

**Brandon Stobart**  
Director



## Curriculum Vitae

### Qualifications

MBA	2006	Business Masters including a research report on evaluating sustainable development strategies in mining (WITS Business School)
EAP	2005	Certified as an environmental assessment practitioner in South Africa and Namibia.
EARA	2001	Environmental Auditors Registration Organisation ("EARA") accredited environmental audit qualification (Institute of Environmental Management Assessment "IEMA")
LLB	1997	Bachelor of law (University of Cape Town). Admitted as an attorney of the High Court of South Africa in 2000. Specialisation in mining and environmental law.
BA	1994	Majors in environmental science and economics (University of Cape Town).

### Key Areas of Expertise

Key areas of Brandon's expertise are summarised below.

Environmental and social assessment	Environmental and social due diligence and auditing. Environmental authorisations, permits, certificates, licenses. Environmental and social impact assessment (EIA) ISO 14001 environmental management systems (EMS). Environmental and social management programs and plans (EMPs).
Stakeholder Management	Stakeholder engagement strategies, facilitation of public participation processes, liaison with government and non-government organisations.
Sustainable development strategies	Planning and implementation of on sustainable development strategies.
Reviews	Peer review of environmental and social assessments.

### Summary of Capability

Brandon is the Managing Director of the following SLR group companies: SLR Consulting (Africa) Pty Ltd, SLR Consulting (South Africa) Pty Ltd and Synergistics Environmental Services (Pty) Ltd. He has been with SLR (previously called Metago Environmental Engineers) since 2000. During this time he has consulted to the mining industry as an environmental and social assessment practitioner. Prior to 2000 he worked as an attorney for Bowman Gilfillan Attorneys specialising in environmental and mining law.

## Recent Project Experience

Key aspects of Brandon's recent project experience are summarised below.

<b>Project</b>	<b>Brandon's Role</b>
<b>Chrome</b>	
Xstrata Chrome EIA and EMP amendment for furnaces 5 and 6, and large scale palletising plant at Wonderkop (South Africa)	Project manager
SA Chrome and Alloys (now called Xstrata-Merafe Ferrochrome), EIA for the development of a green fields ferrochrome smelter complex (South Africa).	Project manager
Transvaal Ferro-Chrome SA Limited (now called IFM), EIA and EMP for the development of a green fields ferrochrome smelter complex and chrome mine (South Africa).	Project manager
Tharisa Minerals, EIA and EMP for a green fields chrome mine (South Africa)	Project manager
<b>Gold</b>	
AngloGold Ashanti, ERGO and Vaal River rubber waste fields chrome mine (South Africa)	Project manager
Eastern Transvaal Consolidated, EIA/EMP amendment for contamination remediation and re-mining of old tailings dam at Sheba, Fairview and New Consort Mines (South Africa)	Project manager
LGL Equigold, ESIA and ESMP for the development of a green fields open pit operation in Hire (Ivory Coast)	Project reviewer
Barrick Gold South Deep Mine, EMP consolidation and tailings dam expansion (South Africa)	Project reviewer
Goldfields Ghana, Tarkwa EIA consolidation (Ghana)	Project reviewer
<b>Manganese</b>	
United Manganese of Kalahari, green fields EIA and EMP for a manganese mine and sinter plant (South Africa)	Project management and review
Ntsimbintle Mining, green fields EIA/EMP for a manganese mine and sinter plant (South Africa)	Project management and review
BHP Billiton Samancor Manganese, strategic environmental advice for expansion in the Hotazel mining area (South Africa)	Project manager
Northern Cape Manganese Mining Company, green fields EIA/EMP for a manganese mine and sinter plant (South Africa)	Project reviewer

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<b>Platinum</b>	
Barplats Mines Limited, EIA and EMP amendments for the following Crocodile River Mine expansions: Krokodil drift expansion, Zandfontein expansion, Maroelabult expansion (South Africa)	Project reviewer
Impala Platinum Limited EIA and EMP amendment for the UG2 and Merensky opencast project (South Africa)	Project manager
Impala platinum limited, EIA, and EMP amendment for smelter complex expansion (South Africa)	Project manager
Marula Platinum Mine, EIA and EMP amendment for the new shaft complex and tailings dam expansion (South Africa)	Project reviewer
Platinum Limited (Boyton), green fields EIA and EMP for Pilanesburg Platinum Mine (South Africa)	Project manager
Eastern Platinum, green fields EIA/EMP for the Spitzkop Platinum Mine (South Africa)	Project reviewer
Eland Platinum, green fields EIA/EMP for the Eland Platinum Mine (South Africa)	Project reviewer

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<b>Diamonds</b>	
De Beers, EIA/EMP performance assessment and review work for the Oaks diamond mine (South Africa)	Project manager
BHP Billiton and Petra Diamonds, EIA for the Alto Cuilo Diamond Project (Angola)	Project reviewer

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<b>Coal</b>	
Keaton Mining, green fields EIA and EMP for the Klipfontein Coal Mine (South Africa)	Project reviewer
Keaton Mining, green fields EIA and EMP for the Vanggatfontein Coal Mine (South Africa)	Project management and review
Leeuw Mining, EIA and EMP for a colliery new Utrecht (South Africa)	Project reviewer

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<b>Uranium</b>	
Mantra Resources, pre-feasibility EIA study for the green fields Mkuju River Uranium Mine (Tanzania)	Project manager
A-Cap Resources, ESIA and ESMP scoping for the green fields Letlhakane uranium mine (Botswana)	Project reviewer
Palladin Energy, ESIA and ESMP amendment for the Langer Heinrich Uranium Mine stage three expansion (Namibia)	Project manager
Swakop Uranium, EIA for the green fields Husab Uranium Mine (Namibia)	Project manager

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<b>Utilities</b>	
Hernic Ferrochrome, IEA for a railway siding between Brits and Hernic Ferrochrome (South Africa)	Project reviewer
Eskom, EIA for a regional power line between the Hotazel line and United Manganese of the Kalahari Mine (South Africa)	Project reviewer
Swakop Uranium, IEA for multiple power lines, pipelines and access road (Namibia)	Project manager

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**Planning, implementation and/or review of the stakeholder management and public participation processes for:**

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Maandagshoek Platinum Mine (now Madikwa) green fields EIA and EMP

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Xstrata, Wonderkop EIA and EMP amendment for furnaces 5 and 6

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SA Chrome (now Merafe) green fields EIA for smelter complex

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Aquarius, Marikana Platinum Mine EIA and EMP amendments

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Transvaal Ferrochrome (now IFM) green fields EIA/EMP for mine and smelter complex

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AngloGold Ashanti, ERGO rubber treatment solution EIA

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Impala Platinum EIA and EMP amendments for the UG2/Merensky opencast project, Shaft 20 Project and Smelter complex expansion

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Stakeholder management strategy and procedure for Impala Platinum Limited

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Platmin (Boynton), Pilanesburg Platinum Mine green fields EIA/EMP

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Barplats Mines Limited, various Crocodile River Mine expansion EIA and EMP amendments

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Tharisa Minerals, EIA and EMP for green fields chrome mine

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Keaton Mining, EIA and EMP for green fields coal mine

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Eastern Platinum Limited, EIA and EMP for green fields Spitzkop Platinum Mine

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Eland Platinum mine green fields EIA and EMP

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Tameng Mining, Mphathlele green fields Platinum Mine EIA and EMP

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LaFarge EIA and EMP amendment for an alternative fuel process at its Lichtenburg cement plant

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Biz Africa prospecting EMP

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Marula Platinum Mine EIA and EMP for mine expansion

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United Manganese of Kalahari, EIA and EMP for a green fields manganese mine

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Ntsimbintle Mining, EIA and EMP for a green fields manganese mine

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Palladin Energy, EIA and EMP amendment for the Langer Heinrich uranium Mine expansion

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Eskom regional power line EIA

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## **Due diligence and audits**

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A range of due diligence investigations (throughout Africa) conducted on behalf of RSG Global, Snowden Industry Mining Consultants, Venmyn Rand, BSG Resources, Standard Bank, Jowell Glyn and Marais Attorneys, Bowman Gilfillan Attorneys

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World Bank, ISO14001, EMP performance and / or legal compliance audits of Ruashi Copper Mine, Kansanshi Copper Mine, Samancor Chrome mine and smelter operations, Impala Platinum, Lonmin Platinum, Botswana Ash, Anglo Platinum Lebowa Platinum Mine, Marula Platinum Mine, Herculite Ferrochrome, Aquarius Marikana Mine, Xstrata Wonderkop, Salene Mining, De Beers the Oaks Mine and Modikwa Platinum Mine

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## **Integrated Water and Waste Licenses**

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Management of water license application processes and / or compilation of technical reports for:

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Xstrata Alloys Project Lion

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Avgold Ltd's Eastern Transvaal Consolidated division

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Xstrata – Merafe Venture, Boshhoek smelter

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Sublime Technologies

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Barplats, Crocodile River Mine

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Platmin (Boynton), Pilanesburg Platinum Mine

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## **Environmental Management System**

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ISO14001 system implementation, training, review and / or audits at Debswana Orapa (Botswana), Lonmin Platinum, Botswana Ash, The Botswana Water Utility Corporation, Marula Platinum Mine, Tati Nickel, Uranium One and Avgold Ltd's Fairview, Sheba and New Consort Mines

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## **Environmental Law**

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Development of the ISO14001 EMS legal registers for Rossing Uranium (Namibia), PPC South Africa, Impala Platinum Ltd Mine and Refinery, Anglo Platinum BRPM Mine, Maandagshoek Platinum, Lebowa Platinum Mine, De Beers Namaqua Mine, Botswana Ash (Botswana) and Eskom Hendrina Power Station

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Opinion work, audits / risks assessments and training for multiple clients in Africa.

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**Jonathan Crowther**  
Director



## Curriculum Vitae

### Qualifications

CEAPSA	2003	Certified as an Environmental Assessment Practitioner with the Interim Certification Board for Environmental Assessment Practitioners of South Africa
ICB	1999	Member of ICB Certification Committee
IWM	1998	Member of Institute of Waste Management
IAIAsa	1997	Member of International Association for Impact Assessment (South Africa). Past President of IAIAsa.
Pr.Sci.Nat.	1993	Registered Professional Natural Scientist – Environmental Scientist
MSc	1988	Environmental Science (University of Cape Town)
BSc (Hons)	1983	Geology (Rhodes University)
BSc	1982	Geology and Geography (Rhodes University)

### Key Areas of Expertise

Key areas of Jonathan's expertise are summarised below.

Environmental Assessments	Project Management Basic Assessments (BA) Environmental Impact Assessments (EIA) Environmental management programmes and plans (EMPs) Environmental authorisations, permits and licenses
Stakeholder Management	Stakeholder engagement Facilitation of public participation processes Liaison with government and non-government organisations
Environmental auditing and monitoring	EMPs Environmental Control Officer (ECO) Compliance Auditing Closure Reporting

### Summary of Experience and Capability

Jonathan is the SLR Sector Lead for Oil and Gas in Africa. He has expertise in a wide range of environmental disciplines, including Environmental Impact Assessments (EIA), Environmental Management Plans / Programmes, Environmental Planning & Review, Environmental Auditing & Monitoring, Environmental Control Officer, Public Consultation & Facilitation.

He has project managed a large number of offshore oil and gas EIAs for various exploration and production activities in South Africa and Namibia. He also has extensive experience in infrastructure projects, property developments and waste management.

## Recent Project Experience

Key aspects of Jonathan's recent project experience are summarised below.

Project	Date	Jonathan's Role
<b>Oil and Gas Exploration and Production</b>		
Spectrum Geo Limited. EMP for a Reconnaissance permit application to acquire 2D multi-client seismic data off the Southern Coast of South Africa	2016-ongoing	Project Management and quality control of the EMP
Petroleum Geo-Services (Pty) Ltd. EMP Addendum for the expansion of a speculative seismic survey off the South Coast of South Africa	2016-ongoing	Project management and quality control of the EMP
Rhino Oil & Gas Exploration South Africa (Pty) Ltd. Scoping and EIA for an Oil and Gas Exploration Programme in Blocks 3617 & 3717 off the South-West Coast of South Africa	2015-ongoing	Project management and quality control of the EIA
Rhino Oil & Gas Exploration South Africa (Pty) Ltd. Scoping and EIA for an Oil and Gas Exploration Programme in various inshore Blocks off the South-West Coast of South Africa	2015-ongoing	Project management and quality control of the EIA
Thombo Petroleum (Pty) Ltd. Scoping, EIA and EMP Addendum for exploration well drilling in Block 2B off the West Coast of South Africa	2014-2015	Project management and quality control of the Scoping, EIA and EMP Addendum
Sunbird Energy Ltd. EIA and EMP for the proposed Ibhubesi Gas Project, West Coast, South Africa	2013-ongoing	Project management and quality control of the EIA
Shell South African Upstream B.V. 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	2013-2015	Project management and quality control of the EIA
Cairn South Africa (Pty) Ltd. EIA and EMP for an amendment to the existing Exploration Right to undertake Exploration Well Drilling in Block 1, West Coast, South Africa	2013-2015	Project management and quality control of the EIA
Total E and P South Africa (Pty) Ltd. ECO, Compliance requirements and audit for deepwater well drilling in Block 11B/12B, South Africa	2013-2014	Project management and quality control
Spectrum ASA. EIA for a proposed 2D speculative seismic survey in the Orange Basin, Namibia	2013	Project management and quality control of the EIA
Tullow Kudu Limited. Environmental and Social Impact Assessment for a proposed 3D and 2D seismic survey in Licence Blocks 2012B, 2112A and 2113B, Walvis Basin, Namibia	2013	Project management and quality control of the ESIA
Sasol Petroleum International (Pty) Ltd. EMP for a proposed 2D seismic survey programme in the Durban and Zululand Basins off the East Coast of South Africa	2012-2013	Project management of the EMP
Total E and P South Africa (Pty) Ltd. EMP for a proposed 2D seismic survey, sonar bathymetry and drop core sampling in the Outeniqua South Area, South Coast, South Africa	2012-2013	Project management of the EMP
PetroSA (Pty) Ltd. EMP Amendment for the proposed seismic survey campaign in Block 1, West Coast, South Africa	2012	Project management of the EMP
Bayfield Energy Ltd. EMP Amendment for the proposed seismic survey in the Pletmos Inshore Area, South Coast, South Africa	2012	Project management of the EMP
CGG Veritas Services (UK) Ltd. EMP for a proposed speculative seismic survey, East Coast, South Africa	2012	Project management of the EMP

<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
Signet Petroleum Ltd. EIA for proposed 2D and 3D seismic surveys in Block 2914B off the coast of Namibia	2011	Project management and quality control of the EIA
HRT Netherlands B.V. EIA for a 3D seismic survey in two offshore areas, Namibia	2010-2011	Project management and quality control of the EIA
CNR International Limited. EMP and BA for exploration well drilling in Block 11B/12B, South Coast, South Africa	2010-2011	Project management of the EMP and Basic Assessment
Atacama Consulting for Dominion Oil. Project review of a proposed onshore and offshore seismic survey in the Queen Elizabeth National Park, Uganda	2010	Project reviewer
PetroSA (Pty) Ltd. EIA and EMP for PetroSA's proposed production wells in the FO field (eight wells) and in the Oribi/Oryx mining lease area (one well)	2008-2011	Project management of the EIA and EMP
Enigma Oil. EIA for 2D seismic surveys to be undertaken of the coast of Namibia	2008-2009	Project management of the EIA
Petroleum Agency SA. Environmental Report for an offshore seismic survey undertaken as part of the South African Shelf claim project	2007	Project management for undertaking an Environmental Report
PetroSA (Pty) Ltd. EMP for the construction phase of the South Coast Gas project, South Coast, South Africa	2007	Chair and Secretariat of the EMP
BHP Billiton Petroleum (Americas) Inc. EIA for a proposed 2D seismic survey in the Northern Block, Namibia	2007	Project management of the EIA
Forest Exploration International (SA). EIA and EMP for the proposed Ihubesi Gas project and related infrastructure, West Coast, South Africa	2006-2008	Project management of the EIA
BHP Billiton Petroleum (Americas) Inc. Expanded Environmental Notification for drilling a Deep Water exploration well in Petroleum Licence Block 3B/4B off the West Coast of South Africa	2004-2007	Compilation of an Expanded Environmental Notification
PetroSA (Pty) Ltd. EIA and EMP for the proposed South Coast Gas Development project in Petroleum Block 9, South Africa	2004-2007	Project management for the EIA and EMP
Pioneer Natural Resources (Pty) Ltd. Environmental Notification and Close-out Reports for the drilling of three prospect wells in Block 9, South Africa	2003	Project management
PetroSA EMPR for the development of the Sable Oil Field, South Africa	2001	Compilation of EMPr
Petroleum Agency South Africa. Generic EMPr for oil and gas prospecting for the whole of the South African Offshore	1999-2002	Compilation of a Generic EMPR
Brown and Root on behalf of Shell Exploration and Production Namibia. Route selection for the proposed Kudu Gas pipeline between Oranjemund, Namibia and Cape Town, South Africa	1998-1999	Environmental input into the route selection
Soekor E&P (Pty) Ltd. EIA and EMPr for the proposed extension of the ORIBI oil production facility and hydrocarbon exploration in Block 9 off the Southern Cape Coast (joint venture with CSIR)	1997	Project management of the EIA and compilation of EMPRs
<b>Road and related infrastructure<sup>1</sup></b>		
Hatch GOBA (Pty) Ltd. MMP for proposed flood damage repairs to structures in the Eden and Winelands Municipal areas between Ladismith and Montagu, Western Cape	2015-ongoing	Project management and quality control of the MMP
ERO Engineers (Pty) Ltd. MMP for the proposed repair and reseal of Main Road 233, Langebaan, Western Cape	2015-2016	Project management and quality control of the MMP

<sup>1</sup> All subsequent projects are undertaken in South Africa unless otherwise indicated.



<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport and Public Works. BA for the storm damage repair of slopes and roadway on MR101 between Simonstown and Smitswinkel Bay, Western Cape	2014-2015	Project management and quality control of the BA
AECOM SA (Pty) Ltd. for South African National Roads Agency SOC Limited. BA and EIA for the proposed upgrading of National Route 7 between Leliefontein and Hopefield intersections, Western Cape	2013-2015	Project management and quality control of the two Basic Assessments and an EIA
Kantey & Templer Consulting Engineers (Pty) Ltd. for WCG (Dept. of Transport & Public Works). BA for the proposed improvement to the R44, Somerset West to Stellenbosch	2012-ongoing	Project management and quality control of a Basic Assessment
BKS (Pty) Ltd for WCG (Dept. of Transport & Public Works). EIA process for the proposed road network improvements required to support the development of the Saldanha Industrial Zone and port expansion, Western Cape	2012-2015	Project management and quality control of the EIA
Aurecon (Pty) Ltd for WCG (Dept. of Transport & Public Works). BA for the repair of flood damaged structures in the Eden District Municipality, Southern Cape	2012-2013	Project management and quality control of a number of Basic Assessments
ERO Engineers (Pty) Ltd for South African National Roads Agency Limited. EIA for the improvement of N7 Section 1 between Melkbos Intersection and Atlantis Intersection, Western Cape	2010-2011	Project management of the Scoping Study and EIA
BKS (Pty) Ltd for South African National Roads Agency Limited. BA, EMP and ECO input for the improvement of structures (including the widening of five bridges) on the R27, Section 10 & 11 between Kenhardt and Keimoes, Northern Cape	2009-2011	Project management for the BA, EMP and ECO
Bergstan South Africa (Pty) Ltd for WCPA (Dept. of Transport and Public Works). BA for the reconstruction of three flood damaged bridges in the Hex River Valley, Western Cape	2009-2010	Project management of the Basic Assessment
UWP (Pty) Ltd for South African National Roads Agency Limited. BA 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	2008-2011	Project management of the Basic Assessment
BKS (Pty) Ltd for WCPA (Dept. of Transport & Public Works). BA and ECO for the upgrading of Trunk Road 2 Section 1 (M5) between the M5 Viaduct and the Black River Parkway Interchange	2007-2011	Project management of the Basic Assessment and ECO
City of Cape Town. EIA for the proposed Bloubos and Gustrow Roads for the Gordon's Bay and Sir Lowry's Pass Development Areas, Cape Town	2007-2011	Project management of the Scoping and EIA
Kwezi V3 (Pty) Ltd for WCPA (Dept. of Transport and Public Works). EMPR for the development of 40 borrowpits for the regravelling of trunk-, main- and divisional roads in the Central Karoo District, Western Cape	2007	Project management of the EMPR
Jeffares & Green (Pty) Ltd for WCPA (Dept. of Transport & Public Works). BA for the proposed upgrading of Main Road 531, regravelling of Main Road 534 and development of 10 borrowpits in the Redelinghuys area, Western Cape	2006-2009	Project management of the Basic Assessment
South African National Roads Agency Limited. EIA for the proposed N2 Wild Coast Toll Road, Eastern Cape to Kwa-Zulu Natal	2005-2011	Co-project manager for the revised EIA
HHO Africa for PGWC (Department of Transport). EIA, EMP and ECO for the upgrading of the road between Gansbaai and Bredasdorp	2005-2010	Project management of the EIA, EMP and ECO

<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
BKS (Pty) Ltd for PGWC (Department of Transport). Scoping Study for the proposed rehabilitation of the N2 between Modderdam Road and Airport Interchange, Cape Town	2005-2007	Undertook the Scoping Study
Protea Parkways Consortium and South African National Roads Agency Limited. EIA for the proposed Winelands N1N2 Toll Highway, Western Cape	2002-2009	Project management of the EIA
PAWC – Roads. CEMP and ECO for the construction of Phase 2 and 3 of the TR31 between Worcester and Robertson	1999-2004	Compilation of CEMP and project management of the ECO
<b>Landfill Sites and Waste Water Treatment Works</b>		
City of Cape Town. Supplementary EIA for a proposed regional landfill site for the City of Cape Town	2010-2013	Project management and compilation of the EIA
Arcus Gibb (Pty) Ltd for Theewaterskloof Municipality. Scoping Study and EIA for the proposed upgrading of the Grabouw Wastewater Treatment Works, Western Cape	2008-2011	Project management and quality control of the Scoping Study and EIA
City of Cape Town. EIA for the proposed new regional landfill site for the City of Cape Town	2001-2007	Project management, quality control, public participation and report drafting of the EIA
City of Cape Town. EIA for the proposed licensing of the Bellville South Waste Disposal Site, Cape Town	1999-2001	Project management of the EIA
Cape Agulhas Municipality, Struisbaai Office. EIA for the proposed regional solid waste disposal site for Struisbaai, L'Agulhas and Suiderstrand	1999-2001	Co-managed the EIA
Mossop Western Leathers. EIA for the proposed closure of the Hermon Road Waste Disposal Site, Wellington	1998	Project managed and compiled the EIA
Greater Hermanus Municipality. Regional waste study for the Hermanus Kleinmond and Bot River region, Hermanus	1997	Process facilitation of a regional waste study
Kleinmond Municipality. Scoping Study for the selection of a new waste disposal site to serve the area between Rooi-Els and Kleinmond, Kleinmond	1996	Facilitation of the Scoping Study
Southern Natal Joint Services Board. EIA procedure (from initial assessment to comments report) for the siting of two regional landfill sites in southern Natal	1994	Project managed and compiled the EIA
<b>Water and Sewage Pipelines</b>		
BVi Consulting Engineers Western Cape (Pty) Ltd. BA for the proposed upgrading of the Bayside Canal and development of a stormwater pipeline for the Big Bay outfall system in the Central and Western catchment of the Blaauwberg development area, Western Cape	2015-ongoing	Project management and quality control of the BA
Jeffares & Green (Pty) Ltd for Stellenbosch Municipality. BA for the proposed Jamestown bulk water supply pipeline and reservoir	2012-2013	Project management of the Basic Assessment
City of Cape Town. BA for the proposed bulk water system for the Gordon's Bay Development Area	2007-2009	Project management of the Basic Assessment
City of Cape Town. BA for the proposed extension of the Trappies Sewer line, Gordon's Bay	2007	Project management of the Basic Assessment
Velddrift Salt Company (Pty) Ltd. 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	2003	Project management of the Scoping Study, EMP and ECO
Entech Consulting Engineers for the Boland District Municipality. EIA for the proposed Eerste River Bulk Sewage Scheme	1999-2001	Project management of the EIA

<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
<b>Rivers and Wetlands</b>		
City of Cape Town. 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	2007-2011	Project management of the Scoping Study and EIA
Stewart Scott International for City of Cape Town: Helderberg Administration. EIA, CEMP and ECO for the proposed Lourens River Flood Alleviation Measures, Western Cape	2000-2001	Project management of the EIA, CEMP and ECO
Southern Waters for South Peninsula Municipality. Public consultation for the development of a Management Plan for Zeekoevlei/Rondevlei	2000	Facilitated the public consultation process
Helderberg Municipality/Cape Metropolitan Council. EIA for the proposed upgrade of the Moddergat River, Macassar	1999	Project management of the EIA
<b>General Industries</b>		
International Mining & Dredging Holdings Ltd. EIA for a Mining Right Application for an offshore diamond concession in Block 2C off the West Coast of South Africa	2015-ongoing	Project management and quality control of the EIA
International Mining & Dredging Holdings Ltd. BA for marine sediment sampling activities in Diamond Mining Concession Areas off the West Coast, South Africa	2014-2015	Project management of the and quality control of the BA
Saldanha Bay IDZ Licencing Company. EIA for the proposed establishment of an Oil and Gas Offshore Supply Base at the Saldanha Bay IDZ	2013-2016	Project management of the EIA
ZAA Engineering Projects and Naval Architecture (Pty) Ltd for Transnet National Ports Authority. Environmental input into the pre-feasibility study for the proposed offshore LPG handling and storage facility, Port of Saldanha, Western Cape	2011	Environmental input into the pre-feasibility study
Yachtport SA (Pty) Ltd. BA and ECO for the proposed Marine Lift Facility in the Small Craft Harbour, Port of Saldanha	2009-2011	Project management of the Basic Assessment and ECO
FerroMarine Cape. ECO for the construction of an Oil and Gas Service Hub in the Port of Cape Town	2010-2011	Project management of the ECO
Richmond Business Park Joint Venture Consortium. EIA for the proposed Richmond Park Development for the project facilitation joint venture on behalf of the successful land claimants, Cape Town	2010-2012	Project management of the EIA
SAB Maltings (Pty) Ltd. EIA 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	2008-2011	Project management of the EIA and Waste Management Licence Application
Savannah Environmental (Pty) Ltd. Environmental Review of the EIA and EMP for the proposed Eskom Wind Energy Facility and associated infrastructure at a site in the Western Cape Province	2007-2008	Environmental review of the EIA and EMP
Finavera Renewables Ltd. Environmental input for a site pre-selection exercise for a proposed Wave Energy Project off the southwest coast of South Africa	2007-2008	Project management of the Environmental input
Irvin & Johnson Limited. BA for a proposed offshore cage aquaculture project, Mossel Bay	2007-2008	Project management of the Basic Assessment
PetroSA (Pty) Ltd. EIA for the upgrading of the PetroSA refinery near Mossel Bay for the conversion to 100% unleaded fuel production	2003-2005	Project management of the EIA

<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
Namakwa Sands Ltd. Initial environmental investigation for the proposed extension of Namakwa Sands' mining, mineral separation and smelting operations	2003	Project management of the initial environmental investigation
Caltex SA (Pty) Ltd. EIA for the processing and disposal of Sulphur produced at the Milnerton Oil refinery	2001-2002	Project management of the EIA
PetroSA (Pty) Ltd. Compilation and implementation of construction-phase Environmental Management Plan for the Low Aromatic Distillate Project, Voorbaai Tank Farm Mossel Bay	2001	Compilation and implementation of construction-phase EMP
Caltex SA (Pty) Ltd. EIA for increase in flow-rate of the Saldanha-Milnerton crude oil pipeline	2000	Project management of the Scoping Study and EIA permit compliance
LAMA International Contractors. EMP for the extension of the Sappi Saiccor marine outfall pipeline, Umkomaas	1996	Compilation and management of the EMP
<b>Environmental Control</b>		
AECOM SA (Pty) Ltd for SANRAL (SOC) Ltd. ECO services for the improvement of the National Road 7 between Abbotsdale and the Voortrekker Interchange, Western Cape	2015-ongoing	Project management and quality control
Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport and Public Works. ECO services for the storm damage repair of slopes and roadway on MR101 between Simonstown and Smitswinkel Bay, Western Cape	2015-ongoing	Project management and quality control
Bergstan SA Consulting and Development Engineers (Pty) Ltd for WCG: Department of Transport and Public Works. ECO services for the repair and resurfacing of Victoria Road (MR103) km 2.1 to km 4.75 between Oudekraal and Llandudno, Western Cape	2014-2015	Project management and quality control
HHO Africa (Pty) Ltd for WCPA (Dept. of Transport and Public Works). ECO for the upgrading of the Koeberg Interchange	2008-2011	Project management of the ECO
BKS (Pty) Ltd for City of Cape Town. ECO and EMC facilitation for the upgrading of the N2 Hospital Bend, Cape Town	2008-2010	Project management of the ECO and EMC facilitation
TCTA. ECO for the construction of the Berg River Project, Franschoek, Western Cape	2005-2008	Project management of the ECO
Table Mountain Aerial Cableway Company. Environmental Management Committee for the construction of the Table Mountain Aerial Cableway, Cape Town	1996-1997	Member of the EMC
<b>Tourism / Resort</b>		
City of Cape Town. Feasibility study for the proposed Monwabisi Coastal Node, Western Cape	2011	Project management
Olympian Developing Company. EIA for the development of a multi-purpose estate on Rem. Farm 681, Firgrove/Macassar, Western Cape (Sitari Fields Golf Estate)	2003-2005	Project management of the EIA
Lourensford Winery. Construction and Operation EMP for a wine cellar on Lourensford Estate in Somerset West, Western Cape	2002-2003	Project management of the Construction and Operation EMPs
Johnnic Property Development (Pty) Ltd. EIA for the proposed development of the Melkbosstrand Golf Village (Atlantic Beach), Melkbosstrand	1997	Project management of the EIA
Table Mountain Aerial Cableway Company. IEM process and EIA for the proposed upgrading of the Table Mountain Aerial Cableway, Cape Town	1996	Project management of the IEM process and EIA

<b>Project</b>	<b>Date</b>	<b>Jonathan's Role</b>
<b>Housing Development Projects</b>		
Peter Koekemoer. Section 24G process for House Koekemoer ERF 3446, Oranjezicht, Western Cape	2015-ongoing	Project management and quality control of the Section 24G EIA
Martin Kelly. BA for the proposed subdivision and rezoning of a portion of Erf 1, Simon's Town (Glencairn)	2006-2011	Project management and compilation of the Basic Assessment
Cape Town Community Housing Company. BA for the proposed rezoning and subdivision of Erf 23300, Maitland (Royal Maitland Phase 3)	2006-2007	Project management of the Basic Assessment
Rocklands Eco Estate (Pty) Ltd. BA for the proposed rezoning and subdivision of parts of Portions 1 and 2 of Farm 1020, Simon's Town (Rocklands Farm), Western Cape	2005-2011	Project management and compilation of the Basic Assessment
Mr Gavin Wurz. Scoping Study for the proposed rezoning and subdivision of Farm Rouen on Erven 5100 & 5101, Strand	2004	Project management of the Scoping Study
<b>Other</b>		
Llandudno Surf Lifesaving Club. BA for the proposed extension of the Llandudno Surf Lifesaving Club Boathouse, Llandudno	2007-2010	Project management of the Basic Assessment
Tow Surf South Africa. Environmental input on the affects of tow surfing in terms of noise and emissions	2006	Environmental input
Water Research Commission. Groundwater Licensing Guide to guide groundwater development and use applications	2004-2007	Development of a Groundwater Licensing Guide
P & I Associates (Pty) Ltd. Environmental Assessment for the proposed wreck reduction of the vessel BBC China, Wild Coast	2004	Environmental Assessor
Plattner Racing Stables. Scoping Study, Construction EMP and Operation EMP for the rezoning and development of Farm Rondeberg Flats, No. 116, West Coast	1999-2000	Project management
CSIR. Public consultation for the proposed CSIR gas monitoring laboratory at Cape Point	1994	Public consultation
Thesen & Co. Public consultation for the proposed development options of Thesen Island, Knysna	1994-1996	Public consultation
<b>Publications</b>		
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.		

### **Qualifications**

Bachelor of Science (Agriculture)	1999	University of Natal (PMB)
Master of Science by coursework in Conservation Biology	2001	UCT
Certificate Course in the Fundamentals of Project Management	2007	Wits

### **Key Areas of Expertise**

Key areas of Matthew's expertise are summarised below.

Waste Management	Legal review of waste management activities. Facilitation of licensing processes for waste management activities in terms of the National Environmental Management: Waste Act, 2008. Development of waste management strategy.
Management of authorisation/licensing process for projects in waste management, gas exploration, mining and electricity sectors.	Management and undertaking of the process(es) required to inform the authorisation and licensing of projects in terms of legalisation such as the National Environmental Management Act, 1998; National Environmental Management: Waste Act, 2008; National Environmental Management: Air Quality Act, 2004; Minerals and Petroleum Resources Development Act, 2002 and, National Water Act, 1998.
Enviro-legal advice	Guidance to projects on legal issues and compliance required in terms of South African environmental legislation

### **Summary of Experience and Capability**

Matthew is an Environmental Assessment Practitioner with SLR and has over 8 years' experience within the environmental consulting field. Matthew's current focus is on legislation and authorisations within the waste management and waste to energy industries.

Matthew is well versed in the authorisation and compliance requirements of all South African environmental legislation. His project experience is diverse and he has managed environmental authorisation processes for projects across a wide range of sectors including mining, gas exploration, electricity generation, infrastructure development and waste management throughout South Africa. In recent years Matthew has focussed on assisting

clients with the waste management legislation and on implementing projects up the waste management hierarchy.

In addition to this he also conducts or manages feasibility assessments, compliance audits, risk assessments, performance assessments, closure cost estimates and due diligence work.

Matthew's career interests include resource management and efficiency, climate change, environmental project management, conservation and land management and the integration of green energy into development projects. His strengths lie in his sound scientific grounding, a practical approach and his ability to adapt to and learn from new situations. Matthew has a broad background in ecology and experience in tourism, conservation and environmental management from many areas of South Africa.

### Recent Project Experience

Key aspects of Matthew's recent project experience are summarised below.

Project	Date	Matthew's Role
EnviroServ's Holfontein Extension: Integrated Waste Management Facility	2014	EAP responsible for EIA for applications in terms of NEMA, NEMWA, NWA and NEMAQA
Rectification applications for EnviroServ Mineral Beneficiation facilities	2013 to 2014	EAP responsible for rectification applications in terms of NEMA and NEMWA.
EnviroServ's Chloorkop Municipal Solid Waste to Energy Project	2013 to 2014	EAP responsible for EIA for applications in terms of NEMA, NEMWA and NEMAQA
Waste Management Plan for the Musonoi Copper Mine	2013	Compile the waste management plan.
Gap Analysis of Specialist Studies for Port Durnford Mine	2013	Review of specialist studies and project's environmental risks.
Exploration right applications for Coal Bed Methane at Secunda, Memel, Wakkerstroom and Amersfoort	2013	EAP responsible for consultation, environmental assessment and management programme.
Development of Electrical Co-generation Power Plant and Ash Disposal Facility at Scaw Union Junction	2011 to 2013	EAP responsible for EIA for applications in terms of NEMA, NEMWA and NEMAQA
Introduction of Treatment Technologies to Aloes Hazardous Landfill Site	2012	EAP responsible for EIA for application in terms of NEMWA
Introduction of Treatment Technologies to Shongweni Landfill Site	2012	EAP responsible for EIA for applications in terms of NEMWA and NWA
Exploration for Coal Bed Methane at Amersfoort and Volksrust	2013	Environmental auditing and compliance management
Ash Dam Extension 3 at Eskom's Komati Power Station	2012	EAP responsible for EIA for applications in terms of NEMWA
Independent Performance Review and Water Quality Assessment of the Anglo Coal 5-Spot Coal Bed Methane Gas Project, for Petroleum Agency South Africa	2012	Independent Environmental Expert

## Publications

**IAIA Paper**, The EAP, EIAs and our opportunity to effect change, not climate change, Synergistics Energy, 2008

**MSc Dissertation**, The MV Treasure oil spill and its effect on the African Penguin, *Spheniscus demersus*, at Robben Island, South Africa. University of Cape Town, 2001.

**BSc (Agric) Project**, Modelling of powerline impacts on large terrestrial birds in the Karoo, Northern Cape, South Africa. University of Natal, 1999.

