiative and seeks to improve collaboration with MFMR, other conservation agencies such as the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) and the South African Bird Ringing Unit (SAFRING).

#### Memberships / Other Activities

- Founding trustee (formerly director) of the Brown Hyena Research Project Trust since December 2003.
- Member of the Namibia Bird Club since May 2011.
- Committee member of the Namibian Environment & Wildlife Society since June 2014.
- Member of the Namibian Integrated Coastal Zone Management Scientific Group since July 2014.
- Member of the IUCN SSC Penguin Specialist Group since May 2016.
- Associate editor of *Ostrich* since August 2016.
- Associate member of the Namibian Chamber of Environment since December 2016.
- National (Namibian) representative to the AEWB Benguela Coastal Seabirds International Working Group since December 2019.

My hobbies include bird, reptile and spider watching, "citizen science" bird atlas (for SABAP 2), exploring the Lüderitz peninsula and documenting its fauna and flora photographically, walking my dogs and reading.

#### Key Publications

Du Toit, M., Boere, G.C., Cooper, J., de Villiers, M.S., Kemper, J., Lenten, B., Petersen, S.L., Simmons, R.E., Whittington, P.A. and Byers, O.P. (eds). (2002). Conservation Assessment and Management Plan for Southern African Seabirds. Cape Town: Avian Demography Unit & Apple Valley: Conservation Breeding Specialist Group.

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#### Recent specialist assessments – Environmental Impact Assessments

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#### References

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## ABBREVIATED CURRICULUM VITAE OF Dr. D. NOLI

*“Dr Dieter Noli... has also (amongst other things) worked his way across the Atlantic on a sailing boat, shot quail in Texas, caught trout in the Rockies, canoed solo down the first 1700 km of the Mississippi, ridden horses in Arabia, delivered a camel calf in the Kalahari and parachuted into a tree in the South-Western Cape.” (EWI Namdeb – 4<sup>th</sup> quarter 1995, page 17).*

### PERSONAL DETAILS

Name : Dieter Noli  
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Nationality : German/RSA/ (Namibian permanent residence)  
Home languages : German/English/Afrikaans  
Occupation : Contract Desert Archaeologist in the Namibian Sperrgebiet since 1995.

### UNIVERSITY QUALIFICATIONS

1983 – 1993 University of Cape Town: BA, Hons, MA and PhD – all in Archaeology

### ACADEMIC PUBLICATIONS

NOLI, D. 1985. Low altitude aerial photography from a tethered balloon. *Journal of Field Archaeology* 12 (4): 497 – 501.  
NOLI, D. 1988. Results of the 1986 excavation at Hailstone Midden (HSM), Eland’s Bay, western Cape Province. *South African Archaeological Bulletin*. 43: 43 – 48.  
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### SELECTED POPULAR EDUCATIONAL ARTICLES

NOLI, D. 1993. The never-lution of the species. *STYLE* – September 1993  
NOLI, D. 1994. It’s all in the genes. *STYLE* – July 1994  
NOLI, D. 1995. Reaching for the past. *EWI Namdeb* – 4<sup>th</sup> quarter 1995.  
NOLI, D. 1997a. Brown Heyena: Beauty or beast? *EWI Namdeb* – 1<sup>st</sup> quarter 1997  
NOLI, D. 1997b. The Orange River before the discovery of Diamonds. *EWI* – 2<sup>nd</sup> quarter 1997.  
NOLI, D. 1997c. Protecting the National Heritage. *EWI Namdeb* – 4<sup>th</sup> quarter 1977.  
NOLI, D. 1998a. The Sperrgebiet: growing in favour. *EWI Namdeb* – 1<sup>st</sup> quarter 1998.  
NOLI, D. & Kali, D. 1998b. 90 years of “pretty stones” in the desert. *EWI* – 1<sup>st</sup> quarter 1998.  
NOLI, D. 1998b. The trackless desert. *EWI Namdeb* – 2<sup>nd</sup> quarter 1998.  
NOLI, D. 1998c. Of trains and diamonds. *EWI Namdeb* – 3<sup>rd</sup> quarter 1998.  
NOLI, D. 1999. The land use debate. *EWI Namdeb* – 1<sup>st</sup> quarter 1999.  
NOLI, D. 1999. The history of the Sperrgebiet. *EWI Namdeb* – 2<sup>nd</sup> quarter 1999.  
NOLI, D. 1999. A labour of love. *EWI Namdeb* – 3<sup>rd</sup> quarter 1999.  
NOLI, D. 2000. Rain in the Desert *EWI Namdeb* – 2<sup>nd</sup> quarter 2000.

### SPECIALIST CONTRIBUTIONS TO ENVIRONMENTAL IMPACT ASSESSMENTS

1997a. EIA for Engo Valley in Skeleton Coast Park, for Namcor test drilling operation.  
1997b. Initial EIA for Pocket beaches north of Chamais, for Namdeb mining operation.  
1998a. Initial EIA for Kudu Gas power station at Oranjemund.  
1998b. EIA for Luederitz Harbour Development for Namport.  
1998c. EIA for Oranjemund Link Road for the Ministry of Works.  
1999. Initial EIA for power line from Oranjemund to Keetmanshoop, for Nampower.  
2000a. EIA for power line from Skorpion to Keetmanshoop, for Nampower  
2000b. Initial EIA for Pocket beaches north of Dreimaster Bay, for Namdeb mining operation.  
2000c. EIA for mining & smelting quartz near Windhoek & Omaruru, for Namibian Smelters.  
2000d. EIA for upgrade of first half of railway line between Luedertiz and Aus.  
2001b. EIA for upgrade of second half of railway line between Luederitz and Aus.  
2003. EIA for the use of a Wet Overburden Mining System in MA1, near Oranjemund, Nam.

### OTHER ARCHAEOLOGICAL CONSULTATION & RESEARCH WORK

1995. Archaeological Survey of the Sperrgebiet coastline and the northern banks of the first 90 km of the Orange River for Namdeb.  
1998. Conducted rescue collections and a rescue excavation at archaeological sites ahead of mining operations along the northern banks of the lower Orange River for Namdeb.  
1999a. Investigated a historical graveyard near Luederitz for Namdeb.  
1999b. Escorted UCT review consultants along the northern banks of the lower Orange River.  
2000a. Workshop on Sperrgebiet pocket beaches for Namdeb.  
2000b. Investigation of terrain near Rosh Pinah ahead of prospecting for Rio Algom.  
2000c. Investigation of two proposed Quarry sites near Luedertiz.  
2001a. Investigation of Elizabeth Bay mining area for Namdeb.  
2001b. Investigation of Sendlingsdrift farm for for Namdeb.  
2001c. Investigation of Windhoektal for Namdeb.  
2001d. Follow-up for Huib Plateau Powerline route for Nampower.  
2001e. Investigation of Koichab area for Falconbridge EPL.  
2002. Investigation of Namdeb Production Expansion Study sites in Namibian Diamond Area.  
2003. Juttadinteria Albata survey of both banks of last 90 km Orange River for Namdeb.  
2005a. Investigation of Pockenbank site on Aus/Rosh P. road for Min. of Works subcontractor.  
2005b. Investigation of graves at Eliabeth Bay mining area for Namdeb.  
2005. Investigation of graveyard at Charlottenthal for Namdeb.  
2013. Baseline study of the archaeology of the Karingarab area for Namdeb

### MARITIME ARCHAEOLOGY

2008. Recognised the importance of, initiated and conducted the primary excavation of the “Bom Jesus”, lost near Oranjemund in 1533 while en route from Portugal to India and found by Namdeb on the 1<sup>st</sup> of April 2008. Some 5111 items were recovered (including 2256 gold coins with a weight of 21.15 kg) for a total artefact weight of about 33 tons. The comparatively untouched nature of the site before excavation, the amazing state of preservation of many of the materials, the age of the wreck and the dearth of physical evidence then existing for that period of maritime history made the wreck one of the archaeological finds of the century.

### REFEREES

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([jurgen.jacob@namdeb.com](mailto:jurgen.jacob@namdeb.com))