

APPENDIX A: PROOF OF EAP REGISTRATION AND CURRICULUM VITAE

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Alessandra Pheiffer

Registration number: 400183/05

is registered as a

Professional Natural Scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)

in the following field(s) of practice (Schedule 1 of the Act)

Environmental Science

Effective 26 July 2005

Expires 31 March 2018



President

Executive Director

CURRICULUM VITAE



MARLINE MEDALLIE

SENIOR ENVIRONMENTAL ASSESSMENT

EMPA, South Africa

QUALIFICATIONS

MSc	2006	Botany (Molecular Systematics)
BSc Hons	2004	Botany
BSc	2003	Natural Science (Botany and Zoology)

EXPERTISE

- Management and facilitation of permitting and licensing processes
- Management of stakeholder engagement processes
- Overall Project Management

Marline is a Senior Environmental Consultant at SLR Africa with 10 years' experience in the field of Environmental Management.

Marline has significant project experience in public participation, project management and environmental report writing. Marline has worked in Gauteng, Mpumalanga, Western Cape, Northern Cape, Free State and Limpopo Provinces. Project experience constitutes coal mines (Mpumalanga), diamond mines (Western Cape & Lesotho), gold mines (Free State & North West), an iron ore mine (Northern Cape), manganese mines (Northern Cape) and a platinum mine (Limpopo).

Marline is currently involved in environmental project management, environmental impact assessment reports, management programmes, integrated water use license applications and environmental compliance auditing. Marline's strengths lie in her solid scientific and practical background, and ability to adapt to and learn from various projects. Marline's interests include basic-, marine- and terrestrial ecology; conservation; management of the environment and environmental project management.

PROJECTS

A sample of Marline's project experience is summarised below by sector.

MINING SECTOR

MANGANESE

UMK Mine (Current)	Environmental impact assessment and environmental management programme (EIA/EMP) for an EMP amendment process for UMK Mine in the Northern Cape: United Manganese of Kalahari (Pty) Ltd.
Tshipi Mine Section 24G (Current)	EIA/EMP for a section 24G rectification process for Tshipi Mine in the Northern Cape: Tshipi é Ntle Manganese Mining (Pty) Ltd.

GOLD

AngloGold Vaal River (2016)	Integrated water use license audit for the Vaal River mining operations in the North-West and Free State: AngloGold Ashanti Limited.
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AngloGold MWS (2016)	Integrated water use license audit for the Mine Waste Solutions mining operations in the North-West: AngloGold Ashanti Limited.
Jeanette Project (2014-2015)	EIA/EMP for the Jeanette Gold Mine in the Free State: Taung Gold (Free State) (Pty) Ltd.
COAL	
Alexander Project (2013-2016)	EIA/EMP for the greenfields Alexander mining right application in Mpumalanga: Anglo American Inyosi Coal (Pty) Ltd.
New Largo Colliery (2011-2015)	EIA/EMP for the greenfields New Largo mining right application in Mpumalanga: Anglo American Inyosi Coal (Pty) Ltd.
Diepspruit Colliery (2008-2009)	EIA/EMP for an EMP amendment process and water use license application (WULA) for the greenfields Diepspruit Mine in Mpumalanga: Exxaro Coal (Pty) Ltd.
Eerstelingsfontein Colliery (2007-2008)	Compilation of WULA and integrated water and waste management plan (IWWMP) for Eerstelingsfontein Colliery in Mpumalanga: Exxaro Coal (Pty) Ltd.
IRON	
Protea Waste Rock Dump Extension (2008-2012)	EMP amendment application for Sishen Mine's Protea Waste Dump Extension in the Northern Cape: Anglo American, Sishen Iron Ore Company (Pty) Ltd.
Sishen Expansion Project 2 (2009)	Environmental site selection study for the Sishen Expansion Project 2 in the Northern Cape: Anglo American, Sishen Iron Ore Company (Pty) Ltd.
Sishen Expansion Project 1B	EIA for the Sishen Expansion Project 1B in the Northern Cape: Kumba Iron Ore Limited.
PLATINUM	
Leeuwkop Mine (2016)	EMP compliance audit for the Leeuwkop Platinum Mine in North-West: Afplats (Pty) Ltd
Hackney Project (2016)	Prospecting EMP performance assessment on the farm Hackney 116 KT in Limpopo: Marula Platinum (Pty) Ltd
Platreef Project (2007)	Environmental input into the baseline report for the Platreef Project in Limpopo: Ivanhoe Nickel & Platinum Limited.
DIAMONDS	
Letšeng Project (2008)	Compile and environmental action plan for the Letšeng Mine in Lesotho: Letšeng Diamonds (Pty) Ltd.
Langklip South Project (2007)	EIA for the Langklip South mining right application in the Western Cape: De Beers Consolidated Mines (Pty) Ltd.

INFRASTRUCTURE SECTOR

Kathu Supplier Park (2014)	EIA and WULA for the proposed Kathu Industrial Park in the Northern Cape: Anglo American, Kumba Iron Ore Limited and the Industrial Development Corporation of South Africa Limited
Sishen Western Expansion Project (2008-2015)	EIA, WULA, waste management license application (WMLA), mining permit application, removal of protected species permit applications and environmental input into the feasibility study of the Sishen Western Expansion Project for relocation of various infrastructure (e.g. Postmasburg-Hotazel railway line, Vaal Gamagara water pipeline, 275kV Eskom powerline and Dingleton-Dibeng public road) in the Northern Cape: Anglo American, Kumba Iron Ore Limited.
RESIDENTIAL	
Dingleton Resettlement Project (2009-2015)	Environmental authorisation amendment application process, removal of protected species permit applications, provision of environmental management support and environmental input into the pre-feasibility and feasibility studies of the Dingleton Resettlement Project in the Northern Cape: Anglo American, Kumba Iron Ore Limited.
Fish Eagle Eco-Estate (2007-2009)	Environmental input into the response to the records of decision issued for the Fish Eagle Eco-Estate in Gauteng: Fish Eagle Reserve CC.
MEMBERSHIPS	
IAIA	Member of the International Association for Impact Assessments (IAIA), South African Affiliate
PUBLICATIONS	
SCIENTIFIC ARTICLE IN THE BOTANICAL JOURNAL OF THE LINNEAN SOCIETY, 2009	<i>Gnidia</i> (Thymelaeaceae) is not monophyletic: taxonomic implications for Thymelaeoideae and a partial new generic taxonomy for <i>Gnidia</i> , 2009.
MSC THESIS, 2007	<i>Gnidia</i> L. (Thymelaeaceae) is not monophyletic: Taxonomic implications for <i>Gnidia</i> and its relatives in Thymelaeoideae, University of Johannesburg, 2007.

CURRICULUM VITAE



JONATHAN CROWTHER

OPERATIONS MANAGER

Environmental Management Planning & Approvals,
Africa

QUALIFICATIONS

M.Sc	1988	Environmental Science
B.Sc (Hons)	1983	Geology
B.Sc	1982	Geology and Geography

EXPERTISE

- Environmental Impact and Social Assessment
- Environmental Management Plans/Programmes
- Public Participation & Facilitation
- Environmental Compliance & Monitoring

Jonathan is the SLR Operations Manager for Environmental Management Planning & Approvals, Africa. He has over 29 years of experience with expertise in a wide range of environmental disciplines, including Environmental Impact and Social Assessments (ESIA), Environmental Management Plans/Programmes, Environmental Planning, Environmental Compliance & Monitoring, and Public Participation & Facilitation.

He has project managed a large number of offshore oil and gas EIAs for various exploration and production activities in Southern Africa. He also has extensive experience in large scale infrastructure projects including some of the largest road projects in South Africa, ESIA's for waste landfill facilities, general industry and the built environment.

PROJECTS

Oil and Gas Exploration and Production

Shell Namibia Upstream BV – EIA for proposed offshore well drilling, Namibia (2017)

EIA for the drilling of up to two deep water exploration wells in Petroleum Exploration Licence 39 off the coast of southern Namibia. Provided project management and quality review during the Scoping Phase of the EIA.

PGS Exploration (UK) Limited – Reconnaissance Permit Application to undertake 2D and 3D seismic surveys, South Africa (2017)

SLR Consulting was appointed to undertake an Environmental Management Programme process for a Reconnaissance Permit Application to undertake 2D and 3D speculative seismic surveys of the East Coast, South Africa. Project director, documentation review and quality review.

Rhino Oil & Gas Exploration South Africa (Pty) Ltd - EIAs for various onshore exploration right applications, South Africa (2015 - 2017)

Individual ESIA's were undertaken for exploration right applications for the initial exploration phases for onshore gas in five license areas across the eastern part of South Africa. Provided high level management support and documentation review.

<p>Spectrum Geo Limited – Reconnaissance Permit Application to acquire 2D multi-client seismic data, South Africa (2017)</p>	<p>Undertook the Environmental Management Programme for a reconnaissance permit application to acquire 2D multi-client seismic survey data off the Southern Coast, South Africa. Project director and provided quality review.</p>
<p>Rhino Oil & Gas Exploration South Africa (Pty) Ltd – Application for exploration programmes for two offshore blocks, South Africa (2015 - 2017)</p>	<p>Appointed to undertake an EIA for exploration right applications for 2D seismic surveys for each of two blocks located offshore of the West Coast, South Africa. Project director and quality control of the EMP.</p>
<p>Petroleum Geo-Services (Pty) Ltd – Addendum application for expansion of speculative seismic survey, South Africa (2016)</p>	<p>Facilitated and undertook the EMP Addendum for the expansion of a speculative seismic survey off the South Coast of South Africa. Project management and quality review of the EMP.</p>
<p>BHP Billiton Petroleum (South Africa 3B/4B) Limited - Relinquishment of Licence Block 3B/4B, South Africa (2016)</p>	<p>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, South Africa. Project director and quality review.</p>
<p>Murphy Oil Corporation - Exploration well drilling in Licence Blocks 2613A and 2613B, Namibia (2014-2016)</p>	<p>EIA for the drilling of up to two exploration wells in Licence Blocks 2613A and 2613B off the coast of Namibia. Project director and quality review.</p>
<p>Sunbird Energy Ltd - Ibhubesi Gas Project, South Africa (2013 - 2016)</p>	<p>EIA for the proposed Ibhubesi Gas Project, West Coast, South Africa. The project includes the development of an offshore well field, a 400 km offshore pipeline, an onshore pipeline and onshore processing facility. Tasks involved stakeholder engagement, document compilation, high level project management, quality control and overall review of the EIA.</p>
<p>Anadarko South Africa (Pty) Ltd - Exploration Right renewal for Licence Blocks 5, 6 & 7, South Africa (2015)</p>	<p>Preparation of 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. Project director and quality review.</p>
<p>ExxonMobil Exploration and Production South Africa Ltd – Well drilling Roadmap and Permitting Plan, South Africa (2015)</p>	<p>Development of 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, South Africa. Project director and quality review.</p>
<p>Nabirm Energy Services - 2D seismic survey compliance, Block 2113, Namibia (2014-2015)</p>	<p>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. Project director and quality review.</p>

<p>Thombo Petroleum (Pty) Ltd – Exploration Right application to undertake well drilling in Block 2B, South Africa (2014- 2015)</p>	<p>The scope of work included undertaking an EIA and EMP Addendum for exploration well drilling in Block 2B situated off the West Coast of South Africa. Project management and quality control tasks were undertaken.</p>
<p>Murphy Oil Corporation and TGS-NOPEC Geophysical Company ASA – 3D seismic survey, Licence Blocks 2613A and 2613B, Namibia (2013-2014)</p>	<p>EIA for a proposed 3D seismic survey in Licence Blocks 2613A and 2613B, Lüderitz Basin, off the coast of Namibia. Project director and quality review.</p>
<p>Shell South African Upstream B.V – EIA and EMP Amendment to undertake exploration well drilling in Orange Basin, South Africa (2013-2015)</p>	<p>EIA and EMP for an amendment to the existing Exploration Right to undertake Exploration Well Drilling in the Orange Basin Deep Water Block, West Coast, South Africa. Provided client interaction, high level management and quality control.</p>
<p>Cairn South Africa (Pty) Ltd – Exploration right amendment to undertake well drilling in Block 1, South Africa (2013-2015)</p>	<p>EIA and EMP for an amendment to the existing Exploration Right to undertake Exploration Well Drilling in Block 1, West Coast, South Africa. Project director and quality control of the EIA.</p>
<p>OK Energy Ltd - Proposed exploration programme in the Northern Cape Ultra-deep Licence Area, South Africa (2014)</p>	<p>EMP for an Exploration Right application for undertaking an exploration programme (including seismic survey, tensor gravity and magnetics, bathymetry survey, seabed sampling) in the Northern Cape Ultra-deep Licence Area in the Orange Basin off the Northwest Coast of South Africa. Project director and quality review.</p>
<p>Total E and P South Africa (Pty) Ltd – Deep Water well drilling in Block 11B/12B, south Africa (2013-2014)</p>	<p>Undertook the Environmental Compliance services during and the environmental audit on completion of the deep water well drilling operation in Block 11B/12B, South Coast South Africa. Audit services, compiled the audit report and project management.</p>
<p>Anadarko South Africa (Pty) Ltd - Seafloor geochemical sampling programme, Licence Blocks 5/6 & 7, South Africa (2013)</p>	<p>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. Project director and quality review.</p>
<p>Spectrum ASA – Speculative 2D seismic survey, Namibia (2013)</p>	<p>EIA for a proposed 2D speculative seismic survey in the Orange Basin, Namibia. Project director and provided quality control.</p>
<p>CGG Services SA - Proposed 2D speculative seismic survey in the Durban Basin, South Africa (2013)</p>	<p>EMP for a Reconnaissance Permit application for undertaking a speculative 2D seismic survey in the Durban Basin off the East Coast of South Africa. Project director and quality review.</p>

Tullow Kudu Limited – 2D and 3D seismic survey, Namibia (2013)	ESIA for a proposed 3D and 2D seismic survey in Licence Blocks 2012B, 2112A and 2113B, Walvis Basin, Namibia. Project director, client interface and quality control.
Sasol Petroleum International (Pty) Ltd – 2D seismic survey programme, South Africa (2012-2013)	EMP for a proposed 2D seismic survey programme in the Durban and Zululand Basins off the East Coast of South Africa. Project director and provided quality control.
Anadarko South Africa (Pty) Ltd - Exploration programme, Licence Block 2C, South Africa (2012-2013)	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. Project director and quality review.
Total E and P South Africa (Pty) Ltd – Application for various exploration activities, South Africa (2012-2013)	EMP for a proposed 2D seismic survey, sonar bathymetry and drop core sampling in the Outeniqua South Area, South Coast, South Africa. Project director and quality review.
Impact Africa Limited - Exploration programme, Tugela North, South Africa (2012-2013)	EMP for a proposed exploration programme in the Tugela North area off the East Coast, 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. Project director and quality review.
PetroSA (Pty) Ltd – Amendment application for a seismic survey campaign, South Africa(2012)	EMP Amendment for a proposed seismic survey campaign in Block 1, West Coast, South Africa. Project director and EMP review.
Bayfield Energy Ltd – EMP amendment for a proposed seismic survey, South Africa (2012)	EMP Amendment for a proposed seismic survey in the Pletmos Inshore Area, South Coast, South Africa. Project director and report review.
CGG Veritas Services (UK) Ltd – Speculative seismic survey, South Africa (2012)	EMP for a proposed speculative seismic survey off the East Coast, South Africa. Project director and quality control of the EIA.
Signet Petroleum Ltd – Application to undertake 2D and 3D seismic surveys, Namibia (2011)	EIA for proposed 2D and 3D seismic surveys in Block 2914B off the southern coast of Namibia. Project director, client interaction and quality control.
PetroSA (Pty) Ltd - 2D/3D seismic survey, Blocks 5 & 6, South Africa (2011)	EMP for a 2D/3D seismic survey campaign in Blocks 5 & 6 off the South-West Coast of South Africa. Project director and quality review.
Chariot Oil & Gas - Proposed seismic survey off the coast of Namibia (2011)	EIA process for a seismic survey off the coast of Namibia. EIA and EMP compliance monitoring services were also provided during the survey operations and a Close-out Report produced. Project director and quality review.

<p>HRT Netherlands B.V. – Application to undertake a 3D seismic survey, Namibia (2010-2011)</p>	<p>EIA for a 3D seismic survey in two offshore areas, Namibia. Project director and quality review.</p>
<p>Atacama Consulting for Dominion Oil – Proposed seismic survey, Uganda (2010)</p>	<p>Undertook an independent review of the EIA undertaken for a proposed onshore and offshore seismic survey in the Queen Elizabeth National Park, Uganda. Site visit, documentation review and report.</p>
<p>PetroSA (Pty) Ltd – Proposed F-O Field development, South Africa (2008-2011)</p>	<p>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 39 km subsea production pipeline. Project director, client liaison and quality control.</p>
<p>Enigma Oil and Gas – Proposed 2D and 3D seismic survey, Namibia (2008-2009)</p>	<p>EIA for proposed 2D and 3D seismic surveys in three areas off the coast of Namibia.. Project management and quality review.</p>
<p>PetroSA (Pty) Ltd – 3D seismic survey, Block 1, West Coast, South Africa (2008)</p>	<p>EMP for a 3D seismic survey in Block 1 (ER83) off the West Coast of South Africa. Project director and quality review.</p>
<p>Petroleum Agency SA – South African Shelf Claim Project (2007)</p>	<p>Compiled an Environmental Report for a proposed seismic survey to be undertaken as part of the South African Shelf claim project. Project management and quality control.</p>
<p>PetroSA (Pty) Ltd – Construction of the South Coast Gas Project, South Africa (2007)</p>	<p>Management of various aspects of the EMP for the construction phase of the South Coast Gas project, including being appointed as the Chair and Secretariat of the Environmental Monitoring Committee, Mossel Bay, South Africa.</p>
<p>BHP Billiton Petroleum (Americas) Inc – Proposed 2D seismic survey, Namibia (2007)</p>	<p>EIA for a proposed 2D seismic survey in the Northern Block, Namibia. Project management and quality control.</p>
<p>Forest Exploration International (SA) – Proposed Ibhubesi Gas Project (2006-2008)</p>	<p>EIA and EMP for the proposed Ibhubesi Gas Project. This included the drilling of 99 wells, offshore production platforms, a 70 km pipeline to the shore and an onshore processing plant. The project is located off West Coast, South Africa. Project director, client interaction and quality review.</p>
<p>Ferromarine Africa - Oil and Gas Service Hub in the Port of Cape Town and Fabrication Yard for Oil and Gas Structures in the Port of Saldanha, South Africa (2006)</p>	<p>Construction and Operational EMPs for two facilities for the servicing and fabrication of oil and gas structures, i.e. an oil and gas service hub at A-Berth in the Port of Cape Town and an oil and gas structures fabrication yard in the Port of Saldanha, South Africa. Project director and quality review.</p>

<p>BHP Billiton Petroleum (Americas) Inc – Deep water exploration well drilling, South Africa (2004-2007)</p>	<p>Compiled an Expanded Environmental Notification for a proposed deep water exploration well in Petroleum Licence Block 3B/4B off the West Coast of South Africa. Project management, client interaction and quality control.</p>
<p>PetroSA (Pty) Ltd – South Coast Gas Development Project, South Africa (2004-2007)</p>	<p>EIA and EMP for the proposed South Coast Gas Development project in Petroleum Block 9, South Africa. The project included well drilling, injection wells, an offshore gas pipeline and the connection to existing infrastructure. Involvement included the role as project director, client interaction, facilitation of stakeholder interaction and quality control.</p>
<p>Pioneer Natural Resources (Pty) Ltd – Application for the drilling of three exploration wells (2003)</p>	<p>Preparation of an Environmental Notification document and Close-out Reports for the drilling of three exploration wells in Block 9, South Coast, South Africa. Project manager, stakeholder engagement, report compilation and quality control.</p>
<p>PetroSA (Pty) Ltd – Proposed development of the Sable Oil Field, South Africa (2001)</p>	<p>Undertook the EMPR for the proposed development of the Sable Oil Field, offshore South Coast, South Africa. This included well drilling, seafloor infrastructure and an FPSO. Project manager, stakeholder engagement, report compilation and quality control.</p>
<p>Petroleum Agency SA – Generic EMPR for oil and gas prospecting, South Africa (2001)</p>	<p>The appointment was to develop a Generic EMPR for oil and gas prospecting for the whole of the South African Offshore. This covered seismic surveys and exploration well drilling. Key impacts were identified and assessed, and templates were developed for future explorers. Client interaction, project management, report compilation and quality control.</p>
<p>Brown and Root on behalf of Shell Exploration and Production Namibia – Route selection for the proposed Kudu Gas pipeline (1998-1999)</p>	<p>Provided environmental baseline and legislative input into the route selection for the proposed Kudu Gas pipeline between Oranjemund, Namibia and Cape Town, South Africa. Site visit, client interaction, report delivery and quality control.</p>
<p>Soekor E&P (Pty) Ltd – Extension of the Oribi Oil Production facility (1997)</p>	<p>In a joint venture with the CSIR, undertook the EIA and EMPR for the proposed extension of the Oribi Oil Production facility and hydrocarbon exploration in Block 9 off the South Coast, South Africa. Management of the process and compilation of the EIA and EMPR.</p>
<p></p>	<p>Road and related infrastructure</p>
<p>GIBB (Pty) Ltd for Western Cape Government (WCG): Department of Transport & Public Works - Swartberg River Bridge, South Africa (2016-2017)</p>	<p>Basic Assessment process for the proposed implementation of erosion protection measures along a section of the Swart River which is traversed by the TR 34, approximately 7 km north of Prince Albert. Project director and quality control.</p>

<p>SMEC SA (Pty) Ltd for Saldanha Bay IDZ Licencing Company (SOC) Ltd - Proposed new access roads to the Saldanha Bay IDZ, south Africa (2016-2017)</p>	<p>Basic Assessment for the construction of two new access roads linked to the back of port area of the Saldanha Bay IDZ. Project director and quality review.</p>
<p>Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport and Public Works – Proposed stormwater repairs on Main Road 101, Cape Town, South Africa (2014-2016).</p>	<p>Basic Assessment and environmental compliance for the storm damage repair of slopes and roadway on MR101 between Simon’s Town and Smitswinkel Bay, Cape Town. Project director, stakeholder engagement, alternate ECO and quality review.</p>
<p>Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport and Public Works – Resurfacing of a section of Victoria Road, Cape Town, South Africa (2014-2015)</p>	<p>Environmental compliance services for the repair and resurfacing of Victoria Road (MR103) km 2.1 to km 4.75 between Oudekraal and Llandudno, Cape Town. Project director.</p>
<p>Gibb (Pty) Ltd for WCG: Department of Transport & Public Works - Proposed changes to the proclaimed road network affected by the raising of the Clanwilliam Dam wall, South Africa (2013-ongoing)</p>	<p>Environmental input and facilitation of the public participation process for the proposed changes to the proclaimed secondary road network that would be affected by the raising of the Clanwilliam Dam wall. Project director, stakeholder engagement and quality review.</p>
<p>Kantey & Templer Consulting Engineers (Pty) Ltd for WCG: Department of Transport & Public Works, South Africa (2012-2017)</p>	<p>Basic Assessment for the proposed safety and operational improvement to the R44 Road between Somerset West and Stellenbosch. Project director, stakeholder engagement and quality review.</p>
<p>Hatch GOBA (Pty) Ltd for WCG: Department of Transport & Public Works, South Africa (2015-2016)</p>	<p>Maintenance Management Plan for proposed flood damage repairs to bridge and culvert structures along various roads in the Eden and Winelands Municipal areas between Ladismith and Montagu, Western Cape. Project director and provided quality review.</p>
<p>ERO Engineers (Pty) Ltd for WCG: Department of Transport & Public Works, South Africa (2015-2016)</p>	<p>Compiled a Maintenance Management Plan for the proposed rehabilitation and reseal of Main Road 233, between the R27 and just north of Langebaan, Western Cape. Project director and quality review.</p>

<p>Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport & Public Works (2014-2015)</p>	<p>Basic Assessment for the storm damage repair of slopes and roadway on Main Road MR101 between Simons Town and Smitswinkel Bay, Western Cape. Project director and quality review.</p>
<p>AECOM SA (Pty) Ltd. for South African National Roads Agency SOC Limited – Upgrading of National Route 7, South Africa (2013-2015)</p>	<p>The project involved the proposed upgrading of the National Route 7 between Leliefontein and Hopefield intersections near Malmesbury, Western Cape. This included widening of the existing road to a dual carriageway, consolidating access and secondary roads and the addition of new interchanges. A Basic Assessment and an EIA were undertaken for two different portions of this section of the N7. Project director, stakeholder engagement and quality review.</p>
<p>EFG Engineers (Pty) Ltd for WCG: Department of Transport and Public Works –Hermanus to Stanford Road Upgrade Project, South Africa (2013-2014)</p>	<p>Basic Assessment for the upgrading of Trunk Road 28 Section 2 (TR28/2) between Hermanus and Stanford, Western Cape. Project director, stakeholder engagement and quality review.</p>
<p>BKS (Pty) Ltd for WCG: Department of Transport & Public Works – Road network improvements to support Saldanha IDZ, South Africa (2012-2015)</p>	<p>EIA for the proposed road network improvements required to support the development of the Saldanha Industrial Zone and port expansion, Western Cape. Project director and quality control.</p>
<p>Aurecon (Pty) Ltd for WCG: Department of Transport & Public Works – Flood repair of damaged structures, South Africa (2012-2013)</p>	<p>Five Basic Assessments for the repair of flood damaged structures along roads in the Eden District Municipality, Southern Cape. Project director and quality control.</p>
<p>ERO Engineers (Pty) Ltd for South African National Roads Agency Limited – N7 Improvement between Melkbos and Atlantis intersections, South Africa (2010-2011)</p>	<p>EIA for the improvement of National Route N7 Section1 between Melkbos and Atlantis Intersections, Western Cape. The project involved duelling of the N7, consolidating of access points and the upgrade of the existing intersections to grade-separated interchanges. Project director, facilitated stakeholder engagement and provided quality control.</p>
<p>BKS (Pty) Ltd for South African National Roads Agency Limited – Improvement of five bridges over the Orange River, South Africa (2009-2011)</p>	<p>A Basic Assessment was undertaken for the improvement and widening of five large bridges where the R27 National Route, Section 10 & 11, cross the Orange River between Kenhardt and Keimoes, Northern Cape. Further services involved providing environmental compliance services (ECO services) during the construction operation and completion auditing. Overall project director, attended specialist site visit and review all project documentation.</p>

<p>Bergstan South Africa (Pty) Ltd for WCG: Department of Transport & Public Works – Repair to flood damaged bridges (2009-2010)</p>	<p>Basic Assessment for the reconstruction of three flood damaged bridges in the Hex River Valley, Western Cape. Project director and quality control.</p>
<p>UWP (Pty) Ltd for South African National Roads Agency Limited – Rehabilitation of National Routes N1 and N9 near Colesberg, South Africa (2008-2011)</p>	<p>Basic Assessment for the proposed rehabilitation of National Route 9 Section 7 from Wolwefontein (km63.63) to Colesberg (km94.84) including a new N1/N9 access interchange at Colesberg, Western Cape. Project director and quality review.</p>
<p>HHO Africa (Pty) Ltd for WCG: Department of Transport and Public Works – Construction of the Koeberg Interchange, Cape Town, South Africa (2008-2011)</p>	<p>Environmental compliance during the construction phase of the Koeberg Interchange upgrade. Alternative ECO services and project director.</p>
<p>BKS (Pty) Ltd for City of Cape Town – Construction of the Hospital Bend upgrade, Cape Town, South Africa (2008-2010)</p>	<p>Environmental compliance for the construction phase of the upgrading of the N2 Hospital Bend, Cape Town. Facilitated the Environmental Monitoring Committee, alternative ECO and project manager.</p>
<p>BKS (Pty) Ltd for WCG: Department of Transport & Public Works - Upgrading of TR 2, M5 Viaduct to Black River Parkway Interchange, South Africa (2007-2011)</p>	<p>Basic Assessment and environmental compliance during construction for the upgrading of Trunk Road 2 Section 1 (M5) between the M5 Viaduct and the Black River Parkway Interchange, Cape Town. Project management of the Basic Assessment and ECO</p>
<p>City of Cape Town – Proposed Bloubos and Gustrow Roads, South Africa (2007-2011)</p>	<p>EIA for the proposed new sections of Bloubos and Gustrow Roads for the Gordon’s Bay and Sir Lowry’s Pass Development Areas, Cape Town. Project management, report writing, stakeholder facilitation and quality control.</p>
<p>Kwezi V3 (Pty) Ltd for WCPA: Department of Transport and Public Works – Development of borrowpits in the Central Karoo District, South Africa (2007)</p>	<p>EMPR for the development of 40 borrowpits for the regravelling of trunk-, main- and divisional roads in the Central Karoo District, Western Cape. Roles included project management, attending the specialist site visit, report writing and quality control.</p>
<p>Jeffares & Green (Pty) Ltd for WCPA: Department of Transport and Public Works – Upgrading of roads in the Redelinghuys area, South Africa (2006-2009)</p>	<p>Basic Assessment for the proposed upgrading of Main Road 531, regravelling of Main Road 534 and development of 10 borrowpits in the Redelinghuys area, Western Cape. Project director and quality review.</p>

<p>South African National Roads Agency Limited – Propose N2 Wild Coast Toll Road, South Africa (2005-2011)</p>	<p>EIA for the proposed N2 Wild Coast Toll Road, Eastern Cape to Kwa-Zulu Natal. The proposed project involved various improvements to a 550 km stretch of the N2 between East London and Durban. A 90 km greenfield alignment formed the northern end of the Eastern Cape section which included the crossing of five large river gorges. Project co-director, client liaison and quality review.</p>
<p>HHO Africa for PGWC (Department of Transport) – Grading of the road between Gansbaai and Bredasdorp (2005-2010)</p>	<p>Undertook the EIA for the proposed upgrading to a tarred road of the existing gravel road between Gansbaai and Bredasdorp. An EMPR was also compiled for a number of borrowpits that were required of the proposed project. Project director, stakeholder engagement, report drafting and quality review.</p>
<p>Protea Parkways Consortium and South African National Roads Agency Limited – N1 Second Huguenot Tunnel Completion, Western Cape, South Africa (2008-2009)</p>	<p>Basic Assessment for the proposed completion of the second tunnel bore of the Huguenot Tunnel on National Route 1 and construction of the western and eastern access roads. Project manager and quality review.</p>
<p>BKS (Pty) Ltd for PGWC (Department of Transport) – Rehabilitation of the N2. Modderdam Road to Airport Interchange, South Africa (2005-2007)</p>	<p>Scoping Study for the proposed rehabilitation and widening of the N2 between Modderdam Road and Airport Interchange, Cape Town. Project manager, stakeholder engagement and quality control.</p>
<p>Protea Parkways Consortium and South African National Roads Agency Limited – Proposed N1/N2 Winelands Toll Highway (2000-2009)</p>	<p>EIA for the proposed Winelands N1N2 Toll Highway, Western Cape. The proposed project included upgrading of various sections of the N1 and N2 national roads outside Cape Town, grade separated intersections, a bypass around Somerset West and various toll plaza locations. Roles included a substantial stakeholder engagement process, project management, specialist report review and report writing.</p>
<p>BKS (Pty) Ltd for PGWC (Department of Transport) – Construction of the TR31, South Africa (1999-2004)</p>	<p>Prepared the Construction EMP and provided Environmental Control Officer services for the construction of Phase 2 and 3 of the TR31 between Worcester and Robertson. Project Director and environmental compliance.</p>
<p>BKS (Pty) Ltd for City of Cape Town – Proposed upgrading of Hospital Bend, Cape Town, South Africa (1998-2002)</p>	<p>EIA for the upgrading of the N2 from Rhodes Drive Interchange to the top of Hospital Bend, Cape Town. Project management, stakeholder engagement, client liaison and quality review.</p>

	Landfill Sites and Waste Water Treatment Works
City of Cape Town – Supplementary EIA for a Regional Landfill Site to service the City of Cape Town, South Africa (2010-2014)	Supplementary EIA for the proposed regional landfill site to service the City of Cape Town. This involved updating the earlier EIA following court proceedings and a revised Ministerial decision. Project director, report compilation, facilitation of public participation and quality review.
Arcus Gibb (Pty) Ltd for Theewaterskloof Municipality, South Africa (2008-2011)	Scoping Study and EIA for the proposed upgrading of the Grabouw Wastewater Treatment Works, Western Cape. Stakeholder engagement, quality review and project director.
City of Cape Town – EIA for a Regional Landfill Site to service the City of Cape Town, South Africa (2001-2007)	EIA for the proposed new regional landfill site to service the City of Cape Town. The project involved a preliminary assessment of a large number of candidate landfill sites. These were shortlisted to four which were evaluated in the Scoping Report. The two recommended sites were carried through for detailed assessment in the EIA. Project manager, client liaison, stakeholder interaction, specialist engagement, report writing and quality review.
City of Cape Town – EIA for the proposed licensing of the Bellville South Landfill site, South Africa (1999-2001)	EIA for the proposed licensing of the Bellville South Waste Disposal Site, Cape Town. Various completion development scenarios were included in the assessment. Stakeholder interaction, specialist engagement, client liaison, report drafting, quality control and project manager.
Cape Agulhas Municipality – Proposed regional solid waste disposal site, South Africa (1999-2001)	EIA for a proposed regional solid waste disposal site for the towns of Struisbaai, L’Agulhas and Suiderstrand, Western Cape. Stakeholder engagement and quality review.
Mossop Western Leathers – Proposed closure of the Herman Road Waste Disposal facility, South Africa (1998)	EIA for the proposed closure of the Hermon Road Waste Disposal Site, Wellington. Project manager, stakeholder interaction, specialist engagement, report writing and quality review.
Greater Hermanus Municipality – Study to identify a regional waste site for the region, South Africa (1997)	EIA for the identification of a regional waste site for the Hermanus, Kleinmond and Bot River regions, Western Cape. Stakeholder engagement, report compilation and project management.
Kleinmond Municipality – Selection of a new waste disposal site to serve the area, South Africa (1996)	Scoping Study for the selection of a new waste disposal site to serve the area between Rooi-Elis and Kleinmond, Western Cape. Project manager, stakeholder engagement and report compilation.
Southern Natal Joint Services Board – Siting of regional landfill sites, South Africa (1994)	EIA procedure (from initial assessment to comments report) for the siting of two regional landfill sites in southern Natal. Report compilation, client liaison and project management.

	Water and Sewage Pipelines
BVi Consulting Engineers Western Cape (Pty) Ltd for City of Cape Town: Transport for Cape Town – Proposed upgrade of the Bayside Canal, South Africa (2016 - ongoing)	Basic Assessment for the proposed upgrading of the Bayside Canal Outfall System located in Tableview, Cape Town. Project director and quality review.
BVI Consulting Engineers WC (Pty) Ltd for the City of Cape Town: Transport for Cape Town – Proposed stormwater pipeline linking Sunningdale to the Big Bay stormwater outfall pipeline, South Africa (2015 -2016)	Basic Assessment process for the construction of a new stormwater pipeline to route runoff from Sunningdale Phases 12A, 13 and 14 to the existing Big Bay Outfall pipeline located at the eastern boundary of the suburb of Big Bay, Cape Town. Project director and quality review.
Jeffares & Green (Pty) Ltd for Stellenbosch Municipality – Jamestown Bulk Water Supply, South Africa (2012-2013)	Basic Assessment for the proposed Jamestown Bulk Water Supply pipeline and reservoir, Stellenbosch. Project director and quality review.
Sujean Investments (Pty) Ltd - Kuils River Flood Alleviation Project, Cape Town, South Africa (2010-2011)	Basic Assessment for the proposed Kuils River flood alleviation measures for Erf 38771, Bellville. Project director and quality review.
City of Cape Town – Bulk Water system for the Gordon’s Bay Development Area, South Africa (2007-2009)	Basic Assessment for the proposed bulk water system for the Gordon’s Bay Development Area, Cape Town. Project director, stakeholder engagement and quality review.
City of Cape Town – Extension of the Trappies Sewer line, South Africa (2007)	Basic Assessment for the proposed extension of the Trappies Sewer line, Gordon’s Bay, Cape Town. Project director, stakeholder engagement and quality review.
Velddrift Salt Company (Pty) Ltd - Seawater Pump Station and Pipeline, South Africa (2003)	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 Laaiplek, Western Cape. Project manager, stakeholder engagement and quality review.
Entech Consulting Engineers for the Boland District Municipality - Eerste River Bulk Sewage Scheme, South Africa (1999-2001)	EIA for the proposed Eerste River Bulk Sewage Scheme, Stellenbosch. Project manager, stakeholder engagement, report compilation, quality review.

	<p>Rivers and Wetlands</p>
<p>City of Cape Town - proposed Sir Lowry's Pass River flood alleviation and upgrade, South Africa (2007-2011)</p>	<p>Scoping Study and EIA for the proposed Sir Lowry's Pass River flood alleviation and upgrade in the Gordon's Bay and Sir Lowry's Pass Development Area, Cape Town. Project manager, stakeholder engagement, report compilation, quality review.</p>
<p>Stewart Scott International for City of Cape Town: Helderberg Administration – Proposed Lourens River Flood Alleviation Measures, South Africa (2000-2001)</p>	<p>EIA, Construction EMP and ECO for the proposed Lourens River Flood Alleviation measures, Cape Town. Project director, stakeholder engagement and quality control.</p>
<p>Southern Waters for City of Cape Town, South Peninsula Municipality - Management Plan for Zeekoevlei/Rondevlei, South Africa (2000)</p>	<p>Public consultation for the development of a Management Plan for Zeekoevlei/Rondevlei, Cape Town. Facilitated the public consultation for the development of the plan.</p>
<p>Helderberg Municipality and Cape Metropolitan Council - upgrade of the Moddergat River, South Africa (1999)</p>	<p>EIA for the proposed upgrade of the Moddergat River, Macassar, Cape Town. Project director, stakeholder engagement and quality control.</p>
	<p>General Industries and similar</p>
<p>Irvin & Johnson Limited - Abalone Processing Facility, Western Cape, South Africa (2017-ongoing)</p>	<p>Basic Assessment and EIA for a proposed abalone processing facility and expansion of the existing abalone farm, respectively, at the existing I&J operation near Gansbaai. Project director and quality control.</p>
<p>International Mining & Dredging Holdings Ltd – Mining Right Application for offshore diamond concession Block 2C, South Africa (2015-2016)</p>	<p>EIA for a Mining Right Application for an offshore diamond concession in Block 2C off the West Coast of South Africa. Project director and quality review.</p>
<p>International Mining & Dredging Holdings Ltd – Application for sediment sampling for diamond mining concession areas, West Coast, South Africa (2014-2015)</p>	<p>Basic Assessment for marine sediment sampling activities in Diamond Mining Concession Areas off the West Coast, South Africa. Project director and quality review.</p>

<p>Saldanha Bay IDZ Licencing Company – Establishment of an Oil and Gas Offshore Supply Base, South Africa (2013-2016)</p>	<p>EIA for the proposed establishment of an Oil and Gas Offshore Supply Base at the Saldanha Bay IDZ. Project director and quality review.</p>
<p>ZAA Engineering Projects and Naval Architecture (Pty) Ltd for Transnet National Ports Authority - Pre-feasibility study for an offshore LPG handling and storage facility, Saldanha Bay, South Africa (2011)</p>	<p>Environmental input into the pre-feasibility study for the proposed offshore LPG handling and storage facility, Port of Saldanha, Western Cape. Project manager and environmental content input.</p>
<p>FerroMarine Cape – Construction of the Oil and Gas Service Hub, Port of Cape Town, South Africa (2010-2011)</p>	<p>ECO for the construction of an Oil and Gas Service Hub in the Port of Cape Town. Project director and alternate ECO.</p>
<p>Yachtport SA (Pty) Ltd – Marine Lift Facility, Saldanha Bay, South Africa (2009-2011)</p>	<p>Basic Assessment and ECO for the proposed Marine Lift Facility in the Small Craft Harbour, Port of Saldanha. Project director and quality review.</p>
<p>Richmond Business Park Joint Venture Consortium – Proposed Richmond Park Development, Cape Town, South Africa (2010-2012)</p>	<p>EIA for the proposed Richmond Park Development for the project facilitation joint venture on behalf of the successful land claimants, Cape Town. Project director, stakeholder engagement and quality review.</p>
<p>SAB Maltings (Pty) Ltd – Proposed Steep Water Purification Plant, Caledon, South Africa (2008-2011)</p>	<p>EIA for a Waste Management Licence Application for the construction of a Steep Water Purification Plant (Two- phased Membrane Bioreactor and Reverse Osmosis system) at the South African Breweries’ Malting Plant, Caledon, Western Cape. Project director, stakeholder engagement and quality control.</p>
<p>Savannah Environmental (Pty) for Eskom Holdings Ltd – Proposed Eskom Wind Energy Facility (Sere Wind Farm), Koekenaap, South Africa (2007-2008)</p>	<p>Environmental Review of the EIA and EMP for the proposed Eskom Wind Energy Facility and associated infrastructure (Sere Wind Farm), near Koekenaap, Western Cape. Review of process and report.</p>
<p>Finavera Renewables Ltd – Proposed Wave Energy Project, Western Cape, South Africa (2007-2008)</p>	<p>Environmental input for a site pre-selection exercise for a proposed Wave Energy Project located off the Southwest Coast of South Africa. Project manager and research.</p>
<p>Irvin & Johnson Limited – Offshore aquaculture Project, Mossel Bay, South Africa (2007-2009)</p>	<p>Basic Assessment for a proposed 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). Project director, specialist review and quality control.</p>

<p>Tow Surf South Africa – Noise and Emissions evaluation of Tow Surfing, Cape Town, South Africa (2006)</p>	<p>Environmental evaluation of the effects of tow surfing in terms of noise and emissions on surrounding residential areas. Project manager and report compilation.</p>
<p>Water Research Commission – Compilation of a Groundwater Licensing Guide (2004-2007)</p>	<p>A member of the project consultant team that prepared a Groundwater Licensing Guide to guide groundwater development and use applications. Project manager and workshop participant.</p>
<p>P & I Associates (Pty) Ltd – Proposed wreck reduction of vessel BBC China, Eastern Cape, South Africa (2004)</p>	<p>Environmental Assessment for the proposed wreck reduction of the vessel BBC China, Wild Coast. Project manager, facilitate specialist input and compilation of EMP for the wreck reduction operation.</p>
<p>PetroSA (Pty) Ltd – Unleaded Fuel Refinery Conversion Project, Mossel Bay, South Africa (2003-2005)</p>	<p>EIA for the upgrading of the PetroSA refinery near Mossel Bay for the conversion to 100% unleaded fuel production. Project director and quality review.</p>
<p>Namakwa Sands Ltd – Proposed extension of mining and processing operations, West Coast, South Africa (2003)</p>	<p>Initial environmental investigation for the proposed extension of Namakwa Sands’ mining, mineral separation and smelting operations. Project director, specialist site visit and quality review.</p>
<p>Caltex SA (Pty) Ltd – Processing and disposal of sulphur produced at the Milnerton refinery, South Africa (2001-2002)</p>	<p>EIA for the additional equipment to process sulphur produced at the Milnerton Oil refinery and offsite disposal of sulphur. Project director and quality review.</p>
<p>PetroSA (Pty) Ltd – Distillate Project, Voorbaai Tank Farm, South Africa (2001)</p>	<p>Compilation and implementation of construction-phase Environmental Management Plan for the Low Aromatic Distillate Project, Voorbaai Tank Farm Mossel Bay. Project manager and report compilation.</p>
<p>Caltex SA (Pty) Ltd – Capacity increase of the Saldanha-Milnerton crude oil pipeline, South Africa (2000)</p>	<p>EIA for the increase in the flow-rate of the Saldanha-Milnerton crude oil pipeline. Project management, stakeholder engagement and report compilation.</p>
<p>LAMA International for Sappi Saiccor – Construction of the extended marine outfall pipeline, KwaZulu-Natal, South Africa (1996)</p>	<p>Compiled the Construction EMP and undertook the construction compliance for the duration of the construction operation to extend the Sappi Saiccor marine outfall pipeline, Umkomaas, KwaZulu-Natal. Project manager, report compilation and ECO.</p>
<p>CSIR – Proposed Gas monitoring laboratory at Cape Point, South Africa (1994-1996)</p>	<p>Public consultation for the proposed CSIR gas monitoring laboratory at Cape Point. Quality review.</p>

<p>CSIR for Saldanha Steel (Pty) Ltd – Proposed steel mill for Saldanha Bay (1994-1995)</p>	<p>Facilitated the public consultation process for the proposed development of a steel mill in the Saldanha Bay area. Stakeholder engagement and co-project manager.</p>
<p>Tourism/Resort</p>	
<p>Meerenhof Properties (Pty) Ltd - Proposed expansion of dams on Uitsig Farm, Cape Town, South Africa (2016 – ongoing)</p>	<p>Basic Assessment for the proposed expansion of dams on Uitsig Farm, Constantia, Cape Town to provide for additional storage for summer irrigation purposes. Project director, stakeholder engagement and quality review.</p>
<p>City of Cape Town – Feasibility Study for proposed Monwabisi Coastal Node, Cape Town, South Africa (2011)</p>	<p>Feasibility study for the proposed Monwabisi Coastal Node, Cape Town. Project manager and content contributor.</p>
<p>Olympian Developing Company – Proposed multi-purpose estate, Firgrove, South Africa (2003-2005)</p>	<p>EIA for the development of a multi-purpose estate on Rem. Farm 681, Firgrove/Macassar, Cape Town (Sitari Fields Golf Estate). Project director, stakeholder engagement, review of specialist studies and quality control.</p>
<p>Lourensford Estate – Construction of Lourensford Winery, Somerset West, South Africa (2002-2003)</p>	<p>Compiled the Construction and Operation EMP and undertook compliance monitoring for the development of a wine cellar on Lourensford Estate, Somerset West, Cape Town. Report compilation and ECO.</p>
<p>Johnnic Property Development (Pty) Ltd – Atlantic Beach Golf Estate, Cape Town, South Africa (1997)</p>	<p>EIA for the proposed development of the Atlantic Beach Golf Estate, Melkbosstrand, Cape Town. Project director, specialist study review, report compilation and quality review.</p>
<p>Table Mountain Aerial Cableway Company - Upgrade of the Table Mountain Cableway, Cape Town, South Africa (1995-1996)</p>	<p>EIA for the proposed upgrading of the Table Mountain Aerial Cableway, Cape Town. Facilitated public consultation process, reviewed specialist studies, report compilation and project management. Member of the Environmental Monitoring Committee for the duration of the construction operation.</p>
<p>Built Environment</p>	
<p>Luna Trust - Proposed Subdivision of Erf 177476, St James, Cape Town, South Africa (2017 – Ongoing)</p>	<p>Basic Assessment for the proposed subdivision into four additional portions of Erf 177476, St James, Cape Town. Project director, client liaison and quality review.</p>
<p>Peter Koekemoer – Rectification process for house construction in Cape Town, South Africa (2015-2016)</p>	<p>EIA for a Section 24G application process for House Koekemoer ERF 3446, Oranjezicht, Cape Town. Project director, client interaction and quality review.</p>

<p>Rustyrose 41 (Pty) Ltd t/a Brights Hardware (Pty) Ltd - Rezoning of Erf 10565 Belville (2011-2013)</p>	<p>Basic Assessment for the proposed rezoning of a portion of Erf 10565, Boston (Belville), Cape Town and ECO services for the duration of the construction period.</p>
<p>Martin Kelly – Proposed subdivision of a portion of Erf 1, Simon’s Town, South Africa (2006-2011)</p>	<p>Basic Assessment for the proposed subdivision and rezoning of a portion of Erf 1, Simon’s Town (Glencairn), Cape Town. Project manager, stakeholder engagement, specialist report review, client interaction and quality control.</p>
<p>Llandudno Surf Lifesaving Club – Extension of the club boathouse, Cape Town, South Africa (2007-2010)</p>	<p>Basic Assessment for the proposed extension of the Llandudno Surf Lifesaving Club Boathouse, Llandudno, Cape Town. Project director, authority liaison and quality review.</p>
<p>Cape Town Community Housing Company – Proposed Royal Maitland Phase 3, Cape Town, South Africa (2006-2007)</p>	<p>Basic Assessment for the proposed rezoning and subdivision of Erf 23300, Maitland (Royal Maitland Phase 3). Project management and quality review.</p>
<p>Rocklands Eco Estate (Pty) Ltd – Proposed development of Rocklands Farm, Simon’s Town, South Africa (2005-2011)</p>	<p>Basic Assessment for the proposed rezoning and subdivision of parts of Portions 1 and 2 of Farm 1020, Simon’s Town (Rocklands Farm), Western Cape. Stakeholder engagement, specialist study review, report compilation, client interaction, project management and quality review.</p>
<p>Trans Caledon Tunnel Authority – Construction of the Berg River Dam, Franschhoek, South Africa (2005-2008)</p>	<p>Environmental compliance for various construction components of the Berg River Dam Project, Franschhoek, Western Cape. Tasks included weekly site visits, ECO report compilation and monthly audit reports for the duration of the construction operation.</p>
<p>Gavin Wurz – Proposed development of Farm Rouen, Strand, South Africa (2004)</p>	<p>Scoping Study for the proposed rezoning and subdivision of Farm Rouen on Erven 5100 & 5101, Strand, Cape Town. Project manager, stakeholder engagement and quality review.</p>
<p>Plattner Racing Stables – Redevelopment of Rondeberg Farm, West Coast, South Africa (1999-2000)</p>	<p>Environmental input included undertaking a Scoping Study for the proposed rezoning and development of Farm Rondeberg Flats, No. 116, West Coast north of Cape Town. A Construction EMP and Operation EMP were also compiled. The project included the construction of a horse racing track, jockey stables and various other supporting infrastructure. Project management, stakeholder engagement, specialist study review, report compilation and quality review.</p>
<p>Thesen & Co – Proposed development of Thesen Island, Knysna, South Africa (1994-1996)</p>	<p>Facilitation of the public consultation process for the proposed development options for Thesen Island, Knysna.</p>

MEMBERSHIPS

CEAPSA	Certified as an Environmental Practitioner with the Interim Certification Board for Environmental Assessment Practitioners of South Africa (2006)
ICB	Interim Certification Board member, since 1999
IWM	Member of the Institute of Waste Management, since 1998
IAIASa	Member of the International Association for Impact Assessment South Africa, since 1997
Pr.Sci.Nat.	Registered as a Professional Natural Scientist - Environmental Scientist, 1993 (Reg. no. 400145/93)

PUBLICATIONS

	R Parsons, L Eichstadt, J Crowther, J Blood. (2008) "Application Procedure for the Development and Use of Groundwater". WRC Report No. 1510/1/08.
	Shippey K., Campbell H.M. and Crowther J. (1997). "Constructing successful environmental management plans for building sites". IAIA '97 Conference, Integrated Environmental Management in Southern Africa: The State of the Art and Lessons Learnt. Pilansberg, South Africa.
	Crowther J. and Dorren D. (1994) "Public consultation in the search for regional landfill sites, South Coast Natal". Wastecon '94 All-Africa Congress, Somerset West, South Africa.
	Hendry R W, Crowther J and Homes R (1990) "Stabilisation of Rock Cuttings on the Florence to Worcester Section of the National Route N1, South Africa". International Society for Rock Mechanics, International symposium on Static and Dynamic Considerations in Rock Engineering, Swaziland.
	Crowther J., Parsons R. and Palm J. (1986). "Experience of Public Participation in developing new waste disposal sites". Wastecon '96 International Congress. Convened by the Institute of Waste Management, Durban, South Africa.

CURRICULUM VITAE



ALESSANDRA (ALEX) PHEIFFER

SENIOR ENVIRONMENTAL CONSULTANT

Environmental Management, Planning and Approvals, Africa

QUALIFICATIONS

BSc	1998	Biological Sciences
BSc (Hons)	1999	Zoology
MSc	2004	Environmental Management

EXPERTISE

- Permitting and Licensing Processes
- Stakeholder Engagement
- Compliance Auditing
- Due Diligence and Reviews
- Screening and Risk Assessments
- Financial Provision and Closure Planning

Alex has 16 years' experience in the field of Environmental Management. She has managed a wide range of permitting and licensing projects including environmental, water, waste and air licensing and assessment processes mainly in the exploration, mining and industrial sectors. These included project management and co-ordination; specialist and engineering team management; co-ordination, facilitation and undertaking of stakeholder engagement processes including for contentious projects, and environmental assessment. She has experience in addressing both in-country legislation and Equator Principles and International Finance Corporation (IFC) requirements.

Alex has provided environmental specialist input on a number of pre-feasibility studies linked to the exploration/development/expansion of mining operations. She has also been involved in policy drafting, environmental due diligence processes, environmental reviews for financing institutions (in the mining, industrial and alternative energy sectors), compliance auditing, general environmental management support to operating sites, site screening exercises, risk assessments and financial provisioning and closure planning.

In her early career years, Alex held a position within Anglo Platinum's Waterval Smelter as Assistant to the Chief Environmental Officer. During the period March 2015 to October 2016, Alex held the position of Operations Manager: Environmental Management, Planning and Approvals (EMPA) within SLR Africa and was responsible for co-ordinating SLR's environmental management team.

PROJECTS

CHROME	
2007	Project Manager: EMPs (including an EIA) for prospecting on the farms Beestekraal 290 JQ, Boschpoort 284JQ, Nooitgedacht 289JQ and Nooitgedacht 287JQ near Rustenburg in the North West Province: Bakgatla Ba Kgafela Tribal Authority
2005	Project Manager: EMPs (including EIA) for two prospecting projects on the town and town lands of Rustenburg 272JQ in Rustenburg Magisterial District, North West Province: Xstrata South Africa (Pty) Ltd
2003-2004	Project Assistant: EIA/EMP for a chrome mine and concentrator in the Rustenburg / Boshhoek region: SA Ferrochrome and Mining (Pty) Ltd

COAL	
Current	Project Manager: EIA/EMP for a greenfields coal mine in northern Kwa-Zulu Natal: Commissiekraal Coal (Pty) Ltd
COPPER	
Current	Project Reviewer: ESIA for the Kitwe tailings retreatment and mineral processing project in Zambia: Horizon Mining
2014	Project Reviewer: EIA/EMP amendment for the Kinsenda operations in the DRC.
2013	Project Reviewer: EIA for a greenfields copper oxide project (Omitiomire project) (Namibia): Craton Mining and Exploration (Pty) Ltd
FERROCHROME	
2013	Project Manager: EIA/EMP amendment for the exclusion of smelter activities at Bokfontein Chrome Mine: Herculite Ferrochrome
2012	Project Manager: EIA/EMP amendment for a concentrator and smelter complex at Bokfontein Chrome Mine: Herculite Ferrochrome
2003-2004	Project Assistant: EIA for Project Lion, a new smelter complex near Steelpoort: Xstrata South Africa (Pty) Ltd
2002-2003	Project Assistant: EIA/EMP for Transvaal Ferrochrome Project (a ferrochrome smelter complex in the Rustenburg/Brits region):
2002-2003	Project Manager: EIA/EMP amendment for a pelletizing plant at Xstrata Wonderkop: Xstrata South Africa (Pty) Ltd
GOLD	
Current	Project Reviewer: EIA for the refurbishment of an existing shaft and related mineral processing and residue disposal facilities: Taung Gold
2016	Project Reviewer: Annual update of the Damang EMP and reclamation plan: Abosso Goldfields Limited
2012	Project Manager: EIA for a filtration plant at Navachab Gold Mine (Namibia): AngloGold Ashanti Namibia (Pty) Ltd
2011	Project Reviewer: Basic Assessment for Diesel storage facilities at its South Deep Mine Operations: Gold Fields (South Africa) (Pty) Ltd
2009	Part of a peer review delegation for an ongoing EIA: Participation in an integrated environmental management review – technical workshop for new projects at Gold Fields: Gold Fields (South Africa) (Pty) Ltd
2005-2007	Project Manager: Consolidating South Deep Min's various EMPR documents into one document and in turn bringing the mine's EMPR in line with the requirements of the Mineral and Petroleum Resources Development Act and supporting

	regulations : Placer Dome Westonaria Joint Venture – South Deep Mine
2005-2007	Project Manager: EIA and EMP amendment for a new tailings dam development: Placer Dome Westonaria Joint Venture – South Deep Mine
IRON	
2016	Project Reviewer: EIA and EMP for the Jenkins and Driehoekspan greenfields mining operations in the Northern Cape: Coza Iron Ore
2012	Project Manager: EIA/EMP for greenfield iron ore mine development near Lephalale (Ellisras) (Moonlight iron ore project) in the Limpopo Province: Turquoise Moon Trading (Pty) Ltd
2010	Project Manager and Reviewer: Amendment to existing prospecting EMP to cater for changes in prospecting operations: Nelesco 684 (Pty) Ltd
2010	Project Manager and Reviewer: Amendments to existing prospecting EMPs (Cascade 442IT and Delft 22HU) to cater for changes in prospecting operations: Mkhombi Mining (Pty) Ltd
2009	Project Manager and Reviewer: Management of the consultation process for a prospecting EMP on the farms Sterkfontein 419IT and Wolvernkop 427IT, near Piet Retief in Mpumalanga Province: Mkhombi Mining (Pty) Ltd
2009	Project Manager: EMP (including EIA) for prospecting on the farms Moabsvelden 248IR and Rietkuil 249IR, near Delmas in Mpumalanga Province: Spirapix Mining (Pty)
MANGANESE	
Current	Project Reviewer: a number of EMP amendment and rectification processes for Tshipi é Ntle Manganese Mining operations in the Northern Cape
Current	Project Reviewer: EMP amendment and rectification processes for UMK Manganese Mine in the Northern Cape
2017	Project Reviewer: EIA and EMP for a greenfields mining right application in the Northern Cape: Khwara Mining
2016	Project Reviewer: EIA and EMP for a greenfields mining right application in the Northern Cape: Ntsimbintle Mining (Pty) Ltd
2008 and 2016	Project Reviewer: EMP performance assessment and financial provision re-assessment for prospecting right in the Northern Cape: Ntsimbintle Mining (Pty) Ltd
PLATINUM	
Ongoing	Project Manager and Reviewer: Various EMP performance assessments and financial provision re-assessments for prospecting rights held by Impala in the North West, Mpumalanga and Limpopo Province: Impala Platinum Limited (Impala)
Ongoing	Project Manager: Various amendments to existing prospecting EMPs to cater for

	the changes in prospecting operations: Impala Platinum Limited (Impala)
Ongoing	Project Manager and Reviewer: Various EMP performance assessments and financial provision re-assessments for prospecting rights held by Afplats, Inkosi and Imbasa in the North West Province
Current	Project Reviewer: EIA and EMP for the relocation of a security perimeter and infrastructure footprint expansion at a BMR and Smelter complex in the Limpopo Province: Northam Platinum
2015-2016	Project Reviewer: EIA and EMP amendment including WML for changes to surface infrastructure and operations at Bakubung Platinum Mine, North West Province
2012-2015	Project Reviewer: EIA and EMP amendment for changes to surface infrastructure and operations at Tharisa Mine, North West Province
2014	Project Reviewer: EMP Compliance Audit for Leeuwkop Mine
2013	Project Manager and Reviewer: EIA/EMP amendment for changes to surface infrastructure at Marula Platinum Mine: Marula Platinum (Pty) Ltd
2013	Project Reviewer: EIA/EMP for the extension of underground mining activities at Everest Platinum Mine (Fairway project): Aquarius Platinum (South Africa) (Pty) Ltd
2013	Project Manager: EIA/EMP for the extension of mining activities at Everest Platinum Mine (Hoogland project): Aquarius Platinum (South Africa) (Pty) Ltd
2011	Project Co-ordinator: Supply and co-ordination of interim on-site environmental manager to assist with general management of environmental aspects at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd
2010	Project Reviewer: Compilation of environmental documents (including a public consultation process) in support of a closure application for the Turffontein 263JQ and Kookfontein 265JQ prospecting right and Reinkoyalskraal 278JQ and Elandsheuwel prospecting right: Impala Platinum Limited (Impala)
2010	Project Reviewer and Auditing: 2010 Annual Re-Assessments of Everest Platinum Mine's closure cost estimate: Aquarius Platinum (SA) (Pty) Ltd
2010	Project Reviewer: EMP (including EIA) for prospecting on the farm Rooikraal 118JS in the Limpopo Province: Braggite Resource (Pty) Ltd
2009	Project Manager: 2009 Annual Re-Assessments of Everest Platinum Mine's closure cost estimate: Aquarius Platinum (SA) (Pty) Ltd
2009	Project Manager and Closure: EIA/EMP amendment for the north and south boxcuts at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd
2009	Project Reviewer: EIA/EMP amendment for the production expansion of Eland Platinum Mine: Xstrata South Africa (Pty) Ltd
2008-2009	Project Manager: Assistance with the consultation with landowners to input into closure of a prospecting right: Impala Platinum Limited (Impala)

2008	Project Manager: Compilation of environmental posters linked to the seismic EMP for the use in environmental awareness training: Impala Platinum Limited (Impala)
2008	Project Manager and Reviewer: EMP performance assessment of Marula Platinum Mine's EMP report: Marula Platinum (Pty) Ltd
2007-2008	Project Manager: EIA/EMP for a new platinum mine and concentrator Plant (Mphahlele Project) in the Limpopo Province: Tameng Mining and Exploration (Pty) Ltd
2006-2009	Project Manager: EIA/EMP amendment for additional infrastructure at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd
2006-2008	Project Manager: EIA/EMP for seismic survey activities near Impala's Rustenburg operations: Impala Platinum Limited (Impala)
2006-2008	Project Manager: EIA/EMP amendment for a new shaft and associated facilities and Marula Platinum Mine. This project also included the consolidation and updating of the mine's EMP to cater for the changes in mining legislation: Marula Platinum (Pty) Ltd
2005	Project Manager: EMP (including an EIA) for prospecting on the farms Turffontein 263JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)
2005	Project Manager: EMP (including an EIA) for prospecting on the farm Reinkoyalskraal 278JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)
2005	Project Manager: EMP (including and EIA) for prospecting on the farms Klipgatkop 115JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)
2005	Project Manager: EMP (including and EIA) for prospecting on the farms, Doornspruit 84JQ and Roodekraalspruit 113JQ near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)
2005	Project Manager: EIA/EMP for a mining right application (The Fingers Project) at Marikana Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd
2004	Project Manager: Assisted in the facilitation of the public involvement process for the Shaft 20 EMP amendment: Impala Platinum Limited (Impala)
2003-2004	Project Manager: EMP amendment for the Maandagshoek Winze Project (re-establishment of an underground shaft): Modikwa Platinum Mine
2002-2005	Project Manager: EIA/EMP amendment for the Opencast Mining Project at the Rustenburg operations: Impala Platinum Limited (Impala)
2002-2003	Project Manager: EMP amendment for The Hills Project (establishment of additional infrastructure for mining purposes): Modikwa Platinum Mine
2002-2003	Project Assistant: EIA and EMP for a greenfields mine – Everest South Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd

2002	Project Assistant: Drilling and bulk sampling EMPs for the Everest South Project: Aquarius Platinum (SA) (Pty) Ltd
2002	Project Assistant: Revised bulk sampling EMP for the Everest South Project: Aquarius Platinum (SA) (Pty) Ltd
2001	Project Manager: EMP amendments for re-positioning of infrastructure for Marikana Platinum Mine: Aquarius Platinum (SA)
RESIDENTIAL, FOOD and BEVERAGE	
2017	Technical E&S Lead: Fatal flaw analysis/site selection screening for a food and beverage developments in Gauteng
2016	Project Manager: Provision of environmental management support to Kumba Iron Ore for the relocation of Dingleton town
2015	Project Reviewer: Basic Environmental process for the Pilanesburg Platinum Mine Housing Development, in the North West Province
2001-2002	Project Assistant: EIA for a village and cemetery for non-landowners to be relocated from the site of Marikana Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd
SILICA AND SAND	
Current	Project Reviewer: EIA/EMP for a mining right application for sand quarry along the Vaal River, in the Free State: Goosebay (Pty) Ltd
2005-2006	Project Manager: EIA/EMP for mining right application at Rietvly Silica Mine: Xstrata South Africa (Pty) Ltd
URANIUM	
2009-2016	Project Manager: ESIA for a greenfields Uranium and Coal Mine in Botswana (Letlhakane Project): A-Cap Resources Limited
ALTERNATIVE ENERGY	
2012	Project Manager: EIA/EMP amendment for the use of alternative fuels at its Lichtenburg Cement Plant: Lafarge Industries SA (Pty) Ltd
2008-On-hold	Project Manager: EIA for cogeneration power plants at Xstrata’s operations in the North West and Mpumalanga Provinces: Power Tech IST/ Xstrata South Africa (Pty) Ltd
INDUSTRY	
2016	Project Reviewer: Basic assessment and Air Emission License for a minerals siding in Bloemfontein: Three clients
BIOREMEDIATION	
2017	Facilitation of DEA bioremediation process for a residential area in the Northern

	Cape
2013-2015	Project Manager: EIA for a waste management license for the bioremediation operation at TransHex Baken Diamond mine in the Northern Cape
CLOSURE PLANNING	
2017	Completion of the environmental and social aspects of the Closure Plan for B2Gold’s mine in Namibia: B2Gold Namibia
OTHER: EXPERT CONSULTANT, DUE DILIGENCE, REVIEWS, RISK ASSESSMENT	
2016-2017	Environmental Specialist: Environmental management services in fulfilment of the environmental legal obligations for the Dingleton Resettlement Project, near Kathu in the Northern Cape
2016	Environmental Specialist: Environmental and Social Due Diligence Review of two wind farm assets located in South Africa
On-going	Environmental Specialist: Environmental input into various pre-feasibility studies linked to the exploration/development/expansion of mining operations.
2015	Environmental Specialist: Legal compliance review of Everest Platinum Mine (Mpumalanga) in support of re-commencing operations
2015 & 2016	Environmental Specialist: Update to Tharisa Mine’s Competent Persons Report
2015	Project Manager: Alfred Knight Lab Due Diligence
2012 and 2013	Environmental Specialist: Due diligence on compliance, water, waste and air related aspects as part of an investment investigation at Silicon Technology (Pty) Ltd
2013	Environmental Specialist: A number of due diligences of gold exploration projects in Tanzania: New African Mining Fund
2012	Environmental Specialist: Input to a legal environmental register for African Barrick Gold’s operations in Tanzania
2012	Environmental Specialist: Peer Review of baseline specialist studies for Gold Fields Damang Gold Mine
2011	Environmental Specialist: Afplats Shaft Risk Assessment Update for Inkosi - Imbasa
2011	Environmental Specialist: Review of Barrick Tulawaka Tailings EIA
2010	Expert Consultant: Environmental input into the ESIA for the expansion of the Morupule Colliery in Botswana: Ecosurv Environmental Consultants
POLICY DRAFTING	
2008	Project Manager: Assistance with drafting a policy, guideline document and procedure for stakeholder participation during explorations operations for the Implats Group: Impala Platinum Limited (Impala)

WATER	
On-going	Project Reviewer: Of a number of water use license applications for mining operations across South Africa
2013	Project Manager: Assistance in compilation of water use license application (WULA) and integrated water and waste management plan (IWWMP) for a new platinum mine and concentrator plant (Mphahlele Project) in the Limpopo Province: Tameng Mining and Exploration (Pty) Ltd
2012	Project Reviewer: Co-ordination of integrated water and waste at Everest Platinum Mine: Aquarius Platinum (South Africa) (Pty) Ltd
2011	Project Manager: Water Supply Study for the Moonlight Iron Ore Project: Turquoise Moon Trading (Pty) Ltd
2011	Project Manager: ESIA for a greenfields wellfield development in Botswana (to supply the Letlhakane Project): A-Cap Resources Limited
2010	Project Reviewer: Re-registration of waste-related water uses at Everest Platinum Mine: Aquarius Platinum (South Africa) (Pty) Ltd
2010	Project Reviewer: Assistance with addressing water use license related issues: Marula Platinum (Pty) Ltd
2010	Project Manager: Water use license application (WULA) for the South Deep Doornpoort tailings dam
2006	Project Manager: Compilation of water use license application (WULA) and integrated water and waste management plan (IWWMP) for South Deep Mine:
Cancelled	Project Reviewer: Basic assessment for a water supply project to the Pilanesberg Platinum Mine Operations: Pilanesberg Platinum Mines (Pty) Ltd
MEMBERSHIPS	
PrSciNat	Registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist (PrSciNat) in Environmental Science (Reg. No. 400183/05)
EAPAN	Registered with the Environmental Assessment Professionals of Namibia (EAPAN) as a Lead Practitioner (Membership No. 121)
IAIA	Member of the International Association for Impact Assessments (IAIA), South African Affiliate since 2005
PUBLICATIONS	
As part of Masters Dissertation	Onderstepoort Journal of Veterinary Science, 2005. "Aspects of the ecology of the Asian tapeworm <i>Bothriocephalus acheilognathi</i> Yamaguti, 1934 in yellow fish in the Vaal dam, South Africa"