



Jones & Wagener

Engineering & Environmental Consultants
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YEARS EST. 1966

CURRICULUM VITAE Konrad Kruger

03 February 2017
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Profession	Environmental Scientist
Date of Birth	20 November 1981
Position in firm	Senior Environmental Scientist
Years with the firm	4 years
Nationality	South African
Education / Qualifications	BSc Honours (Geography) University of Pretoria 2003 (cum laude) BSc Environmental Sciences, University of Pretoria 2002
Languages	Afrikaans, English
Employers	
2005 – 2009	Cymbian Enviro-Social Consulting Services (Randburg) - Environmental Consultant
2009	Phoenix Enviro-Social Consulting Services (Roodepoort) - Environmental Consultant
2009 – 2012	Zitholele Consulting (Pty) Ltd (Midrand) - Environmental Consultant
2012 – Current	Jones & Wagener Engineering and Environmental Consultants - Environmental Scientist



Areas of Expertise

Environmental Management and Authorisations:

- EIA and Basic Assessments;
- EMP's and EMPR's;
- Mine Rehabilitation and Closure Reports;
- Risk Assessments or Screening Assessments;
- IWMP's;
- IWULA's;
- Waste License Applications;
- APPA and AQA permit/license applications; and
- Environmental Auditing (ISO/EMP/RoD)

JONES & WAGENER (PTY) LTD REG NO. 1993/002655/07 VAT No. 4410136685

DIRECTORS: GR Wardle (Chairman) PrEng MSc(Eng) FSAICE JP van der Berg (CEO) PrEng PhD MEng FSAICE JE Glendinning PrSciNat MSc(Env Geochem) MSAIEG M Rust PrEng PhD MSAICE
TM Ramabulana BA(Social Sciences) A Oosthuizen (Alternate) PrEng BEng(Hons) MSAICE
TECHNICAL DIRECTORS: D Brink PrEng BEng(Hons) FSAICE PG Gage PrEng CEng BSc(Eng) GDE MSAICE AStructE JR Shamrock PrEng MSc(Eng) MSAICE MIWMSA NJ Vermeulen PrEng PhD MEng MSAICE
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ASSOCIATES: M van Bijlon PrSciNat MSc(Hydrogeology) RA Nortjé PrEng MSc(Eng) MSAICE MIWMSA C Cilliers PrEng BEng(Hons) MSAICE NW Nxumalo PrEng MSc(Eng) MSAICE
J Breyl PrEng BEng(Hons) MSAICE F Hoertkorn PrEng Dr.-Ing MSAICE
CONSULTANTS: PW Day PrEng DEng HonFSAICE JA Kempe PrEng BSc(Eng) GDE MSAICE AStructE BR Antrobus PrSciNat BSc(Hons) MSAIEG

FINANCIAL MANAGER: HC Neveling BCom MBL CIMA Adv Dip MA



Specialist Assessments:

- Soils and Agricultural Potential;
- Wetland Delineation;
- Flora Assessments;
- Terrestrial Ecological Assessment;
- Visual Impact Assessment; and
- GIS (ArcGIS 10)

Professional Affiliations

IAIA SA International Association of Impact Assessors (South Africa)
LaRSSA Land and Rehabilitation Society of South Africa

Relevant Experience

Financial Provision and Closure

1. GNR 1147 Annual Rehabilitation Plans, Closure and Decommissioning Plans and Latent Risk Reports for Sasol Mining – Sasol Mining, 2016/7
2. Updated Financial Provision for Boikarabelo, Lephalale, South Africa, 2016
3. Financial Provision Procedure Gap Analysis for Sasol Mining – Sasol Mining, 2015
4. Risk Assessment for the closure of the Sigma Colliery – Sasolburg, South Africa – Sasol, 2014
5. Compilation of the Closure Plan and associated Risk Assessment - Emalahleni, South Africa - South Witbank Colliery - 2006

Industrial/Waste Applications

1. EIA, WMLA, NEM:AQA AEL and EMPr for the Flexilube Oil Recycling Facility - Meyerton, South Africa - Flexilube – 2014
2. EIA, WMLA and EMPr for the Lonmin Western Platinum Hazardous Waste Incinerator - Brakpan, South Africa - Lonmin – 2014
3. Wetland delineation for EnviroServ Holfontein – Holfontein, South Africa – EnviroServ - 2012
4. Environmental Impact Assessment for the proposed Metal Recovery and Slag Processing Plant at Metalloys. Also undertook the stakeholder engagement, GIS, vegetation and soil specialist assessments for the project - Meyerton, South Africa - Samancor Manganese, Metalloys – MRSPP - 2007
5. Environmental Impact Assessment for the construction and operation of the M6 Furnace at Metalloys - Meyerton, South Africa - Samancor Manganese, Metalloys – M6 - 2008
6. Basic Environmental Assessment and Air Pollution Prevention Act (APPA) permit application for the proposed M17 Furnace Test Campaign, Metalloys Meyerton - Meyerton, South Africa - Samancor Manganese, Metalloys – M17 - 2007
7. Basic Assessment and subsequent environmental training and auditing for the proposed upgrade of the Salvage Yard and the construction of an oil store at Metalloys. - Meyerton, South Africa - Samancor Manganese, Metalloys – Salvage – 2008

8. Compilation and research of an emission reduction strategy for the Samancor Manganese Metalloys, Meyerton Works. - Meyerton, South Africa - Samancor Manganese, Metalloys – Emission - 2008
9. Water Use License Application for Samancor Manganese Metalloys, Meyerton Works - Meyerton, South Africa - Samancor Manganese, Metalloys – WUL - 2008
10. Environmental auditing for the Fouriespruit Stream Diversion, the Amcor Dam and the old Slag Dumps at Metalloys - Meyerton, South Africa - Samancor Manganese, Metalloys – Audit - 2008
11. EIA and Biophysical assessment (Soil, Land Capability, Land use, Fauna, Flora) for the proposed Sinter Plant at the Mamatwan Mine. - Hotazel, South Africa - Samancor Manganese – Sinter - 2009
12. Research and compilation of the APPA certificate updates for the Metalloys plant. - Meyerton, South Africa - Samancor Manganese, Metalloys – APPA - 2008
13. Vegetation and soil investigation for the proposed Electricity Generation Plant at Metalloys - Meyerton, South Africa - Samancor Manganese, Metalloys – Elgen2 - 2008
14. Annual Environmental Performance Audit for the pelletising plant - Meyerton, South Africa - Samancor Manganese, Metalloys – Pelletising Plant - 2008
15. EIA for the proposed AlloyStream Manganese Plant. - Meyerton, South Africa - Exxaro Resources/Samancor Manganese JV - 2008

Mining

1. Visual and Terrestrial Ecological Assessment for the proposed 400kv KIPower powerlines – Delmas, South Africa – KIPower – 2016
2. Wetland, Soil and Land Capability Assessment for the proposed Era Stene expansion – Delmas, South Africa – Era Stene - 2016
3. Long term soil impact monitoring and visual assessment for the Wolwekrans Evaporator Project – Emalahleni, South Africa – South32 – 2015-16
4. Visual Assessment for the proposed Klipfontein Colliery extension – Middelburg, South Africa, South32 - 2015
5. Middelburg Mine Expansion Visual Assessment – Middelburg, Mpumalanga – South32, 2015
6. Water Use License Amendment for the Phola Coal Processing Plant – Ogies, Mpumalanga, South Africa, 2015
7. BA for the Tweefontein Dragline relocation project – Tweefontein, South Africa – Glencore – 2014
8. BA and WULA for the ATCOM Dragline relocation project – iMpunzi, South Africa – Glencore – 2014
9. Soil and Land Capability Assessment for the Boschmanspoort EMPR – Hendrina, South Africa – Xstrata Coal – 2013
10. Clean and Dirty Water separation study. - Mponeng Mine, South Africa - AngloGold Ashanti, Mponeng - 2008
11. Compilation of an EMPR for two borrow pits to be utilised for road upgrades - Mafikeng, South Africa - North West Department of Roads and Traffic - 2004
12. Environmental auditing of the Dragline relocation project - Kriel, South Africa - Xstrata Coal South Africa – Kriel – 2005
13. Dragline Relocation Scoping Report and associated Soil, Wetland, Vegetation Assessments and GIS mapping - Kriel, South Africa - Xstrata Coal South Africa – Rietspruit - 2007
14. Compilation of the EMPR update as well as the undertaking of Soil, Vegetation Assessments and GIS mapping for the project - Cullinan, South Africa - De Beers Consolidated Mines – Cullinan - 2005

15. Internal ISO14001 audit for the Venetia Diamond Mine - Cullinan, South Africa - De Beers Consolidated Mines – Venetia – 2008
16. EMP update for the North Mara Gold Mine. - Mara Region, Tanzania - Barrick Mining, North Mara - 2008
17. Wetland delineation for the N17 borrow pit application, SANRAL - Mpumalanga, South Africa – SANRAL - 2008
18. Soil mapping for the proposed Harmony Mega Tailings Facility, Welkom. - Free State, South Africa - Harmony Gold – Welkom – 2009
19. Vegetation and soil assessment for the proposed 3rd bypass line, Richards Bay Coal Terminal. - KwaZulu Natal, South Africa - Transnet, RBCT - 2008

Power Generation and Transmission

1. Biophysical Specialist Studies (Ecology, soil, land capability, and visual assessment and associated GIS) for the proposed KiPower 400 kV power line. – Delmas, Mpumalanga, South Africa – KiPower, 2015
2. Wetland delineation for the proposed Pongola-Candover 132 kV powerline – Pongola, South Africa – Eskom Eastern Regions – 2014
3. Wetland delineation for the proposed Ndumo-Gezisa 132 kV powerline – Pongola, South Africa – Eskom Eastern Regions - 2014
4. EIA, WMLA and EMP for the extension of the Camden Power Station Ash Dump - Ermelo, South Africa - Eskom Generation – 2012
5. EIA, WULA and EMP for the proposed Solar Integration Project and the CSP amendment - Uppington, South Africa - Eskom Transmission - 2012
6. EIA, WMLA and EMP for the proposed Kusile Power Station Ash Facility - Balmoral, South Africa - Eskom Generation – 2012
7. Basic Environmental Assessment for the proposed Slagment substation and connecting 33kV power lines. - Meyerton, South Africa - Lyon and Partners - 2008
8. Conducted the Biophysical Specialist Studies (Ecology, soil, land capability, visual and wetland assessment and associated GIS) for the integration of the Bravo (Kusile) power station into the Eskom grid. Five EIAs for the proposed construction of overhead power lines and associated infrastructure for the Bravo Integration Project. - Gauteng and Mpumalanga, South Africa - Eskom – Bravo Integration Project – 2009
9. Conducted the Biophysical Specialist Studies (Ecology, soil, land capability, visual and wetland assessment and associated GIS) for the proposed railway line to the Kusile power station. - Gauteng and Mpumalanga, South Africa - Eskom – Kusile Railway Line - 2010
10. EIA, soil assessment and waste licensing for the proposed Tutuka Power Station general waste disposal site, Standerton. - Mpumalanga, South Africa - Eskom – Tutuka Domestic Waste Site - 2011
11. Wetland delineation for the proposed Braamhoekspruit Bridge upgrade WUL. - KwaZulu Natal, South Africa - Eskom – Ingula bridge - 2010
12. Basic Assessment and specialist studies (Wetland Delineation, Agricultural Potential, Terrestrial Ecology and Visual Assessment) for the proposed Ingula burial grounds near Van Reenen. - KwaZulu Natal, South Africa - Eskom – Ingula burial ground – 2011
13. Biophysical risk assessment (Fauna, Flora, Soils, Wetlands) for the proposed substation alternatives and connecting power lines. - Gauteng, South Africa - Eskom – Bapsfontein - 2010
14. Biophysical risk assessment (Fauna, Flora, Soils, Wetlands and Visual) for the proposed substation and connecting power lines. - Limpopo, South Africa - Eskom – Tabor - 2011

15. Route selection report and associated specialist studies (Soils, Land Use, Fauna, Flora, Wetlands and GIS) for 2 power line route alternatives in Wilgeheuwel. - Gauteng, South Africa - Johannesburg City Power - 2007
16. RoD auditing of the Zuikerbosch Pumping Station embankment stabilisation. - Gauteng, South Africa - Zuikerbosch Pumping Station Audit - 2010

Conservation

1. Strategic Environmental Assessment and GIS modelling for the proposed Tented Safari Camps in the Kruger National Park - Limpopo & Mpumalanga, South Africa - Kruger National Park – SEA – 2006
2. Environmental auditing for the construction phase of the proposed Phalaborwa Office Park and Gate Upgrade Project in the Kruger National Park. - Phalaborwa, South Africa - Kruger National Park – Office Park – 2007
3. Vegetation and Visual Assessment for the proposed day visitor's facility at the Olifants Camp, Kruger National Park - Limpopo & Mpumalanga, South Africa - Kruger National Park – Olifants – 2007

Residential/Commercial

1. Wetland delineation, terrestrial ecology and GIS assessment for the proposed storm water system upgrade in Soweto - Gauteng, South Africa - Johannesburg Road Agency - 2010
2. EIA and Exemption Application for a Residential Development in Raslouw, Centurion - Gauteng, South Africa - Billy Cahill – 2005
3. EIA and Exemption Application for a Residential Development in Raslouw, Centurion. - Gauteng, South Africa - Crown Silver Properties - 2005
4. Basic Environmental Assessment Application for a Residential Development in Bryanston -Gauteng, South Africa - Johannesburg City Property Company - 2007
5. Agricultural feasibility study for the Ramasega development project. - Gauteng, South Africa - Ramasega Agricultural Development Project – 2006
6. Scoping Report, environmental auditing, WUL, specialist studies and GIS for the proposed Teak Place Estate Development in the Cradle of Humankind. - Cradle of Humankind, South Africa - Teak Place Estate Development - 2007
7. Soil and Wetland delineation for the Pala Meetse Eco Estate, Modimolle. - Limpopo Province, South Africa - Pala Meetse Eco Estate - 2008
8. Soil and Land Capability assessment for a residential development in Noordheuwel, Krugersdorp. - Gauteng, South Africa - Noordheuwel Ext 17 and 19 - 2008
9. Vegetation, Tree Identification, Soil and Fauna survey for Holding 68 and 67 Morningside. - Gauteng, South Africa - Bernard Glazer Trust - 2007
10. Vegetation Assessment for the proposed development on Portion 105, 106 and 331 of the Farm Knoppjeslaagte. - Gauteng, South Africa - Vibro Brics – 2008
11. Soil assessment for the proposed industrial development of the Farm Nooitgedacht Portion 215. - Gauteng, South Africa - Viva Construction – Portion 215 - 2008
12. Wetland delineation for the proposed development on Farm Nooitgedacht Portions 8 and 32 - Gauteng, South Africa - Viva Construction – Portion 8 and 36 - 2008
13. Biophysical site assessment for the proposed development of Portions 16, 17 and 18 of the Mostyn Park Smallholdings. - Gauteng, South Africa - Viva Construction – Mostyn Park - 2008
14. Screening sensitivity analysis for the Orlando Soccer Stadium upgrade - Gauteng, South Africa - Orlando Stadium – 2006


15. Vegetation, wetland, soil and fauna assessment for the proposed lodge development in the Vredefort Dome - North West, South Africa - Wesplan Town and Regional Planners - 2006
16. Wetland delineation for the proposed Randfontein Golf Estate. - Gauteng, South Africa - Randfontein Golf Estate – 2008

Summary of other Experience / Publications

Centre for Environmental Studies	March 2007	NEMA EIA Regulations and their application
Cameron Cross	May 2008	National Environmental Management Waste Act Seminar
Africa Land-Use Training	April 2010	Tree Identification
Africa Land-Use Training	June 2010	Soil Classification and Mapping

Declaration

I confirm that the above CV is an accurate description of my experience and qualifications.



Signature of Staff Member

03 February 2017

Date



Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae met spesialisering in Omgewingswetenskappe

met al die regte en voorregte daaraan verbonde by geleentheid
van 'n kongregasie van die Universiteit toegeken is aan

KONRAD KRUGER

kragtens die Wet op Hoër Onderwys, 1997 en die Statuut van die Universiteit

Namens die Raad en die Senaat

Visekanselier en Rektor

Namens die Fakulteit
Natuur- en Landbouwetenskappe

Dekaan



Registrateur

2003-04-15



Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae Honores (met lof) met spesialisering in Geografie

met al die regte en voorregte daaraan verbonde by geleentheid
van 'n kongregasie van die Universiteit toegeken is aan

KONRAD KRUGER

kragtens die Wet op Hoër Onderwys, 1997 en die Statuut van die Universiteit

Namens die Raad en die Senaat

Visekanselier en Rektor

Namens die Fakulteit
Natuur- en Landbouwetenskappe

Dekaan



Registrateur

2004-04-20