

# Estie Retief

		Environmental Scientist
	Profession	Environmental Scientist
Contra-	Education	M.A Environmental Management, University of Johannesburg, 2008 BA (Hons), Geography, University of Johannesburg, 2005 BA, Geography and Environmental Management, Rand Afrikaans University, 2004
	Registrations/ Affiliations	Member, International Association of Impact
	Annations	Assessments (IAIA) South Africa,
		Member, Environmental Law Association (ELA) Member, Society for South African Geographers (SSAG)
		Member, National Clean Air Association (NACA)
Specialisation	Environmental project management; environmental and social impact assessments and associated management plans; strategic environmental planning; closure cost assessments; environmental performance and compliance audits; environmental due diligence reviews; greenhouse gas assessments.	
Expertise	Estie Retief has 13 year's experience in the environmental consulting field. Estie has extensive experience in environmental authorisation processes relating to mining developments. Estie has strong project management skills and have assisted clients with projects from pre-feasibility phase, throughout the permitting and stakeholder consultation process towards authorisation. Estie has also been involved with auditing compliance of authorisations and environmental management plans. Estie has a keen interest in sustainability and climate change, and have been involved with the development of several greenhouse gas assessments (carbon footprint assessments) in line with international standards.	
Employment		
June 2017 – present	SRK Consulting (Pty) Lt	td, Environmental Scientist, Johannesburg
March 2006 – May 2017	GCS Water and Environmental Consultants, Environmental Project Manager, Johannesburg	
Publications		
	"Regulatory detail still la BizCommunity on 21 Au	acking to comply with Climate Change Bill" published on ugust 2018.
	"Lack of regulatory guid Mining Weekly on 31 Au	ance stymies Climate Change Bill preparations" – published in Jgust 2018
	"Industry champs at clin 2018	nate change bit" – published on ee publishers on 4 September
	"Where's the regulatory	detail?" – published in Mining Mirror on 1 November 2018
Languages	English – read, write, sp	peak (Excellent)

Afrikaans - read, write, speak (Excellent)

### Page 2 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	La Mercy, KwaZulu-Natal Province, South Africa 2019-2020 Dube Trade Port Corporation (DTPC) Greenhouse Gas Emissions Report Undertake Greenhouse Gas Emissions Reporting Environmental Consultant – Update greenhouse gas inventory and compile greenhouse gas assessment report
Value of Project:	±R260 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	Witbank, Mpumalanga Province, South Africa November 2018 - Current Anglo Operations Limited SACE Lifex Pre-Feasibility Assessment for proposed future workings Environmental Consultant – Greenhouse gas (GHG) assessment, client contact, document compilation, timeframe coordination, authority and stakeholder consultation, specialist and consultant management.
Value of Project:	±R4 200 000.00
Location: Project duration & year: Client: Name of Project:	Thabazimbi, Limpopo Province, South Africa September 2018 - Current Anglo Operations Limited Rustenburg Platinum Mines, Amandelbult Complex, Fine Chrome Recovery
Project Description:	Plant Environmental Authorisation Process (which required MPRDA, NEMA & NWA applications) for proposed Fine Chrome Recovery Plant
Job Title and Duties:	Environmental Consultant - client contact, document compilation, timeframe coordination, authority and stakeholder consultation, specialist and consultant management.
Value of Project:	±R2 000 000.00
Location: Project duration & year: Client: Name of Project: Project Description:	Steelpoort, Limpopo Province, South Africa August 2018 - Current Anglo Operations Limited Der Brochen Amendment Project Consolidated Environmental Authorisation Process for proposed expansion activities relating to underground mining activities and associated mining related
Job Title and Duties:	infrastructure. Environmental Consultant - client contact, document compilation, timeframe coordination, authority and stakeholder consultation, specialist and consultant management.
Value of Project:	±R3 000 000.00
Location: Project duration & year: Client: Name of Project: Project Description:	Gauteng Province, South Africa Initiated in 2018 - ongoing Confidential Closure Assessment of underground mine workings Environmental Authorisation Process (which required MPRDA, NEMA & NWA applications) for underground mining, additional shaft and associated infrastructure including ventilation shafts
Job Title and Duties:	Environmental Consultant - client contact, document compilation, timeframe coordination, authority and stakeholder consultation, specialist and consultant management. Confidential
Value of Project:	Connucritia

### Page 3 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Mpumalanga Province, South Africa 1 month - 2018 Confidential Environmental and Social Competent Persons review Review of environmental and social issues, risks and liabilities associated with mining related assets. Environmental reviewer Confidential
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	North West Province, South Africa 1 month - 2018 Confidential Environmental and Social Competent Persons review Review of environmental and social issues, risks and liabilities associated with mining related assets. Environmental reviewer
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Kya Sands, Gauteng Province, South Africa March – April 2018 Waste Worx Audit Audit to determine compliance of operations at Kya Sands Facility Environmental Consultant – Compilation of audit report ±R30 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Limpopo Province, South Africa March – April 2018 DRA Global Environmental Plan Compilation of Construction Phase Environmental Compliance Plan Environmental Consultant - client contact, document compilation, ±R60 000.00
Location: Project duration & year: Client: Name of Project: Project Description:	Steelpoort, Limpopo Province, South Africa November 2017 – April 2018 Modikwa Platinum Mine Environmental Audit for Fuel and Hazardous storage areas Environmental Compliance Audit in terms of the NEMA for Fuel and Hazardous storage areas and compliance monitoring for Volatile Organic Compounds (VOCs').
Job Title and Duties: Value of Project:	Environmental Consultant - client contact, document compilation, timeframe coordination, specialist and consultant management. ±R140 000.00

#### Rete/Omar

### **Estie Retief Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project:	Thabazimbi, Limpopo Province, South Africa September 2017 – December 2018 Anglo Operations Limited Rustenburg Platinum Mines, Amandelbult Complex, Tumela 15 East Dropdown
Project Description:	and Dishaba 62 East Raise Bore Project Environmental Authorisation Process (which required MPRDA, NEMA & NWA applications) for underground mining, additional shaft and associated infrastructure including ventilation shafts
Job Title and Duties:	Environmental Consultant - client contact, document compilation, timeframe coordination, authority and stakeholder consultation, specialist and consultant management.
Value of Project:	±R2 000 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	Steelpoort, Limpopo Province, South Africa July 2017 – December 2017 Modikwa Platinum Mine Environmental Compliance Audit Mine wide Environmental Compliance Audit in terms of the NEMA & MPRDA Environmental Consultant - client contact, document compilation, timeframe coordination, drafting and review of documents
Value of Project:	±R120 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Steelpoort, Limpopo Province, South Africa July 2017 – December 2017 Modikwa Platinum Mine Doornbosch Addition Environmental Authorisation Process (NEMA application) for inclusion of an additional area for underground mining into the existing Mining Rights Area Environmental Consultant - client contact, document compilation, timeframe coordination, authority and stakeholder consultation. ±R800 000.00
Location: Project duration & year:	Delmas, Mpumalanga, South Africa Ongoing, initiated in October 2016 (started with new appointment prior to project
Client: Name of Project: Project Description:	completion) Exxaro Eloff Phase 1 The development of Phase 1 of a proposed opencast coal mine which required
Job Title and Duties:	MPRDA, NEMA & NEM: WA and NWA applications. Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, budget control and invoicing.
Value of Project:	±R2 000 000.00
Location: Project duration & year:	Near Piet Retief, Mpumalanga, South Africa Ongoing, initiated in April 2017 (started with new appointment prior to project completion)
Client: Name of Project: Project Description:	Kangra Coal Kusipongo expansion project The development of a proposed underground coal mine which will link to the existing Kangra operations. The project required MPRDA, NEMA and NWA applications.
Job Title and Duties:	Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, budget control and invoicing.
Value of Project:	±R1 500 000.00

#### Estie Retief Environmental Scientist

#### **Key Experience:** Environmental authorisation process Location: Near Kriel, Mpumalanga, South Africa Initiated in 2015 (started with new appointment prior to project completion) Project duration & vear: Client: Exxaro Name of Project: Matla Stooping and Consolidation of WUL and EMP Existing Underground Coal Mine. Client proposed to continue with stooping of Project Description: remaining underground pillars, and consolidate their existing NWA and MPRDA Authorisations. Job Title and Duties: Project Manager - client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, budget control and invoicing. ±R4 500 000.00 Value of Project: Location: Lesotho Project Initiated in November 2016 and Finalised in March 2017. Project duration & year: Client: Gem Diamonds Name of Project: Carbon Footprint (GHG Assessment) and Water Footprint Update Project Description: Update of the Gem Diamonds Group Carbon Footprint (Greenhouse Gas Assessment) and Water Footprints Job Title and Duties: Specialist - Update of the group carbon footprint Value of Project: ±R100 000.00 Near Hotazel, Northern Cape, South Africa Location: Project duration & year: 2014 - 2016 Client: Hatch Goba (through appointment of Eramet) Name of Project: Mukulu Manganese Mine Project Description: Mukulu Manganese Mine was a proposed opencast and underground manganese mine which required MPRDA, NEMA & NEM: WA and NWA IWULA/IWWMP applications. As the project evolved, two additional NEMA authorisations was required to realign a provincial road, and to move Eskom power lines. The project was however cancelled prior to submission... Job Title and Duties: Project Manager - client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents. ±R9 000 000.00 Value of Project: Location: Westonaria, Gauteng, South Africa Project duration & year: 2014 - 2016 Client: Sibanye Gold Name of Project: Cooke 2 Tailings Backfill Plant Project Description: The development of a tailings pipeline from existing plant, over the Wonderfonteinspruit to a new constructed plant to be used as backfill material to stabilise underground workings which required MPRDA, NEMA, NWA and NNR applications. Project Manager - client contact, appointing of specialists, timeframe Job Title and Duties: coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, update of financial provision for closure, budget control and invoicing.

Value of Project:

±R2 500 000.00

### Estie Retief Environmental Scientist

#### Key Experience: Environmental authorisation process

Location: Project duration & year: Client: Name of Project: Project Description:	Near Kriel, Mpumalanga, South Africa Project initiated in November 2014 with Authority feedback still outstanding (started with new appointment prior to project completion) Exxaro Rietkuil-Vhakoni Proposed Underground Coal Mine which required MPRDA, NEMA & NEM: WA and NWA applications.
Job Title and Duties:	Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, budget control and invoicing.
Value of Project:	±R2 000 000.00
Location: Project duration & year: Client: Name of Project: Project Description:	Belfast, Mpumalanga, South Africa 2013 - 2015 Exxaro Glisa Water Treatment Plant The development of a Reverse Osmosis Water Treatment Plant which required MPRDA, NEMA & NEM: WA and NWA applications, to treat the decant water
Job Title and Duties:	from existing operations. Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, update of financial provision for closure, budget control and invoicing.
Value of Project:	±R1 500 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	Near Boksburg, Gauteng, South Africa 2013 (approximately 1 month duration) Clover Alloys Monterey Sands due Diligence Assessment Due Diligence Assessment of the site was required prior to the operation being purchased to ascertain if there are any areas of non-compliance. Project Manager – client contact, timeframe coordination, drafting of due diligence report
Value of Project:	±R50 000.00
Location: Project duration & year: Client: Name of Project:	Near Kathu, Northern Cape, South Africa 2012 - 2014 Khumani Iron Ore Mine Off-Grade 2 Plant
Project Description:	Off-Grade 2 Plant expansion which required MPRDA, NEMA and NWA applications.
Job Title and Duties:	Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, update of financial provision for closure, budget control and invoicing.
Value of Project:	±R900 000.00
Location: Project duration & year: Client:	Near Kathu, Northern Cape, South Africa Bi-monthly for the period 2012 – 2013 (approximately 1 month duration per audit) Khumani Iron Ore Mine
Name of Project:	WHIMS and TFR Environmental Audits
Project Description: Job Title and Duties:	Annual EMP audit on the railway relocation and plant expansion projects. Project Manager – client contact, timeframe coordination, drafting of audit reports, budget control and invoicing.
Value of Project:	±R35 000.00 (per audit)

## Page 7 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client:	Near Port Edward, Eastern Cape, South Africa 2012 Mineral Sands Resources
Name of Project: Project Description:	Xolobeni: Kwanyana Heavy Mineral Sands Offshore Prospecting Right Update of the Prospecting Right Application in terms of the MPRDA for the Xolobeni block proposed mineral sands mine area.
Job Title and Duties:	Project Manager – client contact, timeframe coordination, management of stakeholder consultation specialist, authority and stakeholder consultation, consultant management, review of documents, budget control and invoicing.
Value of Project:	±R200 000.00
Location: Project duration & year:	Near Kriel, Mpumalanga, South Africa 2011 – 2013 Everyone
Client: Name of Project:	Exxaro Matla Water Treatment Plant
Project Description:	The development of a Reverse Osmosis Water Treatment Plant which required MPRDA, NEMA & NEM: WA and NWA applications, to treat the decant water from existing operations.
Job Title and Duties:	Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, update of financial provision for closure, budget control and invoicing.
Value of Project:	±R2 000 000.00
Location:	Near Lutzville, Northern Cape, South Africa
Project duration & year:	2011
Client:	Mineral Sands Resources
Name of Project: Project Description:	Tormin Heavy Mineral Sands Offshore Prospecting Right Application for prospecting in terms of the MPRDA.
Job Title and Duties:	Project Manager –authority and stakeholder consultation, budget control and invoicing.
Value of Project:	R80 000.00
Location:	Belfast, Mpumalanga, South Africa
Project duration & year:	2010 - 2012
Client:	Exxaro
Name of Project: Project Description:	Glisa Consolidation Consolidation of existing EMP's in terms of the MPRDA, NEMA Basic Assessment and NWA applications, to consolidate the EMPs for the existing
Job Title and Duties:	operations, and authorise new infrastructure and mine plan. Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, update of financial provision for closure, budget control and invoicing.
Value of Project:	±R2 500 000.00

## Page 8 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project: Project Description:	Stilfontein, North West Province, South Africa 2010 Mine Waste Solutions Interim Deposition Strategy on MWS Dam 4 As a result of potential delays in the environmental authorisation process for a proposed mega tailings facility, there was a need to authorise an existing tailings dam to receive tailings as a potential interim deposition strategy in terms
Job Title and Duties: Value of Project:	of the MPRDA and NWA applications. Project Manager – client contact, timeframe coordination, authority and stakeholder consultation, drafting of documents, update of financial provision for closure, budget control and invoicing. ±R200 000.00
Location:	Near Piet Retief & Wakkerstroom, Mpumalanga, South Africa
Project duration & year: Client:	2010 Kangra Coal Mines
Name of Project: Project Description:	Kusipongo Baseline Risk Assessment and Site Selection Process Proposed
Job Title and Duties:	Project Manager – client contact, appointing of specialists, timeframe coordination, authority and stakeholder consultation, specialist and consultant management, drafting and review of documents, budget control and invoicing.
Value of Project:	±R1 000 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Near Cape Town and Stellenbosch, Western Cape, South Africa 2010; approximately 4 months African Exploration, Mining and Finance Corporation (AEMFC) AEMFC Prospecting Rights Application for Prospecting Rights in terms of the MPRDA Project Manager – client contact, timeframe coordination, authority and stakeholder consultation, drafting of documents, budget control and invoicing. $\pm$ R400 000.00
Location: Project duration & year:	Orkney, North West Province, South Africa 2009, approximately 2 months
Client:	Buffelsfontein Gold Mine
Name of Project: Project Description: Job Title and Duties:	Tau Lekoa EMP consolidation Consolidation of existing EMPs for the Tau Lekoa mine Project Manager – client contact, timeframe coordination, authority and stakeholder consultation, drafting of documents, update of financial provision for
Value of Project:	closure, budget control and invoicing. $\pm R 200\ 000.00$
Location: Project duration & year: Client: Name of Project: Project Description:	Bethal, Mpumalanga, South Africa 2009, approximately 1 year Total Coal South Africa Forzando North The proposed establishment of a new tailings storage facility and conveyor at the eviating Forzando North mine
Job Title and Duties:	the existing Forzando North mine. Project Manager – client contact, timeframe coordination, authority and stakeholder consultation, drafting of documents, update of financial provision for
Value of Project:	closure, budget control and invoicing. ±R1 200 000.00

### Page 9 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project: Project Description:	Stilfontein, North West Province, South Africa 2008 - 2010 Mine Waste Solutions Mega Tailings Storage Facility The site selection and authorisation of a mega tailings storage facility to accommodate the reworked tailings of the existing Mine Waste Solutions, and Buffelsfontein Gold Mines tailings dams. The project involved authorisation in terms of the MPRDA, NEMA and NWA legislation.
Job Title and Duties: Value of Project:	Environmental Consultant –authority and stakeholder consultation, drafting of documents, budget control and invoicing. $\pm R3\ 000\ 000.00$
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Stilfontein, North West Province, South Africa 2008 – 2010 Buffelsfontein Gold Mines Limited BGM EMP Conversion & Amendment Conversion amendment application of existing rights in terms of the MPRDA. Environmental Consultant –authority and stakeholder consultation, drafting of documents, budget control and invoicing. ±R300 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Mooinooi, North West Province, South Africa 2008 Team 6 Mineral and Energy Resources Team 6 Buffelspoort Prospecting Right Application Application for Prospecting Rights in terms of the MPRDA Environmental Consultant –authority and stakeholder consultation, drafting of documents, budget control and invoicing. ±R100 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Lephalale, Limpopo, South Africa Annual EMP Audits 2007 - 2013 (approximately 1 month duration per audit) Anglo Thermal Coal Bultklip Coal Bed Methane Pilot Project Annual EMP audit on the existing Bultklip Coal Bed Methane Pilot Project Authorisation; Project Manager – client contact, timeframe coordination, drafting of audit report, update of Financial Provision. $\pm R50\ 000.00$
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Westonaria, Gauteng, South Africa 2007, approximately 1 year First Uranium South Africa Ezulwini Prospecting Right Application Application for Prospecting Rights in terms of the MPRDA Environmental Consultant –authority and stakeholder consultation ±R200 000.00
Location: Project duration & year: Client: Name of Project: Project Description:	Stilfontein, North West Province, South Africa 2007, approximately 1 year Buffelsfontein Gold Mine Buffelsfontein Prospecting Right Application Application for Prospecting Rights for uranium for the existing Buffelsfontein Gold Mines
Job Title and Duties: Value of Project:	Environmental Consultant –authority and stakeholder consultation, drafting of documents, budget control and invoicing. ±R200 000.00

## Page 10 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location: Project duration & year: Client: Name of Project:	Stilfontein, North West Province, South Africa 2007, approximately 1 year Mine Waste Solutions MWS 3 Dump Prospecting Right Application
Project Description: Job Title and Duties:	Application for Prospecting Rights for uranium for the existing 3 tailings storage facilities Environmental Consultant –authority and stakeholder consultation, drafting of
Value of Project:	documents, budget control and invoicing. ±R200 000.00
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	Near Port Edward, Eastern Cape, South Africa 2007 Mineral Sands Resources Xolobeni: Mining Right The project entailed the application for Mining Rights in terms of the MPRDA for four resource blocks. Environmental Consultant – update of stakeholder consultation report.
Value of Project: Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties:	Unknown Utrecht, Kwazulu Natal, South Africa 2006, approximately 4 months Kangra Coal Klipspruit Colliery IWUL Application for WUL for Klipspruit Colliery Environmental Consultant – update of licensing forms, consultation with authorities. Unknown
Value of Project: Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Utrecht, Kwazulu Natal, South Africa 2006, approximately 4 months Kangra Coal Umgala/Knights Hill Colliery IWUL Application for WUL for Umgala/Knights Hill Colliery Environmental Consultant – update of licensing forms, consultation with authorities. Unknown
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Utrecht, Kwazulu Natal, South Africa 2006, approximately 4 months Kangra Coal Aasvoelkrans Colliery IWUL Application for WUL for Aasvoelkrans Colliery Environmental Consultant – update of licensing forms, consultation with authorities. Unknown
Location: Project duration & year: Client: Name of Project: Project Description: Job Title and Duties: Value of Project:	Piet Retief, Mpumalanga, South Africa 2006, approximately 4 months Kangra Coal Panbult Siding WUL Application for WUL for Panbult Siding. Environmental Consultant – update of licensing forms, consultation with authorities. Unknown

## Page 11 Estie Retief **Environmental Scientist**

Key Experience:	Environmental authorisation process
Location:	Midrand, Gauteng, South Africa
Project duration & year:	2006, approximately 2 months
Client:	Nestle/Valvita
Name of Project:	Nestle Water Use Authorisation
Project Description:	Update of water use authorisation for Nestle bottling plant.
Job Title and Duties:	Environmental Consultant – update of licensing forms, consultation with authorities.
Value of Project:	Unknown
Location:	Mooinooi, Northwest Province, South Africa
Project duration & year:	2006, approximately 2 months
Client:	Samancor Western Chrome Mines
Name of Project:	Mooinooi and Millsell WUL
Project Description:	Application for WUL for Millsell and Mooinooi operations
Job Title and Duties:	Environmental Consultant – update of licensing forms, consultation with authorities.
Value of Project:	Unknown