



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


### DETAILS OF EAP AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	12/12/20/
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014

### PROJECT TITLE

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL
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Environmental Assessment Practitioner (EAP): <sup>1</sup>	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P. O. Box 2083, Pinetown		
Postal code:	2123	Cell:	079 989 1020
Telephone:	011 789 7170	Fax:	011 787 3059
E-mail:	mudau@eims.co.za		
Professional affiliation(s) (if any)	Registered Professional Natural Scientist (SACNASP - #400214/15)		

Project Consultant:	Same as above.		
Contact person:			
Postal address:			
Postal code:		Cell:	
Telephone:		Fax:	
E-mail:			

#### 4.2 The Environmental Assessment Practitioner

I, Tshivhangwaho Mudau, declare that –

##### General declaration:

I act as the independent environmental practitioner in this application

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, regulations and all other applicable legislation;

I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;

I will keep a register of all interested and affected parties that participated in a public participation process; and

I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not

all the particulars furnished by me in this form are true and correct;

will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and

I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

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**Disclosure of Vested Interest (delete whichever is not applicable)**

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;

~~I have a vested interest in the proposed activity proceeding, such vested interest being:~~

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Signature of the environmental assessment practitioner:

Environmental Impact Management Services (Pty) Ltd

Name of company:

10/06/2015

Date:

## T. MUDAU CV

### CURRICULUM VITAE

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Name	<b>Tshivhangwaho Mudau</b>
Nationality	South African
Date of Birth	26.12.1976
Driver's License	Code 10
Profession	Environmental Assessment and Management Specialist
Position	Senior Environmental Practitioner
Specialisation	Environmental Impact Assessment

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### Key experience

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An Environmental Practitioner with 8 years of experience.

Specialization:

- Site investigations,
  - Environmental Impact Assessment process,
  - Environmental Management Programmes;
  - Public Participation Process,
  - Basic Environmental Impact Assessment,
  - Environmental compliance monitoring;
  - Project Management,
  - Management of specialists;
  - Supervision of Junior Consultant,
  - Marketing;
  - EIA proposals and costing,
  - Environmental control officer and Environmental auditing,
  - Environmental Reporting,
  - Compilation of Environmental closure reports for construction projects.
  - Section 24G Rectification Processes, etc.
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### Qualifications

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#### TERTIARY EDUCATION

**Bachelor of Environmental Science (Hons):**  
Pollution & Waste Management, Land Information Technology, Energy Resource Management, Habitat & Plant Species Conservation, Numerical Analysis, Ecotoxicology & Environmental Quality Analysis, Range Ecology & Management and Wild Ecology & Management.

University of Venda,  
Thohoyandou, South Africa, 2002

**Bachelor of Environmental Science**  
Ecology and Resource management;  
Botany; Geography; Urban and Regional Planning;  
Communication skills for earth sciences; Maths.

University of Venda,  
Thohoyandou, South Africa, 1999

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## T. MUDAU CV

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### Career Summary

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2005 to date: Environmental Impact Management Services (Pty) Ltd – Senior Environmental Practitioner.

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### Managed and completed projects:

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- 2012 to date: Bi-Weekly Environmental Control Monitoring (ECO) for the construction and rehabilitation of Mokolo and Crocodile Water Augmentation Project (MCWAP), Lephalale, Limpopo Province
  - 2008 to 2012: Bi-Annual Environmental Legal Auditing for the proposed Medupi Power Station, Limpopo Province.
  - 2010: Environmental management plan for the proposed upgrade of Eskom Witkop substation
  - 2008 to date: Quarterly Environmental Compliance Monitoring for the proposed Gauteng Freeway Improvement Project (GFIP) (6 Packages)
  - 2005: EIA exemption application for the proposed Eskom telecommunication structure at Soshanguve Substation
  - 2009 to 2010: Basic assessment for the proposed development of Chesterton Equestrian Estate, on remaining extent of portion 3 of the farm Naauwpoort No 355JQ, North West Province.
  - 2008: Basic Assessment for the proposed Road upgrade (internal streets) from gravel to tar at Kaalfontein Extension 23, Gauteng Province
  - 2007: Basic assessment for the proposed township to be situated on portion 38 of the farm Chancliff Agricultural Holdings (Known as portion 414, "a portion of portion 163" of the farm Paardeplaats 177 IQ.), Gauteng province
  - 2007: Basic Assessment for the proposed improvement of the regional route 24 (R24) between the R21, situated in Kempton park, and the National Road 12 (N12), situated in Bedfordview, Gauteng Province.
  - 2007: Basic Assessment for the proposed Improvement of the M1 between Corlett Drive situated in Melrose Arch and Buccleuch Interchange which is situated North of Woodmead, Gauteng Province.
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### Language capability

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	<b>Speaking</b>	<b>Reading</b>	<b>Writing</b>
English	Excellent	Excellent	Excellent
Venda	Excellent	Excellent	Excellent
Zulu	Excellent	Fair	Fair

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Signature

Date

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**environmental affairs**

Department:  
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**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST**

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File Reference Number:	12/12/20/ or 12/9/11/L
NEAS Reference Number:	DEA/EIA
Date Received:	

Application for integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and
- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

**PROJECT TITLE**

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL
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Specialist:	Ekoinfo CC Environmental & Wildlife Management Consultancy		
Contact person:	Willem de Frey		
Postal address:	P.O. Box 72847, Lynwood Ridge, Pretoria		
Postal code:	0040	Cell:	082 579 5049
Telephone:	012 365 2546 x 1	Fax:	012 365 3217
E-mail:	wdefrey@ekoinfo.co.za		
Professional affiliation(s) (if any)	Pr.Sci.Nat. – Botanical - & Ecological Science		

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinegowrie 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:	Mudau@eims.co.za		

4.2 The specialist appointed in terms of the Regulations \_\_\_\_\_

I, Willem de Frey \_\_\_\_\_, declare that – General

declaration:

I act as the independent specialist in this application;  
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;  
I declare that there are no circumstances that may compromise my objectivity in performing such work;  
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;  
I will comply with the Act, Regulations and all other applicable legislation;  
I have no, and will not engage in, conflicting interests in the undertaking of the activity;  
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;  
all the particulars furnished by me in this form are true and correct; and  
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



\_\_\_\_\_  
Signature of the specialist:

EkolInfo CC \_\_\_\_\_

Name of company (if applicable):

28-May-15 \_\_\_\_\_

Date:



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- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

**PROJECT TITLE**

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL
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Specialist:	Faunal Specialist		
Contact person:	Dewald Kamffer		
Postal address:	P.O. Box 55, Duiwelskloof		
Postal code:	0035	Cell:	082 419 0196
Telephone:	082 419 0196	Fax:	
E-mail:	ecocheck@ee-sa.com		
Professional affiliation(s) (if any)	Ecological and Zoological Scientist with the South African Council for Natural Scientific Professions (400204/05)		
Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinegowrie 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:	Mudau@eims.co.za		



4.2 The specialist appointed in terms of the Regulations\_

I, Dewald Kamffer, declare that – General

declaration:

I act as the independent specialist in this application;  
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;  
I declare that there are no circumstances that may compromise my objectivity in performing such work;  
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;  
I will comply with the Act, Regulations and all other applicable legislation;  
I have no, and will not engage in, conflicting interests in the undertaking of the activity;  
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;  
all the particulars furnished by me in this form are true and correct; and  
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

Ecocheck Environmental Services and Art CC

Name of company (if applicable):

2015/05/29

Date:

## 10 APPENDIX A – ABRIDGE CV, BOTANIST

Name of firm: EkolInfo cc Environmental and Wildlife Management Consultancy

Name of staff: WILLEM HENDRIK DE FREY

Profession: Environmental and Wildlife Management consultant

Years with firm: Since 1995

Nationality: RSA

Membership of professional societies:

The South African Council for Natural Scientific Professions (Reg no 400100/02)

Categories: Botanical Science and Ecological Science

Currently in the process of affiliating to:

South African Association of Botanist (SAAB)

Grassland Society of Southern Africa

South African Institute of Ecologist and Environmental Scientists (SAIE)

### KEY QUALIFICATIONS:

Mr W de Frey has been involved in the discipline of ecology since 1989. During this period he prepared himself for a profession in environmental and wildlife management, by attending courses in chemistry, geology, pedology and statistics, while majoring in Botany and Zoology. His working knowledge was obtained while completing projects for his post-graduate studies in wildlife management in both the Savanna and Grassland Biomes. In addition to his academic publications, he has contributed to numerous reports regarding EMPR's, EIA's, vegetation - and soil surveys and monitoring since the registration of his own consultation close corporation in 1995. He is actively involved in the management and marketing of his close corporation while completing tasks in his field of expertise namely soil, vegetation science and Geographical Information Systems. Mr W de Frey is task orientated with consideration of people's needs and safety. He beliefs in a holistic approach to environmental and wildlife management and has therefore established a network with individuals in related fields. He is also assisting previously disadvantaged persons in establishing a presence in the environmental industry, namely Lordwick Makhura of Baagi Environmental Consultancy CC and a joint venture company Bonolo Biodiversity And Environmental Management consisting of Baagi Environmental Consultancy CC and Disa Mphago Community Helpers CC.

### EDUCATION:

1992 BSc Botany & Zoology, University of Pretoria

Course	Content	Level
Chemistry	Organic and Inorganic chemistry	1 <sup>st</sup> year
Geology	Introduction/ Geomorphology, Stratigraphy, Structural, Sedimentology Palaeontology, Crystallography	1 <sup>st</sup> and 2 <sup>nd</sup> year
Pedology	Introduction, soil classification, soil fertility, soil ecology, soil physics	1 <sup>st</sup> and 2 <sup>nd</sup> year
Botany	Morphology, Anatomy, Physiology, Taxonomy, Mycology, Ecology, Reproductive biology	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> year
Zoology	Taxonomy (Vertebrates and Invertebrates), Physiology (mainly vertebrates), Ecology (mainly vertebrates), Animal behaviour (mainly vertebrates)	1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> year
Statistics	Sampling methods, Statistical Analysis, Probabilities	1 <sup>st</sup> year

1993 BSc (Hons) (Cum laude) Wildlife Management, University of Pretoria

Dissertation: 'N HOLISTIESE EKOLOGIESE BENADERING TOT DIE DRAKRAGBEPALING VAN 'N GEMENGDE WILD- EN BEESBOERDERY IN DIE UBOMBO DISTRIK, MET ENKELE BESTUURS AANBEVELINGS, 1993

1999 MSc (Cum laude) Wildlife Management, University of Pretoria

Thesis: PHYTOSOCIOLOGY OF THE MPUMALANGA HIGH ALTITUDE GRASSLANDS, 1999

**COURSES/ WORKSHOPS ATTENDED**

1. Red List And Threatened Species Assessment Training Workshop, Hosted by the Conservation Breeding Specialist Group Southern Africa & Endangered Wildlife Trust, December 2003
2. National State of the Environment Workshop, Hosted by DEAT and SRK, ESKOM Convention Centre – November 2004
3. Gauteng Red Data Flora Workshop, Hosted by SANBI and GDACE – November 2005
4. Gauteng Flora Minimum Requirement Workshop, Hosted by GDACE Nature Conservation – August 2007

**EMPLOYMENT RECORD:**

1986 – 1987

5 Signals Regiment, SADF

1998 – 1993 – Partime

Council of Geoscience, Palaeontology Section

University of Pretoria, Botany Department

Academy of Marksmanship, Range Officer

U Huisoppasser, Own enterprise

1994 – 1995

University of Pretoria, Botany Department, Assistant researcher

1995 – present

EkolInfo cc Environmental and Wildlife Management Consultancy, Founding member and consultant

Overall EkolInfo CC's principal consultant completed or administrated more than 58 vegetation studies as part of Environmental Impact Assessments within all of South Africa's nine provinces and adjacent countries such as Botswana and Mozambique with a focus on either terrestrial vegetation and/ or wetlands. Some projects were on provincial level such as the Mpumalanga and Gauteng Degradation Projects coordinated by the Institute for Soil, Climate and Water and sponsored by National Department of Agriculture. The majority of projects were on local scale from 5 ha to 50 000 ha or more for local developers and corporate institutions (SASOL, Anglo Coal, BHP Billington, Ingwe Coal, Deneys Rietz Attorneys, ESKOM) facilitated independently or as a subcontractor/ specialist for the following institutions: Oryx Environmental CC, African EPA, Arcuss Gibb, Digby Wells and Associates, Nature and Business Alliance and Eyethu Engineers, Strategic Environmental Focus.

**COMMUNITY SERVICE**

1. Substitute lecture – 2nd & 3rd year Botany Practical (Vegetation Survey Methods), University of Pretoria -1994 & 1995
2. Guest lecture – Wetland Vegetation Communities (2nd year students), Department of Landscape Architecture, University of Pretoria – 1996 & 1997
3. Guest lecture – Principles of Ecology (1st year students), Department of Landscape Architecture, University of Pretoria – 2002
4. Guest lecture – Principles of vegetation survey and mapping for EIA's (3rd year students), Department of Landscape Architecture, University of Pretoria – 2003
5. Referee – ILASA Merits Awards (Environmental Planning), Institute for Landscape Architects of South Africa - 2003

**LANGUAGES:**

Language	Capability
English & Afrikaans	Speak, Read, Write - sufficient
Sepedi (Northern Sotho)	Speak, Read, Write – insufficient

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## 11 APPENDIX B - ABRIDGE CV, ZOOLOGIST

Name of staff: DEWALD KAMFFER

Profession: Zoological and Ecological consultant

Years with firm: Since 2001

Nationality: RSA

Membership of professional societies:

The South African Council for Natural Scientific Professions (Reg no 400204/05)

Categories: Zoological Science and Ecological Science

### KEY QUALIFICATIONS:

Dewald Kamffer has been involved in EIA's as a faunal specialist since 1998. After completing a stint at Mala-Mala Private Game Reserve as a game ranger, he started Ecocheck Environmental Services and Art CC and has been the principal ecological and biodiversity specialist at Ecocheck from 2002 to 2015. During this period, he completed his Masters at the University of Pretoria in grassland conservation ecology and became a registered zoological and ecological scientist with SACNASP (400204/05).

### EDUCATION:

1995 BSc Entomology & Zoology, University of Pretoria

1996 BSc (Hons) Entomology, University of Pretoria

Dissertation: 'N HOLISTIESE EKOLOGIESE BENADERING TOT DIE DRAKRAGBEPALING

VAN 'N GEMENGDE WILD- EN BEESBOERDERY IN DIE UBOMBO DISTRIK, MET ENKELE  
BESTUURS AANBEVELINGS, 1993

2004 MSc Grassland Conservation Ecology, University of Pretoria

### COURSES/ WORKSHOPS ATTENDED

Bats and Wind Energy Course – Endangered Wildlife Trust, Oct 2013

### EMPLOYMENT RECORD:

2001

Game Ranger, Mala-Mala Private Game Reserve

2002 - present

Ecocheck, Founding member and consultant

Between 2002 and 2015, Dewald was involved in two hundred and seventeen projects in five countries (South Africa, Mozambique, Lesotho, Namibia and Botswana) as a faunal specialist. His client list includes Eskom, Exxaro, Coffee International, Marsh Vikela, Sun International, GCS, AGES SA, ERM and Ekurhuleni Municipality. He prepared faunal specialist reports for EIA, SEA, EMPR and research purposes relevant to mining, development, infrastructure, power generation and power transmission projects. Dewald worked on three SEA projects: The Frances Baard municipality in the Kimberley district, The Vredefort Dome area in the northern Free State and the Klapperkop area in Pretoria.

### COMMUNITY SERVICE

U/21 rugby coach, Centurion Rugby Club, 2002

### LANGUAGES:

Language Capability

English & Afrikaans      Speak, Read, Write – sufficient



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### PROJECT TITLE

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL

Specialist:	Hydrogeologist		
Contact person:	Jaco Breytenbach		
Postal address:	PO Box 2597, Rivonia, South Africa		
Postal code:	2128	Cell:	072 562 4702
Telephone:	011 803 5726	Fax:	
E-mail:	jacob@gcs-sa.biz		
Professional affiliation(s) (if any)			

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinetown 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170		011 7873059
E-mail:	Mudau@eims.co.za		

4.2 The specialist appointed in terms of the Regulations\_

I, Wynand Jacobus (Jaco) Breytenbach, declare that –

- General declaration:

I act as the independent specialist in this application;

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, Regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

all the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the specialist:



GCS Water and Environmental (Pty) Ltd.

Name of company (if applicable):

28 May 2015

Date:

# Jaco Breytenbach CV

Senior Level Hydrogeologist



Wynand Jacobus (Jaco) Breytenbach is a senior hydrogeologist, currently working at GCS (Pty) Ltd (Groundwater Consulting Services) in Johannesburg, South Africa.

Jaco holds a position as senior project hydrogeologist and is responsible for overall project management and supervision of junior hydrogeologist during hydrogeological investigations. His main duties are planning of fieldwork programs, supervising junior hydrogeologist activities, field data interpretation and conceptualizing of hydrogeological models and project management.

Jaco also gained more than 9 years experience in the Hydrogeological and Environmental fields, as a hydrogeologist working on multi-disciplinary mining projects (such as Iron Ore, Gold, Coal, Platinum Group Elements, Graphite and Diamonds mining projects), involving, Mine Dewatering, Groundwater and Pit Slope Depressurization Studies, Groundwater Exploration and Water Supply Projects, Mine Closure, Specialist Hydrogeological Studies, Contamination Studies, Environmental Baseline Assessment (EBA), Environmental Impact Assessments (EIA), Environmental Monitoring Plans (EMP).

Jaco gained international work experience in a number of countries outside of South Africa like, Sierra Leone (2 years full time), Madagascar, Democratic Republic of Congo (DRC), Mali, Tanzania, Uganda and Botswana. Extensive field & technical experience have led to the development of a broad, but in-depth understanding of the fundamentals of Mine Hydrogeology.

## Fields of Competence

- Dewatering Investigations (Planning, Designing, Implementing and Managing).
- Pit Slope Depressurization and Geotechnical Studies
- Conceptual Hydrogeological Site Modelling (*Rockworks15 software*).
- Groundwater Exploration & Resource Assessments (*Water Supply Studies, Pump Sizing*)
- Numerical Groundwater Modelling (*Visual Modflow*)
- Geographic Information Systems (*ArcView, Global Mapper, Surfer & AutoCAD*)
- Aquifer Testing and Data Analysis (Permeability, Testing & Sustainable Yield Estimates) (*Aquifer Test Pro & FC-Method*)
- Structural Mapping (*via Aerial & Satellite photography and Geophysics*)
- Ground and Aerial Geophysics Surveys & Data Analysis (*Mag, EM and Resistivity*)
- Groundwater Level Monitoring, Hydrocensus and Water Samplings & Data Analysis.
- Groundwater - Surface Water Interaction Studies.
- Geochemical Studies (*Acid Rock Drainage Forming Potential & Environmental Isotopes*).
- Supervision & Management of Drilling contractors (*Core, RC, Percussion*)
- Geological Logging (*Drill Chip and Core Samples*)
- Hydrocarbon Contamination Studies
- Environmental Baseline Studies
- Environmental Impact Assessments (EIA)
- Environmental Monitoring Plans (EMP)
- Project Management & Budgeting.
- Excellent knowallage of MS Office & MS Access.

## Key Industry Sectors

- Mining
- Environmental

## Work Experience

- Groundwater Consulting Services (GCS Pty Ltd) (2014 - Date)

# Jaco Breytenbach CV

Senior Level Hydrogeologist



Senior Project Hydrogeological position within the Water Resource Department, based in the Johannesburg, RSA. Main responsibilities are Project Management of hydrogeological investigation, management of junior hydrogeologist and contractors, coordination of fieldwork activities, conceptualisation of hydrogeological models and numerical models.

- **London Mining Plc. Marampa Iron Ore Mining Operations (Sierra Leone)**  
(2012 to 2013)

Two-year contract with London Mining as their Mine Hydrogeologist reporting to GM of operations. Responsibilities were: Planning, implementation and management of all open pit mine dewatering and hydrogeological activities across the mining operations. Also provide technical input into mine planning & mining departments. Jaco led the mine dewatering team consisting out of 16 members.

- **Environmental Resource Management (ERM Southern Africa)**  
(2011 to 2012)

Intermediate Hydrogeological Consultant position within the Integrated Water Management (IWM) division, based in the Johannesburg.RSA.

- **Environmental Resource Management (ERM Southern Africa)**  
(2007 to 2010)

Junior Hydrogeological Consultant position within the Specialist Groundwater Team (SGT), based in the Johannesburg.

## Education

- B.Sc. Honours degree in Hydrogeology (Geohydrology), Institute for Groundwater Studies (IGS), University of the Free State, South Africa, 2007

Modules were:

- Aquifer Mechanics and Aquifer Testing
- Hydrochemistry and Pollution
- Geophysics and Groundwater Exploration
- Development and Management of Groundwater Resources
- Numerical Groundwater Modelling (Modflow software).

- B.Sc. Degree in Environmental Management, Geography and Geology, University of Johannesburg (RAU), South Africa, 2006.

Majors Modules were:

- Geology
- Environmental Management
- Geography
- GIS

- Matriculated in 2002, Roodepoort High School, Johannesburg, South Africa.

## Languages (Fluent verbal and written)

- Afrikaans
- English

## Contact Details

- (South African) Cell: +27 (0) 72 562 4702
- (Email: [jaco.breytenbach@hotmail.com](mailto:jaco.breytenbach@hotmail.com))

## Citizenship

- South African - Identity Number: 840 518 513 008 8
- Valid South African Passport
- Valid South African Drivers Licenses

## Age

- 31.

## Marital Status

- Married
- No children



# Jaco Breytenbach CV

Senior Level Hydrogeologist



## Key Projects

### **Tasiast Gold Mining Operations (Mauritania), Sondage Wellfield Expatation Investigation, Kinross Mining, 2015.**

Senior hydrogeologist managing and conducting fieldwork work activities: drilling supervisor, geological logging, aquifer testing supervisor, data analysis, formulating the conceptual hydrogeological site model.

### **Yanfolila Gold Mining Operations (Mali), Open Pit Mine Dewatering Investigation, Hummining Bird Resources, 2014.**

Project hydrogeologist managing and conducting fieldwork work activities: drilling supervisor, geological logging, aquifer testing supervisor, data analysis, formulating the conceptual hydrogeological site model.

### **Molo Graphite Project (Madagascar), Open Pit Mine Dewatering Investigation, Energizer Resources, 2014.**

Project hydrogeologist managing and conducting fieldwork work activities activities: resistivity geophysics, drilling supervisor, geological logging, aquifer testing supervisor, data analysis, formulation of the conceptual hydrogeological site model.

### **Lima Matiti Tented Camp (Tanzania), Water Supply Investigation, Four Seasons Hotel, 2014.**

Project hydrogeologist managing and conducting fieldwork work activities: ground geophysics, drilling supervisor , geological logging, aquifer testing supervisor, field data analysis & sustainable long-term yield estimates.

### **Newcastle Works, Groundwater and Soil Contamination Study, Arcelor Mittal South Africa, 2014.**

Project hydrogeologist managing and conducting fieldwork work activities: groundwater sampling, permuability testing and geological logging, data analysis, formulation of the conceptual hydrogeological site model & reporting.

### **Kaweri Coffee Plantation Ltd (Uganda), Water Supply Investigation, Neumann Kaffee Gruppe, 2013-2014.**

Project hydrogeologist managing and conducting fieldwork work activities: drilling supervisor , geological logging, aquifer testing supervisor, data analysis, surface water harvesting & sustainable long-term yield estimates.

### **Marampa Iron Ore Mine (Phase I B Mining Operations), Open Pit Mine Dewatering, 2012 & 2013. (Sierra Leone)**

Dewatering team leader & project manager role: Key responsible included hydrogeological field data collection, refining the hydrogeological conceptual understanding, updating numerical dewatering models, designing and simulating mine dewater, managing the mine dewatering team, managing drilling and hydrogeological consultancies . Provide technical input to mine planning & mining teams. Managing a team of 16 mine dewatering crew members.

### **Marampa Iron Ore Mine, Phase IIA Mining-Environmental Baseline Assessment, London Mining, 2011 to 2012. (Sierra Leone)**

Sub-practice project manager, managing and conducting fieldwork work activities: hydrocensus and groundwater sampling, data analysis and reporting, determining the baseline hydrogeological conditions.

### **Kusipongo Expansion Project, Groundwater Specialist Study for Underground Mine Dewatering & Environmental Impacts Assessment (EIA), Kangra Coal, 2011.**

Project hydrogeologist managing and conducting fieldwork work activities activities: hydrocensus, groundwater sampler, drilling supervisor, geological logging, aquifer testing supervisor, investigation surface water – groundwater interaction, data analysis, formulating the conceptual hydrogeological site model, numerical

# Jaco Breytenbach CV

Senior Level Hydrogeologist



groundwater modeller, gave technical assistance to mine engineers regarding underground mine dewatering possibilities. and reporting.

**Kibali Gold Project (DRC), Mine Dewatering, Randgold Resources & Environmental Baseline Assessment, 2010.** Project hydrogeologist coordinating and conducted fieldwork activities: ground geophysics, drilling supervisor, geological logging, and data analysis, developing & implementing open pit mine dewatering programs & reporting.

**Goukoto Gold Project (Mali), Mine Dewatering Environmental Baseline Assessment, Randgold Resources, 2010.** Field hydrogeologist conducted fieldwork activities: ground geophysics, drilling supervisor, geological logging, and data analysis planning & implementing open pit mine dewatering programs and reporting.

**Boikarabelo, Groundwater and Surface Water Monitoring (EMP), Resource Generation (Pty) Ltd, 2010.** Field hydrogeologist conducted fieldwork activities: quarterly groundwater and surface water sampling, data analysis and reporting.

**Goedgevonden Collieries, Update of Groundwater Monitoring Network, Xstrata Coal SA, 2010.** Project hydrogeologist conducting fieldwork work activities: drilling and aquifer testing supervisor, geological logging, groundwater sampler, data analysis and reporting.

**Mimosa Collieries, Water Use Licenses Application, Northern Coal (Pty) Ltd. 2010.**

Project hydrogeologist conducted fieldwork activities: aquifer testing, groundwater sampler, data analysis and reporting.

**Weltevreden Collieries, Quarterly Groundwater & Surface water Monitoring, Northern Coal (Pty) Ltd. 2010.**

Field hydrogeologist conducted fieldwork activities: ground geophysics, hydrocensus, groundwater and surface sampler, data analysis, reporting.

**Vaalbank & Naudesbank, Environmental Baseline Assessment, BHP Billiton (Coal). 2010.**

Field hydrogeologist conducted fieldwork activities: hydrocensus, groundwater sampling, data analysis and reporting.

**Shell, Pragma Africa's Hydrocarbon Soil Investigation, 2010.**

Project hydrogeologist conducted fieldwork activities: drilling supervisor, geological logging, groundwater sampling, data analysis and reporting.

**Caltex, Hydrocarbon Investigation, Chevron, 2009.**

Field hydrogeologist conducted fieldwork activities: drilling supervisor, geological logging and groundwater sampling.

**Umicore Specialised Hydrogeological Contamination Investigation, 2009.**

Project hydrogeologist conducted fieldwork activities: drilling supervisor, geological logging, investigation surface water – groundwater interaction, conceptual hydrogeological site model formulation, data analysis and reporting.

# Jaco Breytenbach CV

Senior Level Hydrogeologist



## **Natal Steam Coal, Environmental Monitoring Programme (EMP), 2009.**

Project manager as well as Field hydrogeologist conducted fieldwork activities: surface water sampler, taking stream flow measurements, stream profiling, salt load determination, data analysis and reporting.

## **South Deep, Driefontein and Kloof Mines, Hydrogeological Baseline Investigation and Environmental Impact Assessment for the proposed new Tailings Storage Facility, Gold Fields Mining, 2009.**

Field hydrogeologist conducted fieldwork activities: drilling and aquifer testing supervisor, geological logging, hydrocensus, groundwater sampling, and data analysis and reporting.

## **Bekoni (Richtrau No.177/ Atok), Groundwater Monitoring (EMP), Anglo Platinum, 2009.**

Field hydrogeologist conducted fieldwork activities: groundwater sampling, data analysis and reporting.

## **Sasol Midland, Hydrocarbon Contamination Investigation, Sasol Polymer, 2008 & 2009.**

Field hydrogeologist conducted fieldwork activities: drilling supervisor, geological logging, investigation surface water – groundwater interaction, data analysis & reporting.

## **Mafutha (EBA) Environmental Baseline Assessment, Sasol Mining, 2008.**

Field hydrogeologist conducted fieldwork activities: hydrocensus, groundwater sampling, data analysis and reporting.

## **Oaks Diamond Mine, Mine Closure and Groundwater Monitoring Plan, De Beers, 2008.**

Field hydrogeologist conducted fieldwork activities: hydrocensus, groundwater sampling, data analysis and reporting.

## **Booyendal, Baseline Assessment, Northam Platinum 2008.**

Field hydrogeologist conducted fieldwork activities: drilling supervisor, geological logging, and data analysis and reporting.

## **Sheba's Ridge, Hydrogeological Baseline Assessment, Ridge Mining, 2008.**

Field hydrogeologist conducted fieldwork activities: drilling and aquifer testing supervisor, geological logging, hydrocensus, groundwater sampling, and data analysis and reporting.

## **Nkomati Nicol Mine, Open Pit Mine Dewatering, Nkomati Joint Venture, 2007 to 2008.**

Field hydrogeologist conducted fieldwork activities: ground geophysics, drilling and aquifer testing supervisor, geological logging, groundwater sampling, data analysis, planning and implementing open pit mine dewatering projects, and reporting.

## **Mamabula (Botswana), CIC-Pillar Investigation, CIC Energy (Bon-Terra), 2006.**

Field hydrogeologist: drilling supervisor and geological logging.



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST**

	(For official use only)
File Reference Number:	12/12/20/ or 12/9/11/L
NEAS Reference Number:	DEA/EIA
Date Received:	

Application for integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and
- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

**PROJECT TITLE**

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL
---

Specialist:	Sound Research Laboratories South Africa (Pty) Ltd		
Contact person:	Andrew Wade		
Postal address:	P O Box 336, Newlands, 7725		
Postal code:	7725	Cell:	
Telephone:	021 680 5305	Fax:	021 680 5011
E-mail:	<a href="mailto:awade@srlsa.co.za">awade@srlsa.co.za</a>		
Professional affiliation(s) (if any)	C Eng, MIOA		

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinetown, 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:	<a href="mailto:Mudau@eims.co.za">Mudau@eims.co.za</a>		

4.2 The specialist appointed in terms of the Regulations

I, ANDREW DAVID WADE, declare that –

General declaration:

I act as the independent specialist in this application;  
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;  
I declare that there are no circumstances that may compromise my objectivity in performing such work;  
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;  
I will comply with the Act, Regulations and all other applicable legislation;  
I have no, and will not engage in, conflicting interests in the undertaking of the activity;  
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;  
all the particulars furnished by me in this form are true and correct; and  
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

SOUND RESEARCH LABORATORIES SOUTH AFRICA (PTY) LTD  
Name of company (if applicable):

28/05/2015  
Date:

## **Appendix F – Summary of expertise**

### **Andrew Wade C Eng MIOA**

**Andrew Wade** is the Managing Director of Sound Research Laboratories South Africa (Pty) Ltd (SRL SA). He is a registered Chartered Engineer with the Engineering Council (UK) (registration no. 581427). He is a member of the Institute of Acoustics (UK). He has significant experience in:

- environmental and industrial acoustics,
- acoustic modelling,
- building acoustics,
- acoustic contractual requirement development and
- Noise and Vibration Harshness (NVH).

#### **Academic Qualifications**

B Eng (Mechanical), *cum laude*, Stellenbosch University, 2002

MSc Eng (Mechanical), *cum laude*, Stellenbosch University, 2005

#### **Professional Qualifications**

C Eng (Chartered Engineer) with Engineering Council (UK) reg no 581427

MIOA (Member Institute of Acoustics) member no 43543

### **Nigel Chandler MIOA**

**Nigel Chandler** is a Senior Consultant for SRL TSL Ltd (UK). He is a member of the Institute of Acoustics (UK). He has nearly 30 years' experience in noise, vibration and acoustic design. He specialises in industrial and environmental noise assessments.

#### **Academic Qualifications**

B Sc, Open University, 2007

Diploma in Pollution Control, Open University, 2012

#### **Professional Qualifications**

MIOA (Member Institute of Acoustics)



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST**

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**PROJECT TITLE**

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL
---

Specialist:	Sound Research Laboratories South Africa (Pty) Ltd		
Contact person:	Andrew Wade		
Postal address:	P O Box 336, Newlands, 7725		
Postal code:	7725	Cell:	
Telephone:	021 680 5305	Fax:	021 680 5011
E-mail:	<a href="mailto:awade@srlsa.co.za">awade@srlsa.co.za</a>		
Professional affiliation(s) (if any)	C Eng, MIOA		

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinegowrie 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:	<a href="mailto:Mudau@eims.co.za">Mudau@eims.co.za</a>		

4.2 The specialist appointed in terms of the Regulations

I, ANDREW DAVID WADE, declare that –

General declaration:

I act as the independent specialist in this application;  
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;  
I declare that there are no circumstances that may compromise my objectivity in performing such work;  
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;  
I will comply with the Act, Regulations and all other applicable legislation;  
I have no, and will not engage in, conflicting interests in the undertaking of the activity;  
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;  
all the particulars furnished by me in this form are true and correct; and  
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

SOUND RESEARCH LABORATORIES SOUTH AFRICA (PTY) LTD  
Name of company (if applicable):

28/05/2015  
Date:



## **Appendix B – Summary of expertise**

### **Andrew Wade C Eng MIOA**

**Andrew Wade** is the Managing Director of Sound Research Laboratories South Africa (Pty) Ltd (SRL SA). He is a registered Chartered Engineer with the Engineering Council (UK) (registration no. 581427). He is a member of the Institute of Acoustics (UK). He has significant experience in:

- environmental and industrial acoustics,
- acoustic modelling,
- building acoustics,
- acoustic contractual requirement development and
- Noise and Vibration Harshness (NVH).

#### **Academic Qualifications**

B Eng (Mechanical), *cum laude*, Stellenbosch University, 2002

MSc Eng (Mechanical), *cum laude*, Stellenbosch University, 2005

#### **Professional Qualifications**

C Eng (Chartered Engineer) with Engineering Council (UK) reg no 581427

MIOA (Member Institute of Acoustics) member no 43543

### **Nigel Chandler MIOA**

**Nigel Chandler** is a Senior Consultant for SRL TSL Ltd (UK). He is a member of the Institute of Acoustics (UK). He has nearly 30 years' experience in noise, vibration and acoustic design. He specialises in industrial and environmental noise assessments.

#### **Academic Qualifications**

B Sc, Open University, 2007

Diploma in Pollution Control, Open University, 2012

#### **Professional Qualifications**

MIOA (Member Institute of Acoustics)



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


### DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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Application for integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and
- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

### PROJECT TITLE

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL

Specialist: Contact person:	PGS Heritage (Pty) Ltd		
	Wouter Fourie		
Postal address:	PO Box 32542	Cell:	0828513575
Postal code:	Totiusdal 0134	Fax:	0866578077
Telephone:	012 3325305		
E-mail:	<a href="mailto:wouter@pgsheritage.co.za">wouter@pgsheritage.co.za</a>		
Professional affiliation(s) (if any)	Accredited professional Archaeologist (ASAPA) Accredited Professional Heritage Practitioner (AHP)		

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinetown 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:	Mudau@eims.co.za		

4.2 The specialist appointed in terms of the Regulations\_

I, Wouter Fourie , declare that -

- General declaration:

I act as the independent specialist in this application;

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;


I will comply with the Act, Regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

all the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

  
\_\_\_\_\_  
Signature of the specialist:

PGS Heritage

\_\_\_\_\_  
Name of company (if applicable):

29 May 2015

\_\_\_\_\_  
Date:

**PROFESSIONAL CURRICULUM  
FOR WOUTER FOURIE**

**Name:** Wouter Fourie  
**Profession:** Archaeologist  
**Date of birth:** 1974-04-30  
**Parent Firm:** PGS Heritage  
**Position at Firm:** Director  
**Years with firm:** 10  
**Years of experience:** 18  
**Nationality:** South African  
**HDI Status:** White

**EDUCATION:**

**Name of University or Institution** : University of Pretoria  
**Degree obtained** : BA  
**Major subjects** : Archaeology, Geography and Anthropology  
**Year** : 1996

**Name of University or Institution** : University of Pretoria  
**Degree obtained** : BA [Hons] (Cum laude)  
**Major subjects** : Archaeology and Geography  
**Year** : 1997

**Name of University or Institution** : National Nuclear Regulator  
**Certificate obtained** : Radiation Protection Officer Certificate  
**Year** : 1999

**Professional Qualifications:**

Professional Heritage Practitioner – Association of Professional Heritage Practitioners (APHP)  
Professional Archaeologist - Association of Southern African Professional Archaeologists -  
Professional Member – No 043

**CRM Accreditation**

Principal Investigator - Grave Relocations  
Field Director – Iron Age  
Field Supervisor – Colonial Period and Stone Age  
Accredited with Amafa KZN

**Languages:**

Afrikaans  
English – Speaking (Good) Reading (Good), Writing (Good)

**KEY QUALIFICATIONS**

Archaeological Mitigation and excavations, Cultural Resource Management and Heritage Impact Assessment Management, Project management, Archaeology, Anthropology, Applicable survey methods, Fieldwork and project management, Geographic Information Systems

**CONFERENCE PAPERS AND PUBLICATIONS**

- 2004 - Research poster, Probabilistic Modelling of Archaeological Sites, Pilanesberg National Park. *South African Association of Archaeologist Conference, Kimberley*

- 2005 - 'The Return of a King' - The repatriation of King Michael Tjiseseta, *Paper delivered at the conference of the Pan-African Archaeological Association for Prehistory and Related Studies in Gaborone, Botswana, in July 2005.*
- 2005 - Paper delivered at the Three Universities Seminar, University of Pretoria: The repatriation of King Michael Tjiseseta.
- 2006 - *Paper delivered at ASAPA conference, Pretoria. Tavistock: Good grave relocation practice.*
- 2008 –Probabilistic Modeling of archaeological sites, Pilanesberg National Park. Paper delivered at the *Association of Southern African Professional Archaeologists – Conference, Cape Town*
- 2008 - Archaeological Impact Assessments within South African legislation. *South African Archaeological Bulletin 63 (187): 77–85, 2008*
- 2011 - Archaeology, Physical Anthropology and DNA analysis – The case of Queen Thomo Jezangani Ndwandwe. *Association of Southern African Professional Archaeologists – Conference, Swaziland*
- 2011 – POSTER – H.S. Steyn, W. Fourie and M. Hutten. Kappa Omega Transmission Line: Findings from an Archaeological Walk Down. *Association of Southern African Professional Archaeologists – Conference, Swazi Land*
- 2011 – POSTER – W. Fourie and J. van der Walt. Sterkspruit: Micro-layout of Late Iron Age stone walling, Lydenburg, Mpumalanga. . *Association of Southern African Professional Archaeologists – Conference, Swazi Land*
- 2011 – POSTER – P.D. Birkholtz, W. Fourie and W.C. Nienaber. Onverwacht: Archaeological and Historical Analysis of Swazi settlement layout. *Association of Southern African Professional Archaeologists – Conference, Swazi Land*
- 2012 - Heritage management: compliance or just a nuisance during the Environmental Management Programme implementation. 17th annual IAAsa conference, Somerset West, Western Cape.

## **HERITAGE IMPACT ASSESSMENTS**

### ***International***

- 2013 - SLR Consulting - Heritage Impact Assessment, Manica Gold Project, Manica Province, Mozambique
- 2012 - SLR Consulting - Heritage Impact Assessment, Namoya SALR – Gold Mine, Maniema Province in the eastern Democratic Republic of Congo (DRC)
- 2010 - Digby Wells & Associates - Grave Relocation Procedures and Consultation – RAP Process, Kibali Gold Mine, Watsa, Oriental Province, Democratic Republic of the Congo
- 2010 - Digby Wells & Associates - Archaeological Study, Kibali Gold Mine, Watsa, Oriental Province, Democratic Republic of the Congo
- 2012 - Consolidated Contractors Group S.A.L. -Mitigation and Grave Relocation at Site 37-A3-16 on the Mahalpye to Kudumatse Road Construction Project Central District, Botswana
- 2008 - Digby Wells & Associates - Mmamabula Mining Project CIC, Botswana

### ***South African***

Below a selected list of over 400 heritage studies completed

- GRAP103 – Heritage Register for the Ekurhuleni Metropolitan Municipality, Aurecon
- Solar Reserve (Worley Parson RSA), Heritage Impact Assessment, Humansrus Solar Park, Daniëlskuil, Northern Cape
- Solar Reserve (Worley Parson RSA), Heritage Impact Assessment, Rooipunt Solar Park, Upington, Northern Cape
- Solar Reserve (Worley Parson RSA), Heritage Impact Assessment, Arriesfontein Solar Park, Daniëlskuil, Northern Cape

- Solar Reserve (Worley Parson RSA), Heritage Impact Assessment, Slypklip Solar Park, Kimberley, Northern Cape
- Mainstream Renewable Power South Africa (SiVest), Heritage Impact Assessment, Loeriesfontein Solar Park, Northern Cape
- Mainstream Renewable Power South Africa (SiVest), Heritage Impact Assessment, De Aar Solar Park, Northern Cape
- Mainstream Renewable Power South Africa (SiVest), Heritage Impact Assessment, Droogfontein Solar Park, Kimberley, Northern Cape
- Kumba Iron Ore (Synergistics), Heritage Impact Assessment, Shishen Relocation Project, Northern Cape
- Eskom, Archaeological Walkdown, Hydra-Perseus Transmission line (260km), Northern Cape Province
- Nature Conservation Corporation, Phase 2 Heritage Impact Assessment and EMP, Gamma-Omega Transmission line (550km), Western Cape Province
- Aurecon, Archaeological Walk Down and EMP, Eros- Neptune Transmission Line (380km), Transkei, Eastern Cape Province
- Indwe Environmental Services, Heritage Impact Assessment, Lady Slipper Development, Uitenhage, Eastern Cape
- West Brook, Grave Investigation, Port Elizabeth, Eastern Cape
- Nature Conservation Corporation, Phase 2 Heritage Impact Assessment and EMP, Hydra-Perseus Transmission line (260km – selected areas), Northern Cape Province
- GCS (Pty) Ltd, Archaeological Impact Assessment, Tormin Mineral Sands, Namakwaland Coast, Western Cape
- Strategic Environmental Focus, Heritage Impact Assessment, Kalahari Manganese, Hotazel, Northern Cape
- BHP Billiton, Heritage Impact Assessment, Hotazel Manganese Metals, Hotazel, Northern Cape
- BHP Billiton, Initial Heritage Management Plan for prospecting operations, Northern Cape
- Pikwane Diamonds, Heritage Impact Assessment – Waterloo Street, Kimberley, Northern Cape
- TGME, Heritage Assessment – Browns Hill, Pilgrim's Rest, , Mpumalanga,
- Digby Wells & Associates Heritage Assessment – Koert Louw Zyn Pan Colliery, Limpopo
- Bohlweki Environmental, Heritage Mitigation, Springkell Development, Modderfontein
- Digby Wells & Associates, Heritage Impact Assessment, Khutala Colliery, Mpumalanga
- TWP Environmental, Heritage Impact Assessment, Wesizwe Platinum, North West Province
- Bohlweki Environmental, Heritage Impact Assessment, Stone River Arch Development, Alberton, Gauteng
- Digby Wells & Associates, Heritage Impact Assessment, Riversdale Colliery, Vryheid, KwaZulu-Natal
- Digby Wells & Associates, Heritage Impact Assessment, Top Star Dump, Johannesburg, Gauteng
- Bohlweki Environmental, Heritage Impact Assessment, Johannesburg Zoological Gardens, Gauteng Province

#### **GRAVE RELOCATIONS**

- 2001-2 - iMpunzi Division of Duiker Mining, Witbank, Grave Relocation of 907 graves. Field Director
- 2002 - Kriel Collieries, Kriel. Investigation into the position of relocated graves on Kriel Golf Course. Principal Investigator
- 2002 - V3, Brakfontein, Centurion. Reconnaissance excavation on possible grave in new development area. Field Director
- 2003 - Tselentis Colliery, Duiker Mining. Relocation of 80 graves. Field Director

- 2002 - Gardener Ross Golf and Country Estate, DEVCO. Reconnaissance Excavation on possible graves. Field Director
- 2003 - Alveda Park Development, NewHco. Relocation of 114 graves. Field Director
- 2006 - Cosmo City Development, Johannesburg. Basil Read Pty Ltd. Relocation of 135 graves. Field Director.
- 2006 - Highland Gate Development. Dullstroom. Gate Developments. Relocation of 39 Graves. Field Director.
- 2008 - WBHO, Relocation of 5 graves from South Deep tailings project, Fochville Gauteng Province. Field Director, under WC Nienaber as PI
- 2010-3 - Optimum Colliery, Hendrina, Mpumalanga. Relocation of 65 graves. Field Director, under WC Nienaber as PI
- 2010 - Eyethu Coal, Relocation of 7 graves from coal project, Delmas. Field Director, under WC Nienaber as PI
- 2011 - New Clydesdale Coal, Relocation of 7 graves from coal project, Witbank. Field Director, under WC Nienaber as PI
- 2011 - Roadcrete, Lanseria-Randburg Road Upgrade 6 graves, Randburg. Principal Investigator.
- 2011 - Seaton Thompson, Kameeldoorn grave relocation. Single grave. Zeerust. Principal Investigator
- 2011-3 - Mashala Resources, Ferreiras Colliery, Ermelo. Relocation of 11 graves. Principal Investigator.
- 2011 - Xtsrata, ATCOM. Bierman cemetery. 14 graves. Principal Investigator Relocation of 8 graves, Kudumatse Road Upgrade, Botswana. Principal Investigator
- Investigation on the relocation of 3000 graves, Kibali, DRC. Principal Investigator
- 2011 - SAHRA, Relocation of the remains of Queen Thomo KaNdwandwe, Durban, KZN. Principal Investigator
- 2011 - Kudumatse Road works. Removal of 11 Iron Age graves. Kudumatse, Botswana. Principal Investigator
- 2012 - Anglo Coal, New Largo Colliery. 170 Graves. Ogies, Mpumalanga. Principal Investigator
- 2012 – 4 - Calgro/M3, Fleurhof grave rescue and relocation, 100 graves Florida, Gauteng. Principal Investigator
- 2012-4 - Likweti Holdings, Likweti Grave Project, 1 Grave. Nelspruit, Mpumalanga. Principal Investigator
- 2012-3 - Fleurhof Holdings, Fleurhof rescue and grave relocation of 70 graves. Florida, Gauteng. Principal Investigator
- 2012 - Delmas Super Centre. Delmas grave relocation of 1 grave. Delmas, Mpumalanga.
- 2012 - Department of Arts and Culture. JL Dube memorial site restoration. Ohlange Institute, Inanda, KwaZulu-Natal. Principal Investigator.
- 2013 – Ntshovelo Coal. Relocation of 8 graves. Arbor, Mpumalanga.
- 2013 – Msobo Coal. Relocation of 9 graves for the Msobo Coal Lilliput project. Breyten, Mpumalanga. Principal Investigator.
- 2013-4 – Eskom SOC, Eskom Mookodi Substation grave relocation of 6 graves. Vryburg, North West Province. Principal Investigator.
- 2013-4 – Kalgold Project Harmony Gold. Relocation of 20 graves. Kraaipan, North West Province. Principal Investigator.
- 2014 – Bigen Africa. Lufhereng Grave Investigation, Soweto, Gauteng. Principal Investigator.
- 2014 – Basil Read. Savanna City Residential Development. Relocation of 55 graves. Orange Farm, Gauteng. Principal Investigator.
- 2013-4 – Ivanhoe Mining. Relocation of graves for the Platreef project. Mokopane, Limpopo Province. Principal Investigator.

## MITIGATION WORK

1. 2006 - Phase 2 mitigation of archaeological terrain. Gardener Ross Golf and Country Estate. **Field Director, under Prof. JCA Boeyens, PI**
2. 2007 - Phase 2 mitigation of archaeological terrain. Hammanskraal West Proper. Ditsala Construction. Hammanskraal, Gauteng Province. **Field Director, under Prof. JCA Boeyens, PI**
3. 2007 - Phase 2 mitigation of archaeological terrain. Bokfontein Mining Project. Henric Ferrochrome, Brits North West Province. **Field Director, under Prof. JCA Boeyens, PI**
4. 2008 - The Heads Trust, Heritage Assessment and phase 2 documentation, and monitoring for Lydenburg Ext 38 housing development, Lydenburg, Mpumalanga. **Field Director, under Prof. JCA Boeyens, PI**
5. 2008 - TWP, Wesizwe Platinum Phase 2 excavations, Pilanesberg, North West Province. **Field Director, under Prof. TN Huffman, PI**
6. 2008 - Stonehenge x16, Phase 2 test excavations, Nelspruit, Mpumalanga. **Field Director, under Prof. TN Huffman, PI**
7. 2009 - Nkomati Mine, Onverwacht Phase 2 excavations, Badplaas, Mpumalanga. **Field Director, under Prof. TN Huffman, PI**
8. 2011 - Eskom 400kV – Dinaledi-Spitskop – Phase 2 Middel Stone Age Site, Mitigation - **Field Director, under Dr M.M van der Ryst, PI**
9. 2011 – Eskom 400kV – Dinaledi Spitskop – Phase 2 Historical Site, Mitigation - **Field Director, J.P Behrens, PI**
10. 2011 – Eskom 400 kV – Dinaledi Marang – Phase 2 Late Iron Age, Mitigation - **Field Director, under Prof. JCA Boeyens, PI**
11. 2011 – Eskom 400 kV – Dinaledi Marang – Phase 2 Early Stone Age Site, Mitigation - **Field Director, under Dr K. Kumann, PI**
12. 2011 – Eskom 400 kV – Dinaledi Marang – Phase 2 Middel Stone Age Site, Mitigation **Field Director, Dr M.M. van der Ryst, PI**
13. 2012 - Misgund N1 Interchange upgrade, Iron Age Phase 2 excavation, Johannesburg, Gauteng Province. **Field Director, under Prof. JCA Boeyens, PI**
14. 2013 - Kappa Gamma, MSA Mitigation, Touws Rivier, Western Cape. **Field Director, Dr M.M. van der Ryst, PI**
15. 2014-2015 - Raising of the Clanwilliam Dam – Heritage Mitigation, Clanwilliam, Western Cape. **Project Manager**

## SUMMARY OF OTHER EXPERIENCE

### Positions Held

- **1997-1998:** Environmental Officer – Department of Minerals and Energy. Johannesburg, Gauteng
- **1998-2000:** Environmental Coordinator – Randfontein Estates Limited. Randfontein, Gauteng
- **2000-2004:** CEO– Matakoma Consultants
- **2005-2007:** Director – Matakoma Heritage Consultants (Pty) Ltd
- **2007 – 2008:** Project Manager – Matakoma-ARM, Heritage Contracts Unit, University of the Witwatersrand
- **2003 – 2015:** Director - Professional Grave Solutions (Pty) Ltd t/a PGS Heritage  
Director - Professional Grave Solutions Botswana (Pty) Ltd



I Wouter Fourie, hereby confirm that the above information contained in my CV is true and correct.



W Fourie

12 May 2015  
Date

## Curriculum Vitae of Dr Gideon Groenewald

Cell phone: 078 713 6377 Email: 1davidgroenewald@gmail.com

**Name: Dr Gideon Groenewald**

**Age: 59**

**Profession: Geologist**

**Date of Birth: 1955-09-30**

**Parent Firm: Self Employed**

**Nationality: South African**

**Native Language:** Afrikaans. Able to speak, read and write English fluently.

**Academic Qualifications:** BSc and BSc Hons (UPE, 1978), MSc (RAU, 1985), Nat Dip Nature Conservation (Tech SA, 1990), PhD Geology (UPE, 1996)

**Professional Associations:** Professional Scientist (Reg. No. 401946/83). Professional membership with the Geological Society of South Africa, the Palaeontological Society of South Africa, Borehole Water Association of South Africa.

### **Publications:**

- 16 Scientific and large number of popular articles on geology, ecology and groundwater.
- 12 TV 50/50 programs on nature conservation and geology, mainly with Jan Horn and Johan Botha as producers.
- Several children programs on SATV
- M-Net programs, several producers.
- BBC TV Series: "Earth Story" (1998), producer Cynthia Page.
- 10 Papers read at International Symposiums.
- Regular speaker at public meetings and schools.
- Course in Eco-tourism, Qwaqwa University

## **General Geological, Palaeontological and Environmental Management Experience:**

37+ years experience in Southern Africa in the capacity as:

- 1978-1986 Geologist - Geological Survey SA - regional mapping division
- 1986-1993 Ranger, Snr Research Officer, Geologist - National Parks Board SA, geological and groundwater studies in Southern and Inland Parks
- 1993-present Director of Metsi Metseng Geological Services – consultant to farmers and larger companies, Maseru Pumps and Plastics (Lesotho), Peace Parks Foundation, SA National Parks, Local Town Councils, DLA, Dept of Agriculture, DEAT, Imperial Truck and Car, Caltex, Shell and Anglo American on ground water related projects, locating and mapping of quarries in dolerite and sandstone terrain for road building, locating and mapping of sand deposits for construction work, electronic database programs, classification and mapping of geological formations in terms of structural stability for engineering projects, classification and mapping of soils for engineering projects. Environmental Impact Assessments. Risk assessment at sites of petroleum spills. Very good knowledge of geology of the Upper Karoo Supergroup (PhD) and dolerite formations (groundwater related projects), monitoring of drilling and logging of boreholes (mainly chips, but also core-drilling), full time since 1993.
- 2001-2010: Contractual appointment: Peace Parks Foundation: Lesotho Transfrontier Facilitator for the Maloti-Drakensberg Transfrontier Conservation Development and other related Transfrontier projects. Mainly involved in development of Responsible Tourism in Lesotho and border regions of South Africa.
- 2005-2006: Consultant to Maluti-A-Phofung Municipality to develop Tourism Sector Plan (DBSA Project)
- 2005-present: Ad hoc appointment as environmental consultant (geology, geohydrology and soils) to assess environmental impacts at road accidents where tanker trucks are involved in large scale spillages of dangerous goods
- 2008 – 2011: Appointed Palaeontologist on the Ingula Pumped Storage Scheme of Eskom

- 2009 – 2012: Appointed Palaeontologist for the new Petroleum Pipeline installation from Heidelberg (Gauteng) to Durban
- 2010 – 2012: Appointed Geohydrologist to supply groundwater to the town of Senekal/Matwabeng
- 2012: Appointed palaeontologist by AMAFA to compile a palaeontological sensitivity map and palaeontological technical report for Kwa-Zulu Natal Province
- 2014: Appointed palaeontologist by SAHRA to compile a palaeontological sensitivity map and palaeontological technical report for Free State, Gauteng, Limpopo, Mpumalanga and North West Provinces for integration into the SAHRIS online map
- 1993 – present: Appointed geohydrologist for the siting of boreholes, monitoring of drilling and testing of boreholes for towns, farmers and industries. Also appointed geohydrologist for a number of geohydrological surveys and reports for developments around South Africa.
- 2012 – present: Appointed palaeontologist for numerous palaeontological impact assessments (PIAs) throughout South Africa.

**Other Experience:**

- *Wildlife Management* - 1986-1993: ranger and research officer, National Parks Board, South Africa.
- *Environmental Education* - 1986-present : take school children on field trips, assist in filming of educational TV programs on interpretative geology, palaeontology and ecology, including grassveld ecology and the ecology of lichens.
- *Palaeontology* - 1978-present: Environmental Impact Assessments and Fossil hunting expeditions for international and local tourist market. Co-leader of International Geological Conference Field Trip in the Karoo, 1997.
- *University of the Free State, Qwaqwa branch* - 2000 – 2003: Appointed as Senior Lecturer Eco-tourism. Development of short course in Ecotourism at Hons level.
- 2005-2010: Contractual employment to present short training courses in tourism – South Africa and Lesotho.



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


### DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	12/12/20/ or 12/9/11/L
NEAS Reference Number:	DEA/EIA
Date Received:	

Application for integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and
- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

### PROJECT TITLE

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL

Specialist:	Water Resources Engineer		
Contact person:	Eugeshin Naidoo		
Postal address:	63 Wessels Road, Rivonia, Johannesburg		
Postal code:	2128	Cell:	
Telephone:	+27 (0) 11 803 5726	Fax:	+27 (0) 11 803 5745
E-mail:	eugeshinn@gcs-sa.biz		
Professional affiliation(s) (if any)	None		

Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinetown 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170	Fax:	011 7873059
E-mail:			

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4.2 The specialist appointed in terms of the Regulations\_

I, Eugeshin Naidoo , declare that --

General declaration:

I act as the independent specialist in this application;  
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;  
I declare that there are no circumstances that may compromise my objectivity in performing such work;  
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;  
I will comply with the Act, Regulations and all other applicable legislation;  
I have no, and will not engage in, conflicting interests in the undertaking of the activity;  
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;  
all the particulars furnished by me in this form are true and correct; and  
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



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Signature of the specialist:

GCS Water and Environmental Consultants

Name of company (if applicable):

3 June 2015

Date:

# EUGESHIN NAIDOO

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## CORE SKILLS

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- Civil Engineering,
- Technical report writing.
- Development, calibration and running of dynamic water balance models in Goldsim
- Site assessments
- Flood lines
- Storm water management plans
- Hydrological modelling
- Water quality
- Hydrological investigations for EIA's
- Project management

## Details

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### Qualifications

BSc. Eng Civil Engineering, WITS University, Johannesburg, 2009

Matriculated with Distinction (2004)  
Sacred Heart College.

### Memberships

None

### Languages

English – fluent

Afrikaans – fluent

### Countries Worked In

Ghana

Guinea

Malawi

South Africa

## PROFILE

Currently works in the Surface Water Department, primarily working with flood line delineation and development of storm water management plans for various mines in Africa. Has experience in both Hydrology and Hydraulics. Projects involved baseline monitoring of surface water flow and water quality. Development, calibration and running of various dynamic water balance models in Goldsim.

Eugeshin has specialist skills in the following areas:

- Flood line calculation and delineation;
- Design of mine storm water management plans; including design of channels, sumps, return water dams, weirs, culverts;
- Installation and monitoring of a network of specialized hydrological and meteorological monitoring stations;
- Determining the impacts of land use on water quality and quantity;
- Development, calibration and running of dynamic water balance models in Goldsim.



## Key project experience

### **PROFESSIONAL EXPERIENCE:**

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Storm Water Management Plans Greenside Collieries: Mpumalanga, South Africa- Hydrological and hydraulic analysis for river flood peak determination, flood line derivation. Design of mine storm water management plans, including design of channels, sumps, return water dams, weirs, culverts.

Storm Water Management Plans Ruighoek Chrome Mine: North West, South Africa - Design of mine storm water management plans, including design of channels, sumps, return water dams, weirs, culverts.

Platreef Water Study: Limpopo, South Africa - Designed, installed and monitored a network of specialized hydrological and meteorological monitoring stations. This involved site selection, measuring the river cross section and measuring surface water flow. Hydrological and hydraulic analysis for river flood peak determination and floodline delineation.

Richards Bay Industrial Development Zone Floodline Study: Kwazulu-Natal Province, South Africa - Calculated flood peaks, flood lines and sized culverts for road crossings on a number of water courses in the Industrial Development Zone

Surface water management plan Enviroil: Gauteng Province, South Africa - Development of a management plan for the surface water runoff from a proposed hazardous waste site. The risk based approach was used to size the polluted water dam, pump sizing and to assess the impact of spills from the polluted water dam on the receiving streams.

Storm Water Management Plans Nkomati Mine: Mpumalanga, South Africa - Design of mine storm water management plans, including design of channels, sumps, return water dams, weirs, culverts.

Development of Surface Water Monitoring Program Gold Canyon Resources Inc. Chambe Basin, Malawi - Designed, installed and monitored a network of specialized hydrological and meteorological monitoring stations. This involved site selection, measuring the river cross section and measuring surface water flow.

Design of culverts and Bridges Simandou, Guinea - Design of culverts and bridges for railway crossings. Hydrological and hydraulic analysis for river flood peak determination, flood line derivation. Unsteady analysis was used to size the major streams traversing the project area.

Impact Assessments: Namibia, Ghana and South Africa - Carried out a number of assessments of the impacts of releases from sewage treatment plants, mine discharges including mine dewatering on the receiving streams.

Water Balances: South Africa - Development, calibration and running of dynamic water balance models in Goldsim (Belfast Colliery and Venitia Mine, Goedgevonden Colliery and ArcelorMittal Newcastle Works).

Storm Water Management Plan: Debswana Mine, Botswana. Detailed design of mine storm water management plans, including design of channels, sumps, return water dams, weirs, and culverts. Cost estimation and Bill of quantities.

Kendal Ash Dump: Mpumalanga, South Africa. Hydrological and hydraulic analysis carried out for river diversions.







## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


### DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

### PROJECT TITLE

TRANSNET RICHARDS BAY COAL LINE: PROPOSED NEW OVERVAAL TUNNEL

Specialist:	Lourens Erasmus Retief Grobler		
Contact person:	Retief Grobler		
Postal address:	PO Box 72914, Lynnwood Ridge, Pretoria		
Postal code:	0040	Cell:	082 606 7770
Telephone:	012 365 2542		012 365 3217
E-mail:	retiefg@gmail.com		
Professional affiliation(s) (if any)	Pr.Sci.Nat. Botanical Sciences & Ecological Sciences; Registration no.: 400097/09		
Project Consultant:	Environmental Impact Management Services (Pty) Ltd		
Contact person:	Tshivhangwaho Mudau		
Postal address:	P O Box 2083, Pinegowrie 2123, South Africa		
Postal code:	2123	Cell:	
Telephone:	011 7897170		011 7873059
E-mail:	Mudau@eims.co.za		

4.2 The specialist appointed in terms of the Regulations\_

I, Lourens Erasmus Retief Grobler, declare that –

General declaration:

I act as the independent specialist in this application;

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, Regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

all the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



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Signature of the specialist:

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Imperata Consulting CC

Name of company (if applicable):

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9 June 2015

Date:

## CURRICULUM VITAE

Name: **RETIEF GROBLER**

Name of Firm: IMPERATA CONSULTING cc

Position: Wetland Ecologist

Nationality: South African

Languages: Afrikaans (mother tongue), English

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### EDUCATIONAL QUALIFICATIONS

- BSc (Botany), University of Pretoria (1999–2001)
  - BSc Hons (Botany) (cum laude), University of Pretoria (2004)  
Title of Thesis: *"The Impact of subsistence banana (Musa x paradisiaca) farming on the vegetation of peat swamp forest surrounding the Kosi Bay Lake System."*
  - MSc Botany (cum laude), University of Pretoria (2009)  
Title of Thesis: *"Phytosociology of Peat Swamp Forests of the Kosi Bay Lake System."*
- 

### KEY QUALIFICATIONS

► **Watercourse Investigations, Including Wetland and Riparian Habitat Delineation (Mapping), Assessments, Management & Rehabilitation:**

Involved in wetland inventories, classification and description of watercourses, mapping of drainage lines (e.g. wetlands, rivers and ephemeral headwaters), ecological assessments, and wetland rehabilitation studies. A selection of projects demonstrating relevant experience, include:

#### *Wetland rehabilitation*

- Wetland rehabilitation assessment plans for the South African National Biodiversity Institute (SANBI) for several wetlands in the Eastern Free State. 2005.
- Wetland health and rehabilitation assessments for the Gauteng Province, as part of the Working for Wetlands Project under the auspices of the South African National Biodiversity Institute (SANBI). Wetland Ecologist and sub-consultant to Land Resources International (Pty) Ltd. 2007-2009.
- Wetland health and rehabilitation assessments for the Gauteng Province, as part of the Working for Wetlands Project under the auspices of the South African National Biodiversity Institute (SANBI). Wetland Ecologist sub-consultant to Aurecon South Africa (Pty) Ltd. 2010-2011
- Wetland health and rehabilitation assessments for two wetland rehabilitation projects, upstream of Boksburg Lake, Ekurhuleni Metropolitan Municipality, Gauteng. Wetland Ecologist and sub-consultant to Land Resources International (Pty) Ltd. 2011

- Wetland rehabilitation and assessment report for the Hogsback area (Eastern Cape Province), as part of the Working for Wetlands Project under the auspices of the South African National Biodiversity Institute (SANBI). Wetland Ecologist sub-consultant to Aurecon South Africa (Pty) Ltd. 2011
- Wetland & river reinstatement and monitoring guideline report for the New Multi Product Pipeline (NMPP) Project, Trunkline Section (Jameson Park, Gauteng to Durban, KwaZulu-Natal). Transnet Capital Projects. 2010
- Alien plant control in watercourse crossings (wetlands & rivers) report for the New Multi Product Pipeline (NMPP) Project, Trunkline Section (Jameson Park, Gauteng to Durban, KwaZulu-Natal). Transnet Capital Projects. 2012

*Wetland studies for a variety of strategic planning, residential, commercial and industrial projects*

- Ecological functional assessment of wetland areas surrounding the Orlando Power Station for the proposed Ekhaya development, Soweto, Gauteng. Strategic Environmental Focus (SEF), (Pty) Ltd 2005.
- Wetland Audit for the City of Johannesburg. Reviewer and sub-consultant for Strategic Environmental Focus (SEF), (Pty) Ltd. 2008
- Elsburgspruit wetland and habitat assessment, Ekurhuleni Metropolitan Municipality, Gauteng Province. Sub-consultant for Van Riet & Louw Landscape Architects (Pty) Ltd. 2008
- Wetland and watercourse delineation and assessment for the proposed Sun City Vacation Club and Golf Course Phase 3 Development, North West Province. EkoInfo CC. 2008
- Wetland delineation & assessment study for the proposed construction and operation of an aluminium fluoride production facility and associated infrastructure on the farm Jobarne 489 JR, Ekandustria, Gauteng Province. African Geo-Environmental Services (AGES). 2010
- Development of a prioritisation framework for wetland rehabilitation in Ekurhuleni Metropolitan Municipality. Land Resources International (Pty) Ltd. 2011
- Surface watercourse and wetland desktop investigation for the Ivory Park Urban Development Framework, City of Johannesburg, Gauteng Province. Aurecon Group. 2011
- Wetland Study (Delineation & Assessment) for the proposed Witfontein Commercial & Residential Development, Ekurhuleni Metropolitan Municipality, Gauteng Province. Aurecon Group. 2011

*Wetland & watercourse assessments in linear developments (power lines, roads, railway. and pipeline projects) and other projects in the energy sector (e.g. solar electricity installations):*

- Wetland investigation for The Hills road alternatives, Pretoria-East, Gauteng. African-EPA. 2007
- Wetland and river bio-monitoring assessments for the New Multi Product Pipeline (NMPP) Project, Trunkline Section (Jameson Park, Gauteng to Durban, KwaZulu-Natal). Transnet Capital Projects. 2009-2013
- Wetland and surface watercourse study for the proposed Ariadne-Venus 475 kV transmission line, Kwa-Zulu Natal. Baagi Environmental Consultancy. 2010
- Surface watercourse assessment study for the proposed R5 Rand Water pipeline between Rietvlei N.R. and Mamelodi, Gauteng. Aurecon Group. 2010

- Wetland and surface watercourse study for the proposed Paulputs-Aggeney's 220kV transmission line, Northern Cape. SSI Engineers and Environmental Consultants. 2011
- Surface watercourse investigation for a proposed 20MW solar electricity installation at Kalgold Mine, North West Province. Mark Wood Consultants. 2011
- Wetland and surface watercourse study for the proposed Arnot-Ginaledi 475 kV transmission line, Mpumalanga Province. Baagi Environmental Consultancy. 2012
- Watercourse investigation for the proposed upgrade of a section of the N4 Platinum Highway, Rustenburg, North West Province. Environamic. 2012.
- Wetland delineation review for the proposed 80 MW photovoltaic solar electricity installation, Grootvlei, Mpumalanga Province. Mark Wood Consultants. 2012
- Wetland and watercourse assessment study for a proposed 75MW Photovoltaic (PV) plant and associated infrastructure on a portion of the remaining extent of Erf 1, Prieska Northern Cape Province. Enviro Insight. 2012
- Water Use License application & watercourse assessment for permanent access roads on Section PL1-PL4 (Durban to Kendal) of Transnet's New Multi Product Pipeline (NMPP) Project. Transnet Capital Projects. 2012-2014
- Watercourse assessments for the Ngqura 16 MTPA manganese ore rail expansion: Area 1 & 3 (Coega – De Aar; Eastern & Northern Cape). Hatch South Africa. 2013
- Watercourse assessment for the Douglas-Hopetown road upgrade project, Northern Cape. EIMS. 2013.
- Specialist Wetland & Drainage Line Investigation for the Proposed Hermes 132 kV Distribution Line and Substation, Klerksdorp, North West Province. Envirovolution Consulting. 2013
- Specialist Medupi-Borutho 400 kV Power Line Environmental Management Plan (EMP) – Watercourses & Drainage Lines. North West Province. Baagi Environmental Consultancy. 2013.
- Specialist Gromis-Orangemund 400 kV Power Line Environmental Management Plan (EMP) – Watercourses & Drainage Systems, Northern Cape Province. Baagi Environmental Consultancy. 2013
- Watercourse delineation, PES & EIS assessment specialist study for a Water Use License Application for 8 proposed distribution lines around Ngwedi MTS, SA Chrome, Boschkoppie, Impofu Substation, Styldrift, Bakubung, Ledig, Sun City, Mokwase Industries, and Manyane Substations, North West Province. Baagi Environmental Consultancy. 2014
- Environmental Impact Assessment for the Sasol PSA and LPG Project: Botanical Biodiversity and Terrestrial and Wetland Habitat. Specialist Report, Inhassoro, Mozambique. In collaboration with De Castro & Brits C.C. for Mark Wood Consultants on behalf of SASOL. 2014.
- Specialist Watercourse and Wetland Study For The Proposed 500kV Nzhelele to Triangle Eskom Powerline Project (RSA Section Only) EIA Project, Limpopo Province. Baagi Environmental Consultancy. 2014

*Green Star eco-conditional office development assessments:*

- Green Star eco-conditional office assessment for the Lynnwood Bridge retail phase 2 development, Gauteng. Aurecon Group. 2011

- Green Star eco-conditional office assessment for the GCIS Hatfield head office development, Gauteng. Aurecon Group. 2012
- Green Star eco-conditional office assessment for the USAID expansion development, Gauteng. Aurecon Group. 2012
- Green Star eco-conditional office assessment for the Atrium on 5th development, Gauteng. Aurecon Group. 2012
- Green Star eco-conditional office assessment for the Lynnwood Bridge retail phase 3 development, Gauteng. Aurecon Group. 2013
- Green Star eco-conditional office assessment for the Athol Towers development, Gauteng. Aurecon Group. 2013

*Wetlands and surface watercourse assessments for mining-related developments:*

- Wetland and drainage line watercourse study for a proposed Fluorspar Mine in Dinokeng, Gauteng Province. African Geo-Environmental Services (AGES), (Pty) Ltd. 2009.
- Wetland assessment study for the proposed Northern Coal Colliery near Breyton, Mpumalanga Province. Terra Soil Science. 2010.
- Desktop wetland & watercourse assessment for Harmony Gold's Kusasaletu Mine as part of their ISO 14000 environmental management certification, North West Province. DD Science. 2012.
- Watercourse assessment for a water re-use and reclamation project at Mponeng Mine, North West Province, De Castro & Brits Ecological Consultants. 2013

▶ **Additional Wetland Related Training:**

- Attended a two-day DWAF (DWA) facilitated wetland training course on the Wetland Index of Habitat Integrity assessment technique (Wetland IHI methodology) presented by Mark Rountree, June 2009.

▶ **Training - Course Lecturer :**

- Co-lecturer and founding member of an Introductory Wetland Training Course, presented by the Department of Botany (University of Pretoria) through the University's Continued Education at UP (CE@UP) program, and the Gauteng Department of Agriculture, Conservation and Environment (GDACE). Aspects focussed on include the legislation, delineation, drivers and ecology, assessments, management and rehabilitation of wetlands. This course was started in November 2004 and presented since then on September 2005, November 2005, May 2006, July 2007, May 2008, May 2010, and May 2012.

▶ **Publications:**

- Grobler, R., Bredenkamp, G. & Grundling, P-L. 2004. Subsistence farming and conservation constraints in coastal peat swamp forests of the Kosi Bay Lake System, Maputaland, South Africa. *Géocarrefour* 79: 4.
- Grundling, P-L. & Grobler, R. 2005. Peatlands and mires of South Africa. In: Steiner, G.M. (ed.) *Mires from Siberia to Tierra Del Fuego*. *Stapfia* 85, Landesmuseen Neue Serie 35, pp. 379-396.

- Sliva J., Grundling P-L., Kotze D., Ellery F., Moning C., Grobler R., Taylor P.B. (2005). *MAPUTALAND – Wise Use Management in Coastal Peatland Swamp Forests in Maputaland, Mozambique / South Africa*. Wetlands International, Project No: WGP2 – 36 GPI 56.
- 

## MEMBERSHIPS IN PROFESSIONAL AND GENERAL SOCIETY

### ▶ **Professional Society**

- Pr. Sci. Nat (Professional Natural Scientist) in the fields of Botanical and Ecological Science (Registration No. 400097/09).
- Please refer to the SACNASP website to undertake a search of their registered scientists in order to authenticate that Mr. LER Grobler is registered SACNASP member and is registered for the two fields indicated. Searches can be done according to employer (Imperata Consulting) or other criteria provided in this document.  
<http://www.sacnasregister.co.za/search/>

### ▶ **General Society**

- International Mire Conservation Group (IMCG), since 2003.
  - Gauteng Wetland Forum (GWF), since 2006.
  - South African Wetland Society (SAWS), since 2007.
- 

## EMPLOYMENT EXPERIENCE

### ▶ **Wetland Ecologist and Project Manager: Imperata Consulting (March 2007 – Current) Tasks include:**

- Wetland and riparian habitat delineation according to the DWAF (2005) prescribed delineation guideline, as well as the demarcation of other drainage line types (e.g. headwater streams or A Section Channels)
- Wetland Present Ecological State (PES) and Ecological Importance and Sensitivity (EIS) assessments.
- Ecosystem assessments based on phytosociological investigations (vegetation unit identification, description, and assessment), as well as associated mapping and sensitivity rating of vegetation assemblages.
- Inventory, classification and mapping of wetland ecosystems.
- Wetland rehabilitation and monitoring.
- Wetland management and recommendation of impact mitigation measures.
- Environmental risk assessments related to the presence of wetland and riparian ecosystems.
- Project management related to specialist wetland, riparian and headwater ecosystem investigations.

- ▶ **Wetland Ecologist: SEF (January 2006 – February 2007) Tasks included:**
  - Wetland and riparian habitat delineation and wetland ecosystem functional assessments.
  - Strategic wetland assessments and mapping.
  - Vegetation analysis and description, including mapping of sensitive vegetation assemblages.
  
- ▶ **Nature Conservator: Tshwane Nature Conservation (July 2005 – December 2005) Tasks included:**
  - General management of the ecological integrity of greenbelt areas in the eastern section of the City of Tshwane Metropolitan Municipality, including the Colbyn Valley Peatland, Faerie Glen Nature Reserve, Moreletakloof Nature Reserve, Meyerspark Bird Sanctuary, and Murrayfield Koppie.

## REFERRALS

- ▶ **Mr. Tim Liversage:** NMPP Environmental Manager at Transnet  
Email: Timothy.Liversage@transnet.net  
Cell: 079 529 7715
  
- ▶ **Mr. Umesh Bahadur:** Director: Working for Wetlands at South African National Biodiversity Institute  
Email: U.bahadur@sanbi.org.za  
Cell: 072 072 0750
  
- ▶ **Mr. Piet-Louis Grundling:** Independent Wetland Consultant and Researcher, as well as Chair of the South African Wetland Society (SAWS) and the International Mire Conservation Group (IMCG).  
Email: peatland@mweb.co.za  
Cell: 072 793 8248