

Name: Dr Pierré Smit

Current profession: Environmental Consultant

Date of Birth: 6 April 1963

Nationality: Namibian

Family: Married to Sugnet (36 years) with two children, Anja and Willem

Countries of work experience: Namibia, South Africa, Germany (Research)



Education:

Institution:	Ruhr Universität Bochum, Germany / UNAM, Namibia
Date:	- April 2006
Degree(s) or Diploma (s) obtained:	PhD (Landscape Ecology)
Institution:	University of Stellenbosch, South Africa
Date:	February 1982 - March 1991
Degree(s) or Diploma (s) obtained:	BA, BA Hons, HED, MA (Geography)

Certified copies of Dr Smit's qualifications are available on request.

Languages:

Language	Speaking	Reading	Writing
English	<i>Excellent</i>	<i>Excellent</i>	<i>Excellent</i>
Afrikaans	<i>Excellent</i>	<i>Excellent</i>	<i>Excellent</i>
German	<i>Fair</i>	<i>Good</i>	<i>Poor</i>

Employment Record:

Date:	December 2018 - present
Employer:	Self-employed
Position held:	Environmental Assessment Practitioner
Date:	January 2015 to November 2016
Employer:	Langer Heinrich Uranium
Position held:	Land use and mine rehabilitation specialist, Department of Environmental Management
Date:	August 2008 to November 2014
Employer:	Rössing Uranium Limited
Position held:	Senior Advisor: Sustainable Development; Team Leader: Environmental Management
Date:	August 1995 to June 2014
Employer:	University of Namibia
Position held:	Senior Lecturer and Researcher, Head of Department of Geography and Environmental Studies

Experience:

Dr Smit is a born and bred Namibian of European descent. His parents were farmers, and he grew up in small villages and a rural part of Namibia before he went to the University of Stellenbosch in South Africa to study.

Qualified with a MA in Geography, he returned to Namibia where he commenced with a career in environmental consulting. In 1992 he was part of the Namibian delegation to the Earth Summit in Rio de Janeiro and part of a team to compose Namibia's Green Plan, the Environmental Impact Assessment (EIA) Policy of Namibia and Namibia's First 10-year Strategic Plan of Action for Sustainable Development through Biodiversity Conservation. In 1995 he joined the Department of Geography and Environmental Studies at the University of Namibia, where he lectured Climatology, Geomorphology, Biogeography and Environmental Studies. He specialized in Landscape Ecology and gradually introduced the lecturing of applied science in crosscutting and multidisciplinary modules such as Environmental Assessment, Urban and Regional Development, Sustainable Development and Environmental Planning to post-graduate students. As such he also supervised and mentored post-graduate students at the Masters- and PhD-level.

After his career in education (1995 – 2008) Dr Smit joined the mining sector where he worked in the fields of Environmental Management, Sustainable Development, Rehabilitation and Mine Closure Planning until 2016.

Dr Smit and his wife took a sabbatical in 2017 to celebrate 30 years of married life, travelled the Far East and returned to Swakopmund in Namibia where they still reside. Since 2018 he consults for several companies in the fields of Environmental Management, Environmental Audits, EIAs, Strategic and Master Urban and Regional Development Plans, Competency Training, Mine Closure Planning, and Sustainable Development.

His fields of expertise include, but are not limited to:

- Lecturing at a tertiary education institution in Geography, Landscape Ecology, Environmental Assessment and Environmental Planning.
- Research on environmental change and community-based management of natural resources.
- Practicing Environmental Assessment: Social and Environmental Impact Assessments (SEIAs) and the development and implementation of Environmental Management Plans (EMPs).
- Managing the environment: Environmental Management Systems (EMS); Environmental Compliance, development and implementation of environmental policies, procedures and protocols; conducting audits.
- Planning: Gap Analysis, Environmental Screening and Environmental Sensitivity Analysis; Risk Assessment; Mine Closure Planning; Rehabilitation Planning; Business Development and Business Improvement Planning; Green Economy Development; Community Relations Management; Strategic and Master Development Planning.
- Sustainable development: Due Diligence (e.g., Equator Principles, SD and Millennium Goals, Internal and GRI Reporting, IFC standards); Forest Stewardship Council (FSC); Good Governance; Environmental Stewardship.

As a team leader, Dr Smit supervised environmental specialists – both in the mining industry and at an institution of higher education. He has many years of experience in performance management, business improvement and innovation, corporate governance, and strategic planning. Being a landscape ecologist and geographer by profession, Dr Smit is conversed with the fields of Climatology, Climate change and Air Quality; Biodiversity, Landscape Ecology and Rehabilitation; Waste Management (including Hazardous Substances); Land Use Planning and Management; Strategic and Master Plans for Urban and Regional Development; and Environmental Change (as a result of human impacts). He is also very well accustomed with the diversity of arid environments, as a researcher, excursion and tour leader, avid traveller, and environmental consultant, which he applies from time-to-time as a specialist tour guide. A list of publications can be provided on request.

Professional projects as an environmental consultant:

Name of assignment / project:	Scoping (including impact assessment) Report for the proposed new water pipeline from the Oanob Dam to the Dordabis Iron Ore Mine
Year:	July - September 2023
Client:	Lodestone Namibia (Pty) Ltd
Activities performed:	Environmental Impact Assessment and Environmental Management Plan

Name of assignment / project:	Application for renewal of Environmental Clearance Certificate for the proposed PV Power Plant of TeraSun Energy near Arandis
Year:	August 2023
Client:	TeraSun Energy (Pty) Ltd
Activities performed:	Visual Environmental Inspection Report and administration of the renewal application process of the Environmental Clearance Certificate

Name of assignment / project:	Amended Environmental Management Plan for the Swakopmund-Langer Heinrich water supply scheme.
Year:	July 2023
Client:	NamWater
Activities performed:	Revision and update of Environmental Management Plan

Name of assignment / project:	Visual Inspection Report of exploration activities on Namibplaas.
Year:	July 2023
Client:	Namibplaas CC
Activities performed:	Visual assessment report about exploration activities on Namibplaas

Name of assignment / project:	Concise Report about mineral rights on Namibplaas.
Year:	July 2023
Client:	Namibplaas CC
Activities performed:	Descriptive report about mineral rights on Namibplaas

Name of assignment / project:	Soil study (contamination) within the port of Walvis Bay.
Year:	June – July 2023
Client:	Manica Group Namibia (Pty) Ltd
Activities performed:	Screening and assessment report

Name of assignment / project:	Conceptual Mine Closure Plan for Hopewell Mine near Outjo in Namibia.
Year:	May – June 2023
Client:	Hoanib Exploration (Pty) Ltd
Activities performed:	Mine Closure Plan, Mine Closure Costing

Name of assignment / project:	Environmental Performance Audit and Report for Lodestone Namibia (Pty) Ltd.
Year:	May – June 2023
Client:	Lodestone Namibia (Pty) Ltd
Activities performed:	EMP Compliance Audit and report writing

Name of assignment / project:	Environmental Performance Audit and Report for Hoanib Exploration (Pty) Ltd on Hopewell Mine near Outjo in Namibia.
Year:	March – April 2023
Client:	Hoanib Exploration (Pty) Ltd
Activities performed:	EMP Compliance Audit and report writing

Name of assignment / project:	Environmental Screening for a proposed Liquid Mud Plant of SLB in the port area of Walvis Bay
Year:	March – April 2023
Client:	SLB
Activities performed:	Environmental Screening, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment for a proposed new warehouse for bulk handling of copper concentrate in the port area of Walvis Bay
Year:	November 2022 – March 2023
Client:	Walvis Bay Cargo Terminal
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Hands-on training: Environmental Impact Assessment
Year:	November 2022
Client:	Swakopmund Municipality, Kelp Blue
Activities performed:	Environmental Competency Training and Mentoring

Name of assignment / project:	Environmental Performance Audit and Report for Swakop Uranium
Year:	November 2022
Client:	Swakop Uranium's Husab Mine
Activities performed:	EMP Compliance Audit and report writing

Name of assignment / project:	Hands-on training: Principles of green and sustainable approaches in business
Year:	August – September 2022
Client:	Be-Your-Own-Boss (BYOB), The Dome Academy, Swakopmund
Activities performed:	Environmental Competency Training and Mentoring

Name of assignment / project:	Environmental sensitivity report for the Henties Bay Municipality Structure Plan
Year:	August 2022 -
Client:	Henties Bay Municipality
Activities performed:	Environmental sensitivity analysis and advisory services, and report writing

Name of assignment / project:	Environmental Impact Assessment Amendment for the proposed Shiyela Iron Project on ML 176 in the Erongo Region, Namibia
Year:	April - June 2022
Client:	Hylron Green Technologies (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment Amendment for a proposed new Solar PV Power Plant for Rössing Uranium Limited
Year:	January 2022 - June 2022
Client:	Rössing Uranium Limited
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Mine Closure Plan for the Etango-8 Project
Year:	November 2021 - March 2022
Client:	Bannerman Mining Resources (Namibia) (Pty) Ltd
Activities performed:	Mine Closure Planning, cost calculations and report writing

Name of assignment / project:	Hands-on training: Principles of green and sustainable approaches in business
Year:	September – October 2021
Client:	Be-Your-Own-Boss, The Dome Academy, Swakopmund
Activities performed:	Environmental Competency Training and Mentoring

Name of assignment / project:	Environmental Impact Assessment Amendment for a proposed new Solar PV Power Plant for TeraSun near Arandis
Year:	October 2021 - May 2022
Client:	TeraSun Energy (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment for a proposed new powerline for TeraSun near Arandis
Year:	October 2021 - May 2022
Client:	TeraSun Energy (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment Amendment for a proposed new explosives' magazine at the Husab Mine, Erongo Region
Year:	November - December 2021
Client:	Swakop Uranium (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment and Environmental Management Plan for the proposed new water pipeline from the Oanob Dam to the Dordabis Iron Mine
Year:	June – September 2021
Client:	Loadstone Namibia (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment and Environmental Management Plan for a proposed snail production project near Swakopmund
Year:	July – November 2021
Client:	Rainy Day Investments 47 (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Environmental Impact Assessment and Environmental Management Plan for Exploration 18 (Pty) Ltd
Year:	January – June 2021
Client:	Exploration 18 (Pty) Ltd
Activities performed:	EIA, EMP and report writing

Name of assignment / project:	Swakopmund Strategic Plan, based on the Swakopmund Structure Plan 2020 - 2040
Year:	January – March 2021
Client:	Swakopmund Municipality
Activities performed:	Gap analysis, environmental assessment, strategic planning

Name of assignment / project:	Environmental sensitivity report, Swakopmund Structure Plan 2020 - 2040
Year:	May 2019 – October 2020
Client:	Swakopmund Municipality
Activities performed:	Environmental sensitivity mapping, advisory services and report writing

Name of assignment / project:	Mine Closure Plan for B2Gold (site)
Year:	August – December 2020
Client:	B2Gold
Activities performed:	Mine Closure Planning, cost calculations and report writing

Name of assignment / project:	Environmental monitoring training
Year:	December 2020
Client:	Skorpion Zinc
Activities performed:	Environmental Competency Training and Mentoring

Name of assignment / project:	Environmental Impact Assessments (EIAs) and Environmental Management Plans (EMPs) for various clients (subconsultant to ECC)
Year:	January – December 2020
Client:	Various (e.g., B2Gold, Cheetah Minerals, Votarantim, Nuvella, etc.)
Activities performed:	EIAs, EMPs, report writing and reviewing

Name of assignment / project:	Guidance for compliance and alignment of the proposed NamPower Biomass Powerplant with FSC criteria
Year:	June – October 2020
Client:	NamPower
Activities performed:	Gap analysis, compliance audit and advisory comments, report writing

Name of assignment / project:	Best Practice Guide: Environmental Principles for Mining in Namibia
Year:	December 2018 – August 2019
Client:	Namibian Chamber of Environment, Chamber of Mines, MEFT, MME
Activities performed:	Composition of four environmental guiding documents for the mining sector – for exploration, for construction and development, for operations and for mine closure

Name of assignment / project:	Biophysical Rehabilitation Plans for ML 42, 43, 44 and 45
Year:	January 2019 – June 2020
Client:	Namdeb
Activities performed:	Mine Closure Planning, cost calculations and report writing

Professional career in the mining sector:

Job description:	Mine Closure Plan for Langer Heinrich Uranium (Pty) Ltd
Year:	January 2015 – June 2016
Positions held:	Land use and mine rehabilitation specialist
Activities performed:	Mine Closure Planning, cost calculations and report writing

Name of assignment / project:	Operational Management and Mitigation Plans for Langer Heinrich Uranium (Pty) Ltd
Year:	January 2015 – November 2016
Positions held:	Land use and mine rehabilitation specialist
Activities performed:	Plan development and implementation

Name of assignment / project:	Supervise a team to develop and implement an integrated Land Use Plan, Mine Closure Plan and Rehabilitation activities at Langer Heinrich Uranium (Pty) Ltd
Year:	January 2015 – November 2016
Positions held:	Land use and mine rehabilitation specialist
Activities performed:	Update and implement Progressive Rehabilitation Plans

Name of assignment / project:	Environmental Management Plan for Rössing Uranium Limited
Year:	January 2013 – November 2014
Positions held:	Senior Advisor: Environment and HSE Compliance
Activities performed:	Develop and implement an EMP for Rössing Uranium Limited

Name of assignment / project:	Supervising a team of specialists in Environmental Management at Rössing Uranium Limited
Year:	August 2008 – November 2014
Positions held:	Senior Advisor: Environment and HSE Compliance
Activities performed:	Supervise, guide and advise specialists in environmental management at Rössing Uranium Limited

Name of assignment / project:	Mine Closure Plan for Rössing Uranium Limited
Year:	January 2011 – November 2011
Positions held:	Senior Advisor: Environment and HSE Compliance
Activities performed:	Mine Closure Planning, cost calculations and report writing

Professional career as an academic:

Name of assignment / project:	Senior Lecturer and Researcher
Year:	August 1995 – June 2008
Positions held:	Senior lecturer and researcher, Head of Department
Activities performed:	Lecturing, mentoring, research and administrative management

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
- Input into Due Diligence Studies
- Stakeholder Management
- Environmental Management Systems (EMS)
- Environmental Auditing
- Environmental Training and capacity building
- Mine Closure

Werner has more than 26 years of work experience. He started out as a Civil Engineer (first 3 years) but soon became involved with environmental related projects. The following ~23 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 and exploration projects, aquaculture activities, chemical handling and storage, large irrigation projects and other.

(Note: reference to "Environment" includes "Social" aspects).

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
	Sub-contracted to Hatch Africa	Environmental Project Manager
2009-2012	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

EXCERPT OF PROJECTS	
Langer Heinrich Uranium (Pty) Ltd return to production (2023)	EIA Process for the Langer Heinrich Mine's return to production and associated activities (i.e. ECC renewal application with associated amendment). Werner is the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).
Galp's proposed offshore exploration well and flow testing activities	EIA for Galp's amendment application process for the proposed offshore exploration well and flow testing activities of the Project in an areas between 108 km and 250 km from the coastline between Lüderitz and Oranjemund Werner is the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).
Reptile Uranium Namibia (Pty) Ltd – EIA FOR THE TUMAS MINE AND ASSOCIATED ACTIVITIES (2020 – 2023)	EIA application process for the Tumas (Uranium) mining and processing project (and associated activities – including onsite PV power supply) in the Namib Naukluft National Park in Namibia. Werner is the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).
Proposed Namibian Hazardous Waste Site (2023)	Part of the Team that conducted the Screening Study (and compilation of Internal Screening Report), which will lead into the EIA.
Kelp Blue EIA Amendment (2023)	EIA application process for the Kelp Blue's proposed Commercial Scale Kelp Cultivation Project near Luderitz. Werner is the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).
NamDeb PV Power plant Screening (2023)	Environmental input to the Screening study for NamDeb's proposed PV Power Plant.
INNOVATION ENERGIE DEVELOPPEMENT Support to prepare the Otjikoto Biomass Power Station (OBPS) Project (2022 - 2023)	Part of the IED Team conducting a Due Diligence Study for the sustainability of the NamPower Biomass Project, supply chain, on behalf of the French Development Bank.
Rainy Day Investments 47 (Pty) Ltd / Namsnail EIA SCOPING & IMPACT ASSESSMENT REPORT FOR THE PROPOSED SNAIL PRODUCTION PROJECT NEAR SWAKOPMUND, ERONGO REGION (2021 – 2022)	EIA application process for the snail production project near Swakopmund. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing). Assist with the Environmental Management System during the implementation phase (ongoing).
LK Mining EIA for LK Mining's Offshore Diamond MLApplication (2021-2022)	Environmental Impact Assessment & Environmental Management Plan for the offshore diamond mining activities on the proposed ML 220 of LK Mining, required for an Environmental Clearance Certificate Assist Alex Speiser ((ASEC) with management of the process, public participation, report compilation and review.

<p>Rössing Uranium Limited PROPOSED SOLAR PHOTOVOLTAIC POWER PLANT (2022)</p>	<p>RUL is conducting a feasibility study for its Life of Mine Extension (LoME) Project which includes the evaluation of constructing a solar photovoltaic (PV) Power Plant (and a distribution overhead powerline to the Rössing Substation onsite) to support electricity supply to the mine, processing plant and associated infrastructure. Werner was the Lead Environmental Assessment Practitioner managing the EIA amendment process (including stakeholder engagement, PPP specialist management and report writing / review), relating to the above mentioned project.</p>
<p>Hylron Green Technologies (Pty) Ltd (Hylron) (2022)</p>	<p>EIA Amendment process for the proposed Shiyela Iron Project. Key amendments to the approved ECC are implied by the changes Hylron proposes for the Shiyela Iron Project including: The project aims to produce “sponge iron” for use by steel manufacturers and foundries at zero carbon dioxide (CO2) emissions. The original plan was to supply power to the project via a new overhead transmission line from the national grid. Power generation is now planned by means of renewable energy sources only, including PV Power and wind turbines. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).</p>
<p>Renewstable Swakopmund</p>	<p>EIA Process for the proposed HDF ENERGY RENEWSTABLE Swakopmund Hydrogen-to-power project (by SLR). Renewstable Swakopmund will be Africa’s first integrated solar-hydrogen power project with the objective of supplying Swakopmund, and surrounds, with renewable energy. Werner was assisting SLR with public participation and review / input of the EIA reports.</p>
<p>Seagull Namibia (Pty) Ltd – EIA Amendment application for seawater abstraction and associated activities (2021)</p>	<p>EIA amendment application process for the Seagull fish factory for their abstraction of seawater and associated activities. Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).</p>
<p>ENVIRONMENTAL COMPLIANCE AUDITS (ANNUAL)</p>	<p>Various environmental (EMP) Compliance audits (various sectors) on an annual basis. Werner is the lead auditor and compiles the audit reports.</p>
<p>Trigon Mining Namibia (Pty) Ltd – KOMBAT MINE AMENDMENT (2021)</p>	<p>EIA amendment application process for the Kombat (Copper mine). Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).</p>
<p>Terasun Energy – EIA AMENDMENT FOR THE ARANDIS PV POWER PLANT AND NEW POWERLINE (2021 – BUSY)</p>	<p>EIA amendment application process for the PV Power plant near Arandis in the Erongo Region of Namibia. Proposed new powerline to connect to the grid. Werner is the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).</p>
<p>Lodestone Namibia (Pty) Ltd – DORDABIS IRON ORE MINE AMENDMENTS (2020 – 2021)</p>	<p>EIA amendment application process for the Dordabis Iron Ore Mine and associated activities (including new powerline and water pipeline). Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report writing).</p>
<p>Kelp Blue Namibia (Pty) Ltd - THE PROPOSED KELP CULTIVATION PILOT PROJECT NEAR LÜDERITZ, KARAS REGION (2020)</p>	<p>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).</p>

<p>DUE DILIGENCE AUDIT FOR PV POWER PLANT NEAR MARIENTAL (2021)</p>	<p>Assisted SLR with due diligence (Environmental) study, including onsite audit - for the operational PV power plant.</p>
<p>Total E and P Namibia B.V. - PROPOSED 3D SEISMIC SURVEY IN LICENCE BLOCKS 2912 AND 2913B, NAMIBIA (2020)</p>	<p>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).</p>
<p>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)</p>	<p>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.</p> <p>Werner was the in-country coordinator for the EIA process (including stakeholder engagement, PPP and report compilation and review).</p> <p>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).</p>
<p>Ongopolo Mining and Processing Tsumeb West mine Rehabilitation Plan (2020)</p>	<p>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".</p> <p>Werner was the Lead Environmental Assessment Practitioner managing the process to develop an Environmental Rehabilitation Plan for the old mine.</p>
<p>Shell Namibia Upstream BV – EIA amendment for proposed offshore well drilling (2020)</p>	<p>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.</p> <p>Werner was the in-country coordinator for the EIA process (including stakeholder engagement, PPP and document compilation and review).</p>
<p>Walvis Bay Salt Holdings –Environmental Screening (2019)</p>	<p>Environmental Screening for additional infrastructure development at the Walvis Bay Salt Works.</p> <p>Werner is the Lead Environmental Assessment Practitioner managing the Screening process (including stakeholder engagement, PPP and report compilation).</p>
<p>Areva (now Orano Mining Namibia) – EIA renewals (2019)</p>	<p>ECC renewal applications for the Trekkopje Mine (which is on Care and Maintenance) and the Erongo Desalination Plant.</p>
<p>Namib Lead and Zinc – EIA Amendment process (2019)</p>	<p>EIA amendment process for the proposed changes to the final product transportation method and soil excavation for the mine access road resurfacing.</p> <p>Werner was the Lead Environmental Assessment Practitioner</p>
<p>Cathral Investments and Tulela Processing Solutions' Sinclair Mining Project - Environmental Impact Assessment (2019)</p>	<p>EIA for small scale mining & processing activities and ongoing exploration at the Sinclair mine.</p> <p>Werner was the Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report compilation, specialist management and specialist report review).</p>

<p>Galp off-shore exploration projects - Environmental Impact Assessment (2019)</p>	<p>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.</p>
<p>Gecko Cobalt Mining - Environmental and Social Impact Assessment (2019)</p>	<p>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 compilation and review and Facilitate the public participation process.</p>
<p>Walvis Bay Salt Holdings –Environmental Screening (2018 - 2019)</p>	<p>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).</p>
<p>Shell Namibia Upstream BV – EIA for proposed offshore well drilling (2017 -2018)</p>	<p>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).</p>
<p>Gecko Cobalt Mining - Environmental and Social Screening process (2018)</p>	<p>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.</p>
<p>Swakop Uranium – Husab Mine Closure plan (2018)</p>	<p>Development of the Husab mine Draft Closure Plan (MCP): In Country Manager and reviewer of the process and the draft MCP.</p>
<p>Areva (now Orano Mining Namibia) (annually)</p>	<p>Annual Environmental (relating to the EMP) Compliance audits for the Trekkopje Mine (which is on Care and Maintenance) and the Erongo Desalination Plant.</p>
<p>Manila Investments – Kombat Copper Mine EIA (2017 - 2018)</p>	<p>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 compilation).</p>
<p>Swakop Uranium Waste Rock Dump Amendment and Incinerator - EIA amendment (2017 - 2018)</p>	<p>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 compilation).</p>

<p>EIB and NamPower Encroacher Bush Biomass Power Project – EIA (2017 - 2021)</p>	<p>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.</p>
<p>Alten Energy - 37 MW Hardap Solar (Photo Voltaic (PV)) Power plant, near Mariental (end of 2017 – October 2018).</p>	<p>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.</p>
<p>Swakop Uranium Husab mine – Waste Management Strategy (2016 – 2017)</p>	<p>Develop Waste Management Strategy for the Swakop Uranium Husab Mine (i.e. non-mineralised waste). Project Coordinator.</p>
<p>PV power plant (10 MW) at the Ohorongo Cement Factory (2016)</p>	<p>SunEQ GmbH (SunEQ) proposes to construct and operate a photovoltaic (PV) power plant at the Ohorongo Cement Factory. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, PPP and report compilation).</p>
<p>Igneous Mining (Pty) Ltd – Application for Environmental Clearance (2016)</p>	<p>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.</p>
<p>LK Mining EIA for LK Mining's Offshore Diamond Exploration Activities on Exclusive Prospecting License 5965 (2016)</p>	<p>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 and review.</p>
<p>Manila Investments – Kombat Copper Mine Environmental Due Diligence (Sep 2016)</p>	<p>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.</p>
<p>City of Windhoek Gammams Waste Water Treatment Works Upgrade EIA (2017)</p>	<p>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.</p>
<p>B2Gold Otjikoto Gold Mine Closure plan (2017)</p>	<p>Development of the Otjikoto Gold Mine Draft Closure Plan (MCP): In Country Manager and reviewer of the process and the draft MCP.</p>

<p>NAMPARKS Facility Amendments at Mudumu NP – EIA amendment (2016 - 2018)</p>	<p>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.</p>
<p>Gecko Salt (Pty) Ltd Cape Cross Salt Project - EIA (2016 - 2018)</p>	<p>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.</p>
<p>Namibia Construction (Pty) LTd Sand Mining Project – 20 km South West of Okahandja</p>	<p>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.</p>
<p>Namibia Rare Earths – Proposed Lofdal Mine and linear infrastructure – EIA (2015 - 2016)</p>	<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. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p>Rössing Uranium – Impacts of the TSF on biota and desert ecology – Management of study (2015 - 2016)</p>	<p>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.</p>
<p>High Speed Railway Lines – Environmental Screening Process (2015 - 2016)</p>	<p>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.</p>
<p>Swakop Uranium Reagents – EIA for storage at the Manica facilities (2015)</p>	<p>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</p>
<p>Sand Miners Association of Swakopmund – EIA for sandmining in the Swakop River (2015 – 2018)</p>	<p>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.</p>

<p>Swakop Uranium Reagents storage at a new facility in the Port of Walvis Bay – EIA (2015)</p>	<p>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.</p>
<p>Namibia Rare Earths – Lofdal mine – Environmental baseline development (2015)</p>	<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. Compile the environmental baseline project plan. Manage specialists and develop Baseline data/report with input from various specialists.</p>
<p>Swakop Uranium – Husab Mine amendments - EIA (2015)</p>	<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. The Strategic Environmental Assessment (SEA) for the “Uranium Rush” in the Erongo Region had to be considered and incorporated into the EIA. 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>
<p>B2Gold – Otjikoto Gold Mine landfill site - EIA (2013 – 2014)</p>	<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. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p>B2Gold – Otjikoto Gold Mine development - EIA (2012 – 2013)</p>	<p>B2Gold applied for Mining Licence (ML 169) to developed 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. 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. Completed the EIA process – i.e. assessment phase. Develop Mine Closure Framework. The EIA had to conform with World Bank / IFC Standards.</p>
<p>Arandis Power Plant - EIA amendment (2014)</p>	<p>Arandis Power proposed to construct and operate a 'hybrid' thermal/PV plant with the maximum output capacity of 120 MW. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. The EIA had to conform with World Bank / IFC Standards.</p>
<p>EPL's for exploration activities – various EIA's (2013 – 2015)</p>	<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. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. Also review of reports.</p>

<p>Commissiekraal Coal Mine – EIA Scoping Report (2015)</p>	<p>Development of the proposed Commissiekraal Coal Mine including services and associated infrastructure in South Africa. Compiled EIA Scoping Report.</p>
<p>Various Mining and Exploration companies - various services (2012 – 2015)</p>	<p>Various Mining and exploration companies across Namibia sought assistance. 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>
<p>Various Mining, Exploration and Infrastructure Projects – various services (2012 – 2015)</p>	<p>Various Mining and exploration projects as well as infrastructure projects across Namibia sought assistance with EIAs, EMPs and review processes. 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>
<p>Pietersite Mining License – EIA (2013)</p>	<p>Mining Pietersite (gemstone) on Mining License (ML) 57 in the Kunene Region, north-central Namibia. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p>TransNamib – sulphuric acid transport – EIA (2014)</p>	<p>TransNamib plans to transport sulphuric acid by rail from Dundee Precious Metals (Tsumeb) to Rössing Uranium Mine and to Walvis Bay. Lead Environmental Assessment Practitioner managing the EIA processes and compiling reports.</p>
<p>Rössing Uranium Z20 deposit – EIA (2012 – 2014)</p>	<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. Managing the EIA processes and compiling reports in a 'joint venture' with Aurecon.</p>
<p>Rössing Desalination Plant – Managing SEIA processes (2014)</p>	<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 m³/day. Managing the SEIA processes and compiling reports in a 'joint venture' with Aurecon.</p>
<p>Coal Storage at Walvis Bay Harbour – EIA (2012)</p>	<p>Environmental Screening/ fatal flaw analysis for the proposed expansion of coal storage at the Walvis Bay Harbour. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p>Arandis Power HFO and recycled oil power plant - EIA (2012)</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. Lead Environmental Assessment Practitioner managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports. The EIA had to conform with World Bank / IFC Standards.</p>

<p>Langer Heinrich Uranium Mine – expansion projects – Specialist environmental support (2009 – 2012)</p>	<p>Langer Heinrich is an operational Uranium Mine in Namibia Naukluft National Park. 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.). Developed the draft Mine Closure and restoration strategy and Draft Mine Closure plan.</p>
<p>Port Expansion Projects in SA – Project environmental management (2008 - 2009)</p>	<p>Port expansions and development (Port Elizabeth, Coega and Richards Bay). Project Environmental Manager - managing the EIA process (including stakeholder engagement, managing specialists, etc.) and compiling reports.</p>
<p>Gautrain Rapid Rail Link - EIA (2006 - 2007)</p>	<p>Development of the Gautrain Rapid Rail Link. 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:
 - Geology Department of the University of Namibia in 2014
 - Various lectures at the University of Pretoria in 2006.
 - Various EIA Training courses at Namisun’s Environmental Education Centre (2022 and 2023).

MEMBERSHIPS

<p>EAPAN</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.