# CURRICULUM VITAE



## **QUALIFICATIONS**

MSc	2001
BSc (Agric)	1999

## **MATTHEW HEMMING**

TECHNICAL DISCIPLINE MANAGER

Environmental Management Planning & Approvals, South Africa

MSc (Conservation Biology), with distinction, from University of Cape Town BSc (Agriculture) in Wildlife Science, with Zoology major, from University of Natal

### **EXPERTISE**

- Environmental legislation
- Environmental Impact Assessment
- Environmental planning & licensing
- Waste management
- Stakeholder engagement
- · Environmental training

Matthew is a Senior Environmental Consultant with SLR and has over 14 years' experience as an Environmental Assessment Practitioner within the environmental consulting field. Matthew is well versed in the authorisation and compliance requirements of all South African environmental legislation. He is currently the Technical Discipline Manager for SLR's Environmental & Social Impact Assessment team in Africa. Matthew is also SLR's lead for the Infrastructure Sector.

He has managed a wide range of licensing projects including environmental authorisations, water use license and waste management license applications, mainly in the oil and gas exploration, waste management, mining, industrial and electricity generation sectors. His role included project management and co-ordination; specialist and engineering team management; environmental impact assessment; and co-ordination, facilitation and undertaking of stakeholder engagement processes, including for contentious projects.

In recent years Matthew has focussed on assisting clients with waste management legislation and implementing projects up the waste management hierarchy. He has also managed a number of projects in the onshore oil and gas sector. Matthew also conducts or manages feasibility assessments, compliance audits, risk assessments, performance assessments, closure cost estimates and due diligence work.

A sample of Matthew's project experience, summarised by sector, is provided below.

## **PROJECTS**

EnviroServ Waste Management - Chloorkop Landfill Site, Midrand (2019 - 2020)

NamWater - Desalination Plant and Water Carriage System (2019 - ongoing)

#### Infrastructure

EnviroServ intend to expand their Chloorkop Landfill Site to enable ongoing disposal of general wastes.

Matthew was the Environmental Assessment Practitioner responsible for the Basic Assessment process required to inform the application for a waste manageemnt licence made in terms of NEM:WA, and an application in terms of the NWA.

The Namibia Water Corporation Limited is undertaking a Feasibility Study for the development of a Desalination Plant and Water Carriage System, to secure water supply to the central coastal area of Namibia and Windhoek, as well as en-route users.

Matthew provided technical support to the Environmental Assessment Practitioner team responsible for undertaking the Scoping process required to inform the application for an Environmental Clearance Certificate in terms of Namibia's EMA.



Sun International – Pyrolysis and Ash to Brick Plant (2018 to 2019) Sun International Limited proposed the establishment and operation of a waste to energy Pyrolysis plant and Ash-to-Brick plant at its Sun City resort in the North West Province. Residual general waste and certain hazardous wastes will be recovered at the Pyrolysis plant to generate approximately 100 kW of electricity for the resort.

Matthew was the Environmental Assessment Practitioner responsible for the Basic Assessment process required to inform the application for a waste management licence made in terms of NEM:WA, and an atmospheric emissions licence in terms of the NEM:AQA.

RHDHV for Quidenica Investments – Thornridge Waste Park Conservancy (2018) Quidencia Investments has proposed the development of a waste park on a property at Cato Ridge, KwaZulu-Natal.

Matthew provided environmental inputs into an initial desktop environmental screening of the property and subsequent Master Plan development.

**Dundee Precious Metals - Tsumeb Smelter, Namibia** (2017)

As part of plans to increase the capacity of the Tsumeb Smelter, Dundee Precious Metals appointed SLR to provide a high-level overview and opinion on current waste management strategies and operational procedures at the Tsumeb Smelter, including for both general and hazardous waste.

Matthew managed the project which included the assessment of waste management strategies relative to national and international legislation and a review of current waste management practices and impacts of managed and unmanaged wastes at the site.

EnviroServ Waste Management - Holfontein Extension: Integrated Waste Management Facility, Gauteng (2014 to 2017) EnviroServ intended to expand the facilities at their Holfontein Hazardous Waste Disposal Facility to include a range of additional disposal, recycling, recovery and treatment activities for both general and hazardous wastes. The project was withdrawn.

Matthew was the Environmental Assessment Practitioner responsible for the integrated Scoping and EIA process required to inform the applications for authorisation made in terms of NEMA, NEM:WA, NWA and NEM:AQA.

EnviroServ Waste Management - Shongweni Landfill Site, Durban (2012 to 2017) EnviroServ own and operate the Shongweni Landfill Site in terms of a waste management licence. EnviroServ made application to the Department of Water and Sanitation for a water use licence in terms of the NWA.

Matthew was the project manager responsible for the integrated water use licence application made in terms of the NWA.

EnviroServ Waste
Management – Holfontein
Hazardous Waste Disposal
Site, Gauteng (2013 to
2016)

EnviroServ own and operate the Holfontein Hazardous Waste Disposal Site in terms of a waste management licence. EnviroServ made application to the Department of Water and Sanitation for a water use licence in terms of the NWA.

Matthew was the project manager responsible for the integrated water use licence application made in terms of the NWA.

EnviroServ Waste
Management – Treatment
technologies at Shongweni,
KZN (2011 to 2012)

EnviroServ proposed to introduce a range of technologies for the recycling, recovery and treatment of wastes at the Shongweni Landfill Site, KZN.

Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for authorisation made in terms of the NEM:WA.



EnviroServ Waste
Management – Treatment
technologies at Holfontein,
Gauteng (2011 to 2012)

EnviroServ proposed to introduce a range of technologies for the recycling, recovery and treatment of wastes at the Holfontein Hazardous Waste Disposal Site, Gauteng.

Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for authorisation made in terms of the NEM:WA.

EnviroServ Waste
Management – Treatment
technologies at Aloes, Port
Elizabeth (2011 to 2012)

EnviroServ proposed to introduce a range of technologies for the recycling, recovery and treatment of wastes at the Aloes Landfill Site, Port Elizabeth.

Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for authorisation made in terms of the NEM:WA.

#### Oil and Gas

Afro Energy (Pty) Ltd – Regulation 54 A Audits of onshore exploration rights, South Africa (2018) The Petroleum Agency of South Africa required that Afro Energy complete and submit Environmental Audit Reports for three onshore Exploration Rights.

Matthew prepared reports reflecting the level of performance against and compliance with the EMPrs and the suitability of the EMPrs to manage the avoidance, management and mitigation of environmental impacts.

Rhino Oil and Gas Exploration South Africa (Pty) Ltd - Onshore exploration right applications, South Africa (2018 to 2020) Rhino Oil & Gas Exploration South Africa lodged two applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across onshore areas in the central-eastern regions of South Africa.

Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for environmental authorisation in terms of NEMA. Matthew managed the environmental impact assessment as well as an extensive public consultation process.

De Beers Marine (Pty) Ltd – Offshore Geophysical Survey in West Greenland (2019) De Beers Marine proposed to undertake a short, geophysical survey in offshore West Greenland during July/August 2020. The geophysical survey would include seven seismic lines, undertaken between 66° and 67°N, for the purpose of testing different types of seismic equipment and obtaining high-resolution geophysical data.

Matthew managed the preparation of environmental inputs to the Pre-scope application document in accordance with the requirements of the Greenland Minerals Authority.

Afro Energy (Pty) Ltd – Renewal of onshore exploration rights, South Africa (2018) Afro Energy lodged made application with the Petroleum Agency of South Africa to renew two onshore Exploration Rights.

Matthew prepared reports reflecting the extent of compliance with the requirements of the environmental authorisation for the exploration work programme.

Afro Energy (Pty) Ltd -Onshore exploration right applications, South Africa (2016 to 2017) Afro Energy lodged two applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across various onshore areas.

Matthew was the overall project manager, responsible for ensuring that the Scoping and EIA process meet the legislative and client requirements.



Rhino Oil and Gas Exploration South Africa (Pty) Ltd - Onshore exploration right applications, South Africa (2015 to 2017) Rhino Oil & Gas Exploration South Africa lodged five applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across various onshore areas in the eastern regions of South Africa.

Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for environmental authorisation in terms of NEMA. Matthew managed the environmental impact assessment as well as an extensive public consultation process.

Centlube (Pty) Ltd -Blending Plant at Wadeville (2014 to 2016) Centlube own an oil and lubricant blending and packaging facility in Wadeville that was operating without the required environmental authorisations.

Matthew was the Environmental Assessment Practitioner responsible for the Section 24G process required to inform the rectification application for environmental authorisation in terms of both the ECA and NEMA.

Energy Oil (Pty) Ltd - Waste oil recycling plant at Wadeville (2014 to 2016)

Energy Oil own a waste oil recycling facility in Wadeville that was operating without the required waste management licence.

Matthew was the Environmental Assessment Practitioner responsible for the Section 24G process required to inform the rectification application for environmental authorisation in terms of NEM:WA.

Afro Energy (Pty) Ltd -Onshore exploration right applications, South Africa (2013 to 2014) Afro Energy lodged three applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across various onshore areas in the eastern regions of South Africa.

Matthew was the Environmental Assessment Practitioner responsible for the EIA process required to inform the application for environmental authorisation in terms of the MPRDA.

Badimo Gas (Pty) Ltd -Onshore exploration right applications, South Africa (2010 to 2013) Badimo Gas, and later Kinetiko Energy, lodged 12 applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across various onshore areas around Volksrust and Amersfoort, South Africa.

Matthew was the Environmental Assessment Practitioner responsible for the EIA process required to inform the application for environmental authorisation in terms of the MPRDA.

#### Industry

The South African
Breweries – Glass Bottle
Manufacturing Plant,
Gauteng (2018 - 2019)

SAB proposed the development of a glass bottle manufacturing plant on the farm Leeuwkuil 596 IQ in Vereeniging, Gauteng. The proposed glass bottle manufacturing plant would produce approximately 290 000 tons of green and amber coloured glass bottles using two gas fired furnaces. The facility would comprise a batch plant, main manufacturing building and warehouse.

Matthew was the Environmental Assessment Practitioner responsible for the integrated Scoping and EIA process required to inform the applications for authorisation made in terms of NEMA, NEM:WA and NEM:AQA. An application for general authorisation under the NWA was also made.

Clay Industry cc – Brick Manufacturing Plant (2018 – 2019) Clay Industry cc operates a brick manufacturing plant in Fisantekraal, Durbanville.

Matthew was the project manager responsible for undertaking a general environmental compliance audit of the operations and managing an application for the renewal of the facilities atmospheric emissions licence in terms of the NEM:AQA.



2018)

SmartMatta (Pty) Ltd – Anderbolt (2016 -2017)	Smart Matta made application for a Recycling and Waste Management Facility in Anderbolt, Boksburg.  Matthew was the Environmental Assessment Practitioner responsible for management of the Basic Assessment process to inform a Waste Management Licence in terms of the NEM:WA.
Rappa Holdings - Homestead Road operations, South Africa (2014 to 2017)	Rappa operates a facility that specialises in the recovery of gold from various materials and wastes acquired from mining and mineral processing operations. Some of the facilities and activities may pose risk to the water resource and thus require a water use licence in terms of the NWA.  Matthew was the project manager responsible for the integrated water use licence application made in terms of the NWA.
Scaw South Africa - Electrical Cogeneration Power Plant and Ash Disposal Facility, Union Junction (2011 to 2015)	Scaw proposed to establish a 67 MW Electrical Cogeneration Power Plant and Ash Disposal Facility at their Union Junction facility. The Ash Disposal Facility was designed to cater for power plant ash and other Scaw wastes.  Matthew was the Environmental Assessment Practitioner responsible for the integrated Scoping and EIA process required to inform the applications for authorisation made in terms of NEMA, NEM:WA and NEM:AQA. The development was authorised.
EnviroServ Waste Management – Treatment technologies at Shongweni, Durban (2011 to 2012)	EnviroServ proposed to introduce a range of technologies for the recycling, recovery and treatment of wastes at the Shongweni Landfill Site, Durban.  Matthew was the Environmental Assessment Practitioner responsible for the Scoping and EIA process required to inform the application for authorisation made in terms of the NEM:WA.
	Mining
Hotazel Manganese Mines (Pty) Ltd (2020)	Hotazel Manganese Mines operates a the Mamatwan Mine manganese mine near to Hotazel in the Northern Cape. Application has been made for an integrated Environmental Authorisation and update of the mine's EMPr to address a number of layout and activity change.  Matthew assisted in drafting and review of the Scoping Report prepared in terms of the MPRDA, NEMA and NEM:WA.
Tshipi É Ntle Manganese Mining (Pty) Ltd (2017)	Tshipi É Ntle operates a manganese mine near to Kathu in the Northern Cape.  Matthew undertook a review of reported non-compliances and corrective actions taken by Tshipi in response to previous audit findings and associated authorisation conditions. Covering the Environmental Authorisation, EMPr and Water Use Licence held by Tshipi for the period 2014 to 2017.
Gecko Salt (Pty) Ltd - Cape Cross Salt Project (2016 –	Gecko Salt intends to develop a new solar salt production facility at the Cape Cross Salt Pan. The proposed project involves the mining of natural rock-salt and the establishment of salt crystallization pans for salt production by solar evaporation.



Matthew was the Environmental Assessment Practitioner responsible for the

compilation of the EIA Report required to inform the application for an environmental

clearance certificate in terms of the Environmental Management Act, 2007.

Tronox Limited - Port Durnford Prospecting Rights, KwaZulu-Natal (2015)	Tronox hold prospecting rights over an area at Port Durnford and required investigations into the environmental features of the area to inform decision-making on future mining right applications.  Matthew was the environmental scientist responsible for Environmental Sensitivity Study, Risk Review and Findings report.
Tronox Limited - Port Durnford Prospecting Rights, KwaZulu-Natal (2015)	Tronox hold prospecting rights over an area at Port Durnford and required investigations into the environmental features of the area to inform decision-making on future mining right applications.  Matthew undertook a gap analysis of Specialist Studies previously compiled for the Port Durnford area.
Kumba Iron Ore - Sishen Mine, Dingleton (2014)	As part of the Sishen Western Expansion Project, Kumba Iron Ore proposed to demolish Dingleton Town to make way for mining operations. Waste arising from the demolition requires to be managed.  Matthew compiled the draft waste management strategy for the Dingleton Resettlement Project.
Sishen Iron Ore Company - Kolomela Mine, Postmasburg (2014)	The activities, infrastructure and staff supporting the mining operations at Kolomela Mine generate significant volumes of waste. All of the wastes produced at Kolomela Mine require to be managed.  Matthew project managed the compilation of a waste management strategy for the Kolomela Mine and the development of awareness and training material on the implementation of the waste management strategy.
MEMBERSHIPS	
EAPASA	Application for Registration as Environmental Assessment Practitioner submitted in October 2019.
SACNASP	Registered with South African Council for Natural Scientific Professions as a Professional Natural Scientist (Pr.Sci.Nat) in Environmental Science (400155/17)
IWMSA	Member of the Institute of Waste Management South Africa (20112082) Committee member on the KZN branch of the IWMSA
IAIAsa	Member of the International Association of Impact Assessors (1753)
DCCI	Member of the Durban Chamber of Commerce and Industry and Vice-chair of the Environmental Forum



<b>PUBLICATIONS</b>	
	The EAP, EIAs and our opportunity to effect change, not climate change, Synergistics Energy. IAIA Paper, 2008
	The MV Treasure oil spill and its effect on the African Penguin, Spheniscus demersus, at Robben Island, South Africa. University of Cape Town. MSc Dissertation, 2001.



# CURRICULUM VITAE



## **QUALIFICATIONS**

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M(Phil)	2010
BSc (Hons)	2006
BSocSci	2005

### **EXPERTISE**

- Environmental Assessment and Applications
- Stakeholder Management
- Rehabilitation Planning, Environmental Auditing and Monitoring.
- Environmental due diligence

#### **PROJECTS**

QGMI, Road Upgrade Project in Accra, Environmental and Social Impact Assessment, Ghana (2019)

iX Engineers (Pty) Ltd for the Nkosazana Dlamini Zuma Municipality – Construction of the Sdangeni Access Road (2019)

HHO Consulting Engineers (Pty) Ltd for South African National Roads Agency SOC Limited (SANRAL) -Upgrading of N1 Section 18 (2017-ongoing)

## **THEO WICKS**

## **ENVIRONMENTAL ASSESSMENT PRACTITIONER**

Environmental Management Planning & Approvals, South Africa

**Environmental Management** 

Geographic and Environmental Science

Geographic and Environmental Science

Theo is an Environmental Assessment Practitioner (EAP) and Project Manager with SLR. He has more than 13 years' experience in civil infrastructure development, waste management, private sector commercial development and the mining sector.

Theo has fulfilled a number of Project Leader positions for large South African parastatals including Transnet SOC Limited, South African National Road Agency Limited and Umgeni Water and has fulfilled the responsibility of the Environmental Assessment Practitioner on these and many more.

In addition to this, Theo has functioned as the Environmental Control Officer (ECO) on a number of construction sites.

Prior to joining SLR in 2016, he held a position as an Environmental Consultant at JG Afrika (previously Jeffares & Green (Pty) Ltd) and Terratest (Pty) Ltd.

#### **Infrastructure - Roads**

Environmental Impact Assessment (EIA) Addendum Report for the Obetsebi Lamptey Interchange in Accra, Ghana in collaboration with local consultants SAL Consult Limited

Theo was responsible for compiling the EIA Addendum Report.

EIA and Water Use Licence for the proposed construction of a greenfield road linking two communities in the Creighton area of the Nkosazana Dlamini Zuma Municipality.

Theo was the project manager fulfilling the role of EAP responsible for the Basic Assessment process required to inform the application for authorisation made in terms of National Environmental Management Act (NEMA), and an application in terms of the National Water Act (NWA).

EIA and compliance monitoring for the widening of the National Route 1 Section 18, between Heuningspriut and Koppies, Free State Province.

Theo's responsibilities as the EAP included managing the environmental application and Basic Assessment processes for the road upgrade in terms of the NEMA and the registration of the associated water uses in terms of the NWA.



Gibb Engineering &
Architecture (Pty) Ltd
(Gibb) for SANRAL –
Upgrading of N2 Section 18
(2017-ongoing)

EIA and compliance monitoring for the widening of the National Route 2 Section 18, between Viedgesville and Mthatha, Eastern Cape Province.

Responsibilities included managing the separate application and Basic Assessment processes for the road upgrade and material sources, and the registration of the associated water uses in terms of the NWA.

Royal Haskoning DHV (Pty)
Ltd (RHDHV) on for the
KwaZulu-Natal (KZN)
Department of Transport
(DoT) - Construction of the
Mashunka, Mtateni, Ngubo
Access Road & Bridge
(2015-16)

EIA for the construction of the Mashunka, Mtateni, Ngubo Access Road including a 170 m bridge over the Tugela River near Tugela Ferry, KwaZulu-Natal.

Theo functioned as the Environmental Assessment Practitioner (EAP) responsible for compiling the application for environmental authorisation, undertaking the Basic Assessment process, compiling the WULA and overall project management.

Naidu Consulting (Pty) Ltd for SANRAL - Upgrading of National Route 2 Section 27 (2015) EIA for the upgrading of N2 Section 27 between the uMvoti and uMhali Rivers in KwaZulu-Natal.

Theo functioned as the EAP responsible for compiling the application for environmental authorisation, undertaking the Basic Assessment process, compiling the WULA and overall project management.

Gibb for SANRAL – Upgrading of N11 Section 3 (2012-2013) EIA for the upgrading of N2 Section 27 between the Nkunzi River and Sunset Rest, KwaZulu-Natal.

Theo functioned as the EAP responsible for compiling the application for environmental authorisation, undertaking the BA process, compiling the WULA and overall project management. He also functioned as the project's independent Environmental Control Officer (ECO), a five (5) year appointment.

UWP Consulting (Pty) Ltd (UWP) for SANRAL -Upgrading of National Route 5 Section 2 and 3 (2012-2013) EIA for the upgrading of N5 Sections 2 and 3 between the Kestal and Bethlehem in the Free State Province, KwaZulu-Natal.

Theo functioned as the EAP responsible for compiling the application for environmental authorisation, undertaking the BA process and overall project management. He also functioned as the project's independent ECO, a three (3) year appointment.

RHDHV for the KZN DoT – Construction of the Qudeni Link Road EIA For the construction of a 37 km greenfield road through the uMzinyathi River valley linking the towns of Qudeni and Pomeroy, KwaZulu-Natal. Included in the design was a 140m bridge across the uMzinyathi River.

(2009-2014)

Theo functioned as the EAP responsible for compiling the application for environmental authorisation, undertaking the Scoping and EIA (S&EIA) process and overall project management. He also functioned as the project's independent ECO, a four (4) year appointment.

Infrastructure - Water and Waste Water



UWP (now Mariswe Pty Ltd) for the Amajuba District Municipality (DM) – Upgrading of the Durnacol Water Treatment Works (2018) Water Use License (WUL) and construction monitoring for the upgrading of the existing Water Treatment Works (WTW) at Durnacol, KwaZulu-Natal.

Theo functioned as the EAP responsible for managing the WUL application process as well as performing the role of the ECO, monitoring construction activities.

Mariswe for the Amajuba DM - Dannhauser Regional Water Supply Scheme (2019) An EIA and WUL application for the proposed Dannhauser Regional Water Supply Scheme linking the Durnacol Water Treatment Works to the settlements of Skombaren, Hilltop, Hattingspruit and Ramaphosa in northern KwaZulu-Natal.

Theo functioned as the EAP responsible for compiling the application for environmental authorisation and WUL, undertaking the BA process and overall project management.

Nathoo Mbenyane Engineers (Pty) Ltd (NME) -Upgrading of the Balfour WWTW (2019) WUL for the proposed upgrading of the Balfour WWTW increasing the treatment capacity from 4 MI/ day to 12 MI/ day.

Theo's function as the EAP included compiling the WUL application and managing the associated process.

**Pylon Park Sugar Estate - Irrigation Supply Dam**(2017-2019)

EIA for the construction of a new 12 m high earth embankment irrigation dam near Empangeni, KwaZulu-Natal.

Theo functioned as the EAP responsible for compiling the application for environmental authorisation, undertaking the Scoping and EIA (S&EIA) process and overall project management.

NME for the City of Mbombela - Upgrading of the Rocky Drift Waste Water Treatment (2017ongoing) EIA, WUL and construction monitoring for the upgrading of the capacity of the Rocky Drift Waste Water Treatment Works (WWTW) from 2 MI/day to 7.5 MI/day, near Nelspruit, Mpumalanga.

Theo is functioning as the EAP responsible for compiling a detailed environmental screening assessment, BA and WULA processes and overseeing construction as the ECO.

Umgeni Water uMzimkhulu Bulk Water Supply Scheme (2017ongoing) EIA for the development of the uMzimkhulu Bulk Water Supply Scheme near Underberg, KwaZulu-Natal. The project scope includes a 48 m high embankment, flooding an area of 8.5 square kilometres, a WTW, a 12 km potable water pipeline and a 15 MI reservoir.

Theo's function is as the projects EAP responsible for compiling the application for environmental authorisation, undertaking the S&EIA process and overall project management.

NME for Govan Mbeki Municipality – Infrastructure Environmental Due Diligence (2017) A due diligence assessment of four proposed water and waste water related project in the Govan Mbeki Municipality, Mpumalanga. The outcome of the assessment was utilized in compiling a funding application to finance the proposed development.

Theo was the project manager responsible for compiling the assessment report.



Umgeni Water -Upgrading of the Nungwane Pipeline (2014-2015)

application for environmental authorisation, BA process and WUL.

EIA for the development of the Ufafa Water Supply Scheme near Ixo

application for environmental authorisation, BA process and WUL.

Mangwaneni Stream, rising main, reservoir and reticulation.

to the Amanzimtoti WTW in KwaZulu-Natal.

NME on behalf of the Harry Gwala District Municipality (DM) – Ufafa Water Supply Scheme (2014-2015) EIA for the development of the Ufafa Water Supply Scheme near Ixopo, KwaZulu-Natal. The project scope provided for approximately 137 km of pipeline reticulation.

Theo functioned as the overall project manager responsible for compiling the

EIA for the replacement of a 500 mm diameter gravity main from the Nungwane Dam

Theo functioned as the overall project manager responsible for compiling the

Makhaotse, Narasimulu & Associates (MNA) on behalf of Harry Gwala DM -Mangwaneni Water Supply Scheme (2014-2015) EIA for the development of the Mangwaneni Water Supply Scheme near Bulwer, KwaZulu-Natal. The project scope provided for approximately 2.5 m high weir on the

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, BA process and WULA.

Worley Parsons RSA (Pty) Ltd on behalf of the uMgungundlovu DM - EIA for the upgrading of the Richmond WWTW in KwaZulu-Natal. The upgrade provided for increasing the facilities capacity from 2 MI/day to 4 MI/day.

Upgrading of the Richmond WWTW

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, BA process and WUL.

(2014-2015)

#### Infrastructure - Residential, commercial and industrial developments

Sun International Limited – Pyrolysis and Ash to Brick Plant (2018 to 2019) Sun International Limited proposed the establishment and operation of a waste to energy Pyrolysis plant and Ash-to-Brick plant at its Sun City resort in the North West Province. Residual general waste and certain hazardous wastes will be recovered at the Pyrolysis plant to generate approximately 100 kW of electricity for the resort.

Theo was the Environmental Assessment Practitioner responsible for the Basic Assessment process required to inform the application for a Waste Management Licence (WML) made in terms of National Environmental Management: Waste Act, 2008 (No. 59 of 2008) (NEM:WA), and an Atmospheric Emissions Licence (AEL) in terms of the National Environmental Management: Air Quality Act, 2004 (No. 39 of 2004) (NEM:AQA).

Cedar Falls Property 25 (Pty) Ltd St John's Village (2017-ongoing) SLR was appointed as the external environmental managers for the development of the St Johns Village: Lifestyle and Estate in Howick, KwaZulu-Natal.

As part of services to the development, Theo has compiled and undertaken an amendment process in terms of the NEMA and functions

Devrog Family Trust – Panorama Gardens Business Park (2012-2013) EIA for the development of a 13 ha commercial development on the outskirts of Pietermaritzburg.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, BA process and WUL.



JR Investments (Pty) Ltd -
<b>Edendale Business and</b>
<b>Industrial Development</b>
(2011-2012)

EIA for the development of a 16 ha commercial and light industrial development in Edendale, Pietermaritzburg.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, BA process and WUL.

Inkonjane Projects on behalf of the KZN Department of Human Settlements -Pomeroy Housing Development (2010-2013) EIA for the development of a 28 ha housing development outside Pomeroy, KwaZulu-Natal.

Theo's functioned as the projects EAP responsible for compiling the application for environmental authorisation, undertaking the S&EIA process and overall project management.

#### Infrastructure - Rail and Port infrastructure

# Transnet Capital Projects - Rail and tidal gate upgrade (2013)

EIA for the upgrading of the rail line near the tidal gate, Richards Bay coal terminal.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation and BA process.

## Transnet National Ports Authority – Locomotive turn around (2014)

EIA for the construction of a locomotive turn around table with the Richards Bay harbour.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation and BA process.

# Transnet Capital Projects Port of Durban, Pier 1 Phase 2

Theo functioned as the EAP, appointed by Transnet Capital Projects to provide environmental services for the eastward expansion of Pier 1 container terminal (Pier 1 Phase 2).

(2013-2016)

Responsibilities included a detailing environmental screening, environmental due diligence of the proposed development, compilation of the application for environmental authorisation, assessment and overall project management.

### Mining

# Concrete 2000 CC – Stanger Quarry (2014)

EIA and mining right application for the establishment of greenfields aggregate (tillite) quarry near Stanger, KwaZulu-Natal.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, S&EIA and Environmental Management Programme (EMPR).

# Afrimat Limited – Ladysmith Quarry (2014)

EIA and mining right application for the establishment of greenfields aggregate (weathered dolerite) quarry near Ladysmith, KwaZulu-Natal.

Theo functioned as the overall project manager responsible for compiling the application for environmental authorisation, S&EIA and EMPR.

#### Oil and Gas



Afro Energy (Pty) Ltd - Coal bed methane exploration in Mpumalanga and Free State (270, 271, 272, 38 and 56 ER) (2020)	Afro Energy hold Exploration Rights (ER) for 270, 271, 272, 38 and 56 for the exploration of coal bed methane in the Free State and Mpumalanga Provinces.  Theo was responsible for the auditing of the Environmental Management Programmes and their approvals in terms of the EIA Regulations, 2014
Afro Energy (Pty) Ltd - Coal bed methane exploration in Mpumalanga and Free State (ER 320 & 321) (2016-ongoing)	Afro Energy lodged two applications with the Petroleum Agency of South Africa for Exploration Rights to explore for petroleum products across in KwaZulu-Natal, Mpumalanga and the Free State provinces  Theo was responsible for compiling the application for environmental authorisation and S&EIA.
Energy Oil (Pty) Ltd Due diligences assessment	Due diligence assessment of the Energy Oil's Wadeville facility in Gauteng auditing compliance with the various South African statutes.  Theo functioned as lead auditor.
Centlube (Pty) Ltd  Due diligences assessments (2016-2018)	SLR has provided various due diligence assessments for Centlube largely associated with the re-establishment of a motor oil lubrication facility in Anderbolt, Gauteng.  Theo was responsible for undertaking these assessments and advising the client as to the statutory environmental limitations and requirements.
MEMBERSHIPS	
Member	International Association for Impact Assessment South Africa (IAIAsa)  Member of the Institute of Quarries
AWARDS	
IAIAsa Advance Award 2013	Environmental planning and management of the Edendale Business and Industrial Park.



# CURRICULUM VITAE



## **AMISHKA MOTHILAL**

## **ENVIRONMENTAL CONSULTANT**

Environmental Management Planning & Approvals, South Africa

# **QUALIFICATIONS**

BSc Hons	2020
BSc	2016

BSc Hons (Environmental Management), from University of South Africa BSc (Environmental and Life Science), from University of KwaZulu-Natal

#### **EXPERTISE**

- Environmental Impact Assessments
- Environmental audits
- Environmental planning and permitting
- Stakeholder engagement
- Environmental legislation
- Environmental and social screening assessments

Amishka is an Environmental Consultant at SLR with over 5 years of experience in environmental consulting, project management and community engagement. Her primary focus has been in the execution of environmental management, planning and approval tasks which include, but are not limited to Environmental Impact Assessments, Basic Assessments, Permit Applications, Environmental Auditing, Feasibility Assessments, Stakeholder Engagement and Public Participation.

Amishka's key areas of involvement are the oil and gas, infrastructure and power sectors. She has been involved in upstream and downstream oil and gas project authorisations and auditing for new developments as well as site decommissioning. She also has a wide range of experience in environmental audits and has conducted in excess of 45 audits in the oil and gas and infrastructure sectors. Recent key project experience includes an environmental and social feasibility assessment for Engie as well as environmental audits for Total, Equinor, Exxon Mobil, Eni and Aveng Trident Steel.

#### **PROJECTS**

A sample of Amishka's project experience, summarised by sector, is provided below.

# **Total Exploration and Production South Africa** (Pty) Ltd, Environmental **Compliance Audit for the**

**Block 11B/12B Exploration** Right - Seismic and Drilling operations, South Africa (2020)

Total South Africa (Pty) Ltd, **Environmental Audits of Fuel Infrastructure at** commercial portfolio sites in KwaZulu-Natal, South Africa, (2020)

### Oil and Gas

The Petroleum Agency of South Africa required Total to submit Environmental Audit Reports in respect of the authorised seismic surveys operations and exploration drilling operations for the Block 11B/12B Exploration Right.

Amishka prepared two audit reports (one for seismic survey operations and one for drilling operations), reflecting the level of performance against and compliance with the EMPr and the suitability of the EMPr to manage the avoidance, management and mitigation of environmental impacts.

Total currently provide fuel and own fuel infrastructure at commercial portfolio sites throughout South Africa. Total required audits of commercial sites in Gauteng, Mpumalanga, Limpopo and KwaZulu-Natal. Sites were audited to obtain details on the condition of fuel infrastructure on the sites with aims assess individual site risk and to identify sites that require upgrades, remediation or closure.

Amishka conducted audits at 40 sites in KwaZulu-Natal, and prepared individual audit reports for the sites.



Shell Downstream South Africa (Pty) Ltd, Basic Assessment for the Construction of a Fuel Service Station in Johannesburg, Gauteng, South Africa, (2020)

Shell Downstream South Africa intend constructing the Aerodrome fuel service station in Johannesburg, Gauteng, South Africa.

Amishka prepared the Basic Assessment report and Environmental Management Programme for the project.

Equinor South Africa B.V, Environmental Compliance Audit of the East Algoa Exploration Right, South Africa (2020) The Petroleum Agency of South Africa required that Equinor South Africa complete and submit an Environmental Audit Report for the East Algoa Exploration Right (ER257). Amishka prepared the audit report, reflecting the level of performance against and compliance with the EMPr and the suitability of the EMPr to manage the avoidance, management and mitigation of environmental impacts.

Eni South Africa B.V South Africa, Environmental Compliance Audit of the ER236 Exploration Right, South Africa (2020) The Petroleum Agency of South Africa required that Eni South Africa complete and submit an Environmental Audit Report for the ER236 Exploration Right.

Amishka prepared the audit report, reflecting the level of performance against and compliance with the EMPr and the suitability of the EMPr to manage the avoidance, management and mitigation of environmental impacts.

Shell Downstream South Africa (Pty) Ltd, Basic Assessment for the Construction of a Fuel Service Station in Johannesburg, Gauteng, (2020)

Shell Downstream South Africa intend constructing a fuel service station on Summit Road in Johannesburg, Gauteng, South Africa.

Amishka was the assistant project manager and prepared the Basic Assessment report and Environmental Management Programme for the project.

Exxon Mobil South Africa (Pty) Ltd, Environmental Compliance Audit and Closure Report for the Deep Water Durban Exploration Right, South Africa, (2020) Exxon Mobil indicated intent to relinquish the Deep Water Durban Exploration Right. The Petroleum Agency of South Africa required that Exxon Mobil complete and submit an Environmental Audit and Closure Report in respect of the relinquishment of the Exploration Right.

Amishka prepared the audit and closure report, reflecting the level of performance against and compliance with the EMPr.

Exxon Mobil South Africa (Pty) Ltd, Environmental Compliance Audit for the Transkei-Algoa Exploration Right, South Africa, (2020) The Petroleum Agency of South Africa required that Exxon Mobil South Africa complete and submit an Environmental Audit Report for the Transkei-Algoa Exploration Right.

Amishka prepared the audit report, reflecting the level of performance against and compliance with the EMPr and the suitability of the EMPr to manage the avoidance, management and mitigation of environmental impacts.

Exxon Mobil South Africa (Pty) Ltd, Environmental Compliance Audit for the Tugela South Exploration Right, South Africa, (2020) The Petroleum Agency of South Africa required that Exxon Mobil South Africa complete and submit an Environmental Audit Report for the Tugela South Exploration Right.

Amishka prepared the audit report, reflecting the level of performance against and compliance with the EMPr and the suitability of the EMPr to manage the avoidance, management and mitigation of environmental impacts.



Shell Downstream South Africa (Pty) Ltd, Basic Assessment for the Decommissioning of Fuel Storage Tanks, Modderfontein, Gauteng, South Africa (2019) Shell Downstream South Africa intended on decommissioning and in-situ slurry filling of fuel storage tanks within the AECI Modderfontein Industrial Complex in Modderfontein, Johannesburg, Gauteng, South Africa.

Amishka was the assistant project manager and prepared the Basic Assessment report and Environmental Management Programme. She also conducted all public participation and stakeholder engagement tasks.

Confidential Client – Legislative compliance risk assessment of 407 retail service stations, South Africa, (2019) A confidential Oil and Gas Client required legislative compliance risk assessment of 407 retail service stations. The service stations were screened in respect of lawful upgrades and installations in terms of the National Environmental Management Act (NEMA), Act 107 of 1998, the Environment Conservation Act (ECA), Act 107 of 1989 and their subsequent amendments.

Amishka conducted individual compliance screening for each site and compiled a comprehensive risk report highlighting the risks and legislative requirements in terms of section 24G of NEMA.

Shell Downstream South Africa (Pty) Ltd – Update of Environmental Management Programme for the Decommissioning of the Dom Pedro Complex, Port Elizabeth, Eastern Cape, South Africa, (2019)

Shell requested an update of the existing approved EMPr for the decommissioning and closure of the Dom Pedro Complex in Port Elizabeth, Eastern Cape.

Amishka conducted a gap analysis of the authorised permits and EMPr and prepared an updated EMPr aligned to the current legislative requirements and best practice.

ION Geophysical Corporation, Environmental Impact Assessment for Seismic Surveys, Angola, (2019) ION intended on applying for authorisation to conduct seismic surveys for a proposed offshore Oil & Gas development, off the coast of Angola. The ESIA was initially compiled in 2015 and updated in 2019.

Amishka prepared the updated environmental and social baseline chapter of the EIA report.

Shell Downstream South Africa (Pty) Ltd, Basic Assessment for the Decommissioning of Fuel Storage Tanks in Kleinsee, Northern Cape, South Africa, (2018) Shell intended on decommissioning and removing fuel storage tanks from the De Beers Mining Complex in Kleinsee and Koingnaas, Northern Cape, South Africa. The project required authorisation from the Northern Cape Department of Mineral Resources and Energy

Amishka managed the SAMRAD portal and prepared the Basic Assessment report and Environmental Management Programme She also conducted all public participation and stakeholder engagement tasks.

Eni South Africa B.V South Africa – Environmental and Social Impact Assessment for Exploration Drilling within Block ER236, off the East Coast of South Africa, (2018 - 2019) An ESIA was undertaken for Eni in respect of the offshore exploration drilling for hydrocarbon reserves within Block ER236, off the east coast of South Africa. The project received authorisation and underwent an appeals phase in 2019.

Amishka managed the public participation tasks and responded to comments from interested and affected parties during the EIA phase (2018) and the appeals phase (2019) of the project. In excess of 500 comments were received and responded to during the EIA and the appeals phases of the project.



#### Infrastructure

Nathoo Mbenyane Engineers (Pty) Ltd on behalf of the City of Mbombela Municipality, Basic Assessment for the Rocky Drift Bulk Wastewater system upgrade, (2020) Basic assessment for the proposed upgrade of the Rocky Drift wastewater system upgrade, consisting of the upgrade of the Msholozi sewer outfall pipeline and the expansion of the Rocky Drift Wastewater Treatment Works.

Amishka served as the assistant project manager, assisted with writing the basic assessment report and environmental management programme and conducted stakeholder engagement tasks.

iX Engineers (Pty) Ltd (iX Engineers), on behalf of Nkosazana Dlamini Zuma Municipality, Basic Assessment for the construction of the Sdangeni Access Road, (2020)

Basic assessment for the proposed construction of an access road in between the towns of Creighton, Underberg and Bulwer in the Dr Nkosazana Dlamini Zuma Local Municipality in the KwaZulu-Natal Province.

Amishka served as the assistant project manager, assisted with writing the basic assessment report and environmental management programme and conducted stakeholder engagement tasks.

Aveng Trident Steel (Pty) Ltd, Environmental Due Diligence Audit of the Pinetown manufacturing plant, Durban, KwaZulu-Natal, South Africa, (2020) The Aveng Trident Steel site operations have concluded, and Aveng do not intend on extending the lease at the current site. Aveng were required to conduct environmental due diligence audits to identify any potential areas of concern which require environmental remediation or mitigation, prior to site handover.

Amishka undertook a desktop environmental screening, conducted the due diligence audit and prepared the audit report.

Alcatel Submarine Networks UK Ltd, METISS Subsea Cable System Seashore Lease, South Africa, Liquid Telecom, (2020) The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs required Alcatel Submarine Networks to apply for a seashore lease prior to the installation and landing of the METISS subsea cable in Amanzimtoti, KwaZulu-Natal. The subsea cable will be installed from Mauritius and landed at pipeline beach in Amanzimtoti, KwaZulu-Natal, South Africa.

Amishka prepared the permit application, managed stakeholder engagement tasks and served as the Department liaison.

Shell South Africa (Pty) Ltd, Environmental Compliance Audit of the Leeu Gamka Water Pipeline in Leeu Gamka, Western Cape, (2020) Shell received authorisation for the extension of the municipal potable water supply pipe to the Leeu Gamka retail service station. Shell received a general authorisation for the construction of a water pipeline within 500m of a watercourse and were required to conduct annual environmental compliance audits at the site.

Amishka prepared the annual water-use licence compliance monitoring environmental compliance report for the project.

Shell South Africa (Pty) Ltd, Environmental Compliance Audit of the Leeu Gamka Water Pipeline in Leeu Gamka, Western Cape, South Africa, (2019) Shell received authorisation for the extension of the municipal potable water supply pipe to the Leeu Gamka retail service station. A new underground water pipeline was constructed to connect an existing water pipeline to the service station. Shell received a general authorisation for the construction of a water pipeline within 500m of a watercourse and were required to monitor environmental compliance at the site during the construction period.

Amishka conducted the environmental compliance audit and prepared the environmental audit report for the project.



Alcatel Submarine Networks UK Ltd, METISS Subsea Cable System Project, Amanzimtoti, KwaZulu-Natal, South Africa, (2019) Alcatel Submarine Networks applied for Environmental Authorisation for the installation and operation of the Melting Pot Indianoceanic Submarine System (METISS) subsea fibre optic cable. The subsea cable will be installed from Mauritius and landed at pipeline beach in Amanzimtoti, KwaZulu-Natal, South Africa.

Amishka managed all stakeholder engagement and public participation tasks for the project.

Bhangazi Trust - Basic Assessment for the Development of the Bhangazi Cultural Heritage Lodge within iSimangaliso Wetland Park, (2019) A basic assessment process was undertaken for the construction of the Bhangazi Cultural Heritage Lodge within the iSimangaliso Wetland Park in St Lucia, KwaZulu-Natal South Africa.

Amishka assisted with public participation and stakeholder engagement tasks of the project.

Dow South Africa (Pty) Ltd, Basic Assessment for the Dow New Germany Polyurethane Systems House Expansion, (2018 -2019) The Dow New Germany site was identified as a site for potential site expansion and upgrades through the Polyurethane Systems House Expansion (PUSH) Project. The project was in respect of construction of a new product storage tank, isotainer, blender and associated support infrastructure.

Amishka managed the project, prepared the basic assessment report, EMPr, conducted all public participation tasks and stakeholder engagement. She also served as the departmental and client liaison and managed the subcontractor.

#### **Mining and Minerals**

Integrated Water and Waste Management Plan in Support of the Integrated Water Use License Application for West Wits Mine, West Wits MLI (Proprietary) Limited (2020) West Wits MLI (Proprietary) Limited (West Wits), proposes to establish a mining operation in an area located south of Roodepoort and to the north of Soweto in the City of Johannesburg Metropolitan Municipality, Gauteng. West Wits. An integrated water use licence application (IWULA) process was required for the proposed water uses associated with the mining operations.

Amishka was a project assistant on the integrated waste and water management plan and wrote the section 27 motivation report.

Anglo American South Africa (Pty) Ltd, IFC Performance Standards Legislative Gap Analysis (2019) Anglo American requested a comparative legislative gap analysis of IFC Performance Standards, South African Environmental Legislation and Botswana Environmental Legislation.

Amishka conducted a screening assessment of the legislation and assisted with preparation of the gap analysis report.

#### **Power**

Golomoti JCM Solar Corporation Limited, ESIA Addendum Report for the Golomoti Solar PV Power Plant Battery Energy Storage System, (2020) JCM received authorisation to develop a 20MWac solar photovoltaic power plant in the Golomoti (Dedza) District in Malawi. JCM proposed on installing a Battery Energy Storage System (BESS) to provide a stable continuous supply of power to the energy regulator. The Project necessitated a ESIA Addendum process.

Amishka managed the project, wrote the ESIA Addendum Report and supporting documents.



ENGIE Southern Africa (Pty) Ltd, Rheboksfontein Wind Farm Development Part Two Environmental Authorisation Amendment Report, (2020) ENGIE previously obtained environmental authorisation for the construction of a wind farm in Rheboksfontein, Western Cape, South Africa. ENGIE subsequently requested to amend the project description and were required to undertake a Part Two Amendment of the environmental authorisation.

Amishka assisted with the preparation of the amendment report and served as the subcontractor liaison.

ENGIE Southern Africa (Pty) Ltd, Greenfield Wind Farm Development Environmental and Social Screening Assessment (2020)

ENGIE identified 8 sites for the potential development of wind farms. Each site underwent environmental and social feasibility studies to determine commercial and environmental viability.

Amishka conducted desktop screening, GIS tasks and risk assessments for each site. She thereafter prepared the social feasibility chapters for each report.

#### Other

eThekwini Municipality, Farmer Eco-Enterprise Development Project, Durban, KwaZulu-Natal (2016-2018) 60 Small-scale agriculture facilities were identified by the eThekwini municipality to undergo monthly community engagement and skills development.

Confidential Client, Community engagement Project, KwaZulu-Natal (2015 – 2016) Amishka prepared monthly and quarterly situational analysis reports for each site. She conducted extensive project management, procurement and financial management. She also assisted with skills development through community engagement sessions

A confidential client required community engagement sessions and extensive stakeholder management of 20 community-based subsistence agriculture projects in KwaZulu-Natal.

Amishka assisted with stakeholder and community engagement on the projects.

#### **MEMBERSHIPS**

**IAIAsa** 

Member of the International Association of Impact Assessment South Africa (6432)

