

## CURRICULUM VITAE OF KAREN JODAS

<b>Profession:</b>	Environmental Management and Compliance Consultant; Environmental Assessment Practitioner. Professional Natural Scientist: Environmental Science since 1999.
<b>Specialisation:</b>	Strategic environmental assessment and advice; development of plans and guidelines; environmental compliance advise and monitoring; Environmental Impact Assessment; environmental management; project management and co-ordination of environmental projects; peer review; policy, strategy and guideline formulation; renewable energy projects; water resources management.

### VOCATIONAL EXPERIENCE

Provide technical input for projects in the environmental management field, specialising in strategic evaluation, Environmental Impact Assessment studies, environmental management plans, programmes and guidelines, integrated environmental management, environmental compliance monitoring; peer review of EIA reports and processes, strategy and guideline development, and public participation. Key focus on overall Project Management, integration of environmental studies and environmental processes into larger engineering-based projects, strategic assessment, and the identification of environmental management solutions and mitigation/risk minimising measures.

Excellent working knowledge of environmental legislation, strategies, guidelines and policies. Compilation of the reports for environmental studies are in accordance with the all relevant environmental legislation under the National Environmental Management Act. Due consideration of Equator Principles and compliance with IFC performance standards is now a part of all projects.

### SKILLS BASE AND CORE COMPETENCIES

Provide technical input for projects in the environmental management field, specialising in strategic evaluation, Environmental Impact Assessment studies, environmental management plans, programmes and guidelines, integrated environmental management, environmental compliance monitoring; peer review of EIA reports and processes, strategy and guideline development, and public participation. Key focus on overall Project Management, integration of environmental studies and environmental processes into larger engineering-based projects, strategic assessment, and the identification of environmental management solutions and mitigation/risk minimising measures.

Excellent working knowledge of environmental legislation, strategies, guidelines and policies. Compilation of the reports for environmental studies are in accordance with the all relevant environmental legislation under the National Environmental Management Act. Due consideration of Equator Principles and compliance with IFC performance standards is now a part of all projects.

### SKILLS BASE AND CORE COMPETENCIES

- Twenty years (20) of experience in the environmental management, impact assessment and compliance fields
- Eighteen (18) years of experience in Project Management - Project management of large environmental assessment and management projects
- Strategic and compliance advise for all aspects of environmental assessment and management
- External and peer review of environmental assessment and compliance reporting as well as EIA processes
- Working knowledge of environmental planning policies, regulatory frameworks and legislation

- Input and review of Environmental Management Plans and Programmes, including Invasive Species Monitoring, Control and Eradication Plans
- Identification and assessment of potential environmental impacts and benefits
- Development of practical and achievable mitigation measures and management plans and evaluation of risk to project execution
- Experienced in environmental compliance advise, monitoring and reporting for construction projects
- Compilation and review of the reports in accordance with all relevant environmental legislation
- Public participation/involvement and stakeholder consultation
- Environmental strategy, policy and guidelines development
- Experienced in assessments for both linear developments and nodal developments
- Key experience in the assessment of impacts associated with renewable energy projects
- Wide range of experience for public and private sector projects
- Experienced consultant in projects in Sub-Saharan Africa.

## EDUCATION AND PROFESSIONAL STATUS

### Degrees:

- B.Sc Earth Sciences, majoring in Geography and Zoology, Rhodes University, Grahamstown, 1993
- B.Sc Honours in Geography (in Environmental Water Management), Rhodes University, Grahamstown, 1994. Major subjects included Water Resources Management, Streams Ecology, Fluvial Geomorphology and Geographic Information Systems.
- M.Sc in Geography (Geomorphology), Rhodes University, Grahamstown, 1996

### Short Courses:

- Environmental and Social Risk Management (ESRM), International Finance Corporation, 2018
- Integrated Water Resource Management, the National Water Act, and Water Use Authorisations, CSBSS, 2017
- WindFarmer Wind Farm Design course, Garrad Hassan, 2009
- Environmental Law Course, Aldo Leopold Institute, 2002
- Water Quality Management, Potchefstroom University, 1998

### Professional Society Affiliations:

- Registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist: Environmental Science (400106/99)
- Registered with the International Associated for Impact Assessment South Africa (IAIAsa): 5888

### Other Relevant Skills:

- Xtrack Extreme – Advanced Off-Road Driving Course (2003)

## EMPLOYMENT

Date	Company	Roles and Responsibilities
<b>2006 - Current:</b>	Savannah Environmental (Pty) Ltd	Director <i>Independent specialist environmental consultant, Environmental Assessment Practitioner (EAP) and advisor</i>
<b>1997 – 2005:</b>	Bohlweki Environmental (Pty) Ltd	Associate <i>Environmental Management Unit: Manager; Principle Environmental Scientist focussing on Environmental Management and Project Management</i>

## PROJECT EXPERIENCE

Experience includes projects associated with electricity generation and transmission, wastewater treatment facilities, mining and prospecting activities, property development, and national roads, as well as strategy and guidelines development.

### **RENEWABLE POWER GENERATION PROJECTS: PHOTOVOLTAIC SOLAR ENERGY FACILITIES**

#### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Aggeneys PV Plant, Northern Cape	Solar Capital	Project Manager & EAP
Blackwood PV SEF, Free State	VentuSA Energy	Project Manager & EAP
Bloemsmond PV 1 & PV 2 SEF's, Northern Cape	Atlantic Energy Partners	Project Manager & EAP
Bosjesmansberg PV SEF, Northern Cape	Networx	Project Manager & EAP
Boundary PV SEF, Northern Cape	VentuSA Energy	Project Manager & EAP
Buffels PV 1 & PV 2 SEF's, North West	Kabi Energy	Project Manager & EAP
De Aar PV SEF, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
De Aar PV Solar Energy Plant, Northern Cape	Solar Capital	Project Manager & EAP
Gihon & Kison PV SEF's, Limpopo	Networx	Project Manager & EAP
Gunstfontein PV SEF, Northern Cape	Networx / Prana Energy	Project Manager & EAP
Harmony Eland, Nyala & Tshepong PV SEF's, Free State	BEEEntropie Renewable Innovation	Project Manager & EAP
Hibernia SEF, North West	EA Energy	Project Manager & EAP
Iziko PV SEF, Mpumalanga	VentuSA Energy	Project Manager & EAP
Kabi Kimberley PV Facility at DeBeers, Northern Cape	Kabi Solar	Project Manager & EAP
Karoo Renewables PV SEF, Northern Cape	SARGE	Project Manager & EAP
Kheis Phase 1, 2 & 3 PV SEF, Northern Cape	GeStamp Solar	Project Manager & EAP
Klipgat PV SEF, Northern Cape	Terra Solar	Project Manager & EAP
Loeriesfontein/Helios PV SEF, Northern Cape	Solar Capital	Project Manager & EAP
Naauwpoort PV SEF, Northern Cape	Terra Solar	Project Manager & EAP
Orkney PV SEF, North West	Genesis Eco-Energy	Project Manager & EAP
Pofadder SEF, Northern Cape	Mainstream Renewable	Project Manager & EAP
Prieska North PV SEF, Northern Cape	VentuSA Energy	Project Manager & EAP
Prieska PV SEF, Northern Cape	VentuSA Energy	Project Manager & EAP
Ritchie PV SEF, Northern Cape	Solar Capital	Project Manager & EAP
San Solar PV SEF, Northern Cape	VentuSA Energy	Project Manager & EAP
Sirius (Tungston Lodge) PV Solar Plants (x2, Northern Cape)	Aurora Power Solutions	Project Manager & EAP
Sol Invictus x4 PV Developments, Northern Cape	Building Energy	Project Manager & EAP
Solar Plant at Kathu (Wincanton), Northern Cape	REISA	Project Manager & EAP
Solar Plant at Sishen (Wincanton), Northern Cape	VentuSA Energy	Project Manager & EAP
Solar Plant at Sishen (Wincanton), Northern Cape	VentuSA Energy	Project Manager & EAP
SolarReserve Kotulo Tsatsi PV1 SEF, Northern Cape	Kotulo Tsatsi Energy and SolarReserve South Africa	Project Manager & EAP
SolarReserve Kotulo Tsatsi PV2 Facility, Northern Cape province	Kotulo Tsatsi Energy and SolarReserve South Africa	Project Manager & EAP
Stormberg Solar PV SEF, Eastern Cape	Networx / Prana Energy	Project Manager & EAP
Tewa Isitha (Grootdrink/Albany) PV SEF, Northern Cape	Africoast Engineers	Project Manager & EAP

Project Name & Location	Client Name	Role
Tiger Kloof PV SEF near Vryburg, North West	Kabi Energy	Project Manager & EAP
Tiger Solar PV SEF, Northern Cape	Kabi Energy	Project Manager & EAP
Vaalkop and Witkop PV SEF's, North West	Kabi Solar	Project Manager & EAP
Wagnbietjiespan PV SEF, Free State	VentuSA	Project Manager & EAP
Wolmaransstad Municipality PV SEF, North West	BlueWave	Project Manager & EAP
Woodhouse PV 1 & PV 2 SEF's, North West	Genesis Eco-Energy	Project Manager & EAP
Zuurwater PV SEF's (x4), Northern Cape	Solafrica / BlueWave	Project Manager & EAP
Three PV SEF facilities in Lichtenburg, North West	Atlantic Energy Partners	Project Manager & EAP

#### Basic Assessments

Project Name & Location	Client Name	Role
Amandla Welanga & Dida PV SEF's near Noupoot, Northern Cape	Terra Solar	Project Manager & EAP
Carolusberg PV SEF, Northern Cape	Ilio Energy (SARGE)	Project Manager & EAP
Gosforth Park and Kynoch Rooftop PV SEF's Northern Cape	Building Energy	Project Manager & EAP
Hennenman PV SEF, Free State	BlueWave	Project Manager & EAP
Hibernia PV SEF near Lichtenburg, North West	EA Energy	Project Manager & EAP
Inkulukelo PV SEF, Northern Cape	Terra Solar	Project Manager & EAP
Kabi Kimberley PV SEF, Northern Cape	Kabi Energy	Project Manager & EAP
Kokerboom & Boabab PV Solar Energy Plants, Northern Cape	Brax Energy	Project Manager & EAP
Middelburg PV SEF, Mpumalanga	African Clean Energy Developments (ACED)	Project Manager & EAP
Nigramoep PV Solar Energy Plant, Northern Cape	SARGE	Project Manager & EAP
Noupoot (Kleinfontein and Toitdale) CPV, Northern Cape	Terra Power	Project Manager & EAP
O'Kiep 1 PV Solar Energy Plant, Northern Cape	Ilio Energy (SARGE)	Project Manager & EAP
O'Kiep 2 PV Solar Energy Plant, Northern Cape	BluePort Trade 118 (SARGE)	Project Manager & EAP
O'Kiep 3 PV Solar Energy Plant, Northern Cape	Ilio Energy (SARGE)	Project Manager & EAP
Rodicon PV SEF, Mpumalanga	VentuSA Energy	
Slurry PV SEF, North West	PPC	Project Manager & EAP
Small projects for PV SEF's, North West	BlueWave	Project Manager & EAP
Son Sitrus Rooftop PV Installation, Eastern Cape	Building Energy	Project Manager & EAP
Tollie PV SEF, Northern Cape	Terra Solar	Project Manager & EAP
x2 Southern Farms PV Solar Energy Plants, Northern Cape	Southern Farms	Project Manager & EAP

#### Screening Studies

Project Name & Location	Client Name	Role
Allemans, Wonderheuwel, Damfontein & Dida PV SEF's, Northern Cape	Terra Solar	Project Manager & EAP
Amandla Welang, Gillmer & Inkululeko PV SEF's, Northern Cape	GeoSolar/ TerraSolar	Project Manager & EAP
Blouputs PV, Onseepkans PV, Hoogelegen PV & Boegoeberg PV projects, Northern Cape	Engineering Development Industrial Projects (EDIP)	Project Manager & EAP
Bobididi PV SEF, Limpopo	Root 60Four Energy	Project Manager & EAP
Boshof-Les Marais / Buitenfontein SEF, Free State	Bluewave Capital	Project Manager & EAP
Bosjesmansberg PV SEF, Northern Cape	Networx	Project Manager & EAP

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Class 2 & Class 3 Road Networks in the vicinity of the proposed Tambo Springs Freight Hub, Gauteng	SMEC South Africa (on behalf of Gauteng Department of Roads & Transport)	Project Manager & EAP
Hibernia SEF, North West	EA Energy	Project Manager & EAP
Lephalale PV SEF, Limpopo	Exxaro	Project Manager & EAP
Prieska PV SEF, Northern Cape	Terra Solar	Project Manager & EAP
Proposed Solar Project near Hotazel, Northern Cape province	ABO Wind	Project Manager & EAP
Proposed Solar Project near Beaufort West, Western Cape	ABO Wind	Project Manager & EAP
Proposed Solar Project near Lichtenburg, North West province	ABO Wind	Project Manager & EAP
PV SEF's (x15) for the projects for the REIPP small scale BID, Nationwide	Building Energy	Project Manager & EAP
Senekal 1 & 2, Pongola & Newcastle PV SEF's, Kwa-Zulu-Natal	Building Energy	Project Manager & EAP
Small scale PV SEF project - 2nd Stage One	Bluewave Capital	Project Manager & EAP
Small scale PV SEF project - 2nd Stage One	Building Energy	Project Manager & EAP
Stella Helpmekaar SEF, North West	Bluewave Capital	Project Manager & EAP
Wolmaransstad Municipality SEF, North West	Bluewave Capital	Project Manager & EAP
Solar Project near Beaufort West, Western Cape	ABO Wind	Project Manager & EAP
Solar Project near Lichtenburg, Western Cape	ABO Wind	Project Manager & EAP
Solar Project near Hotazel, Western Cape	ABO Wind	Project Manager & EAP

#### **Environmental Compliance, Auditing and ECO**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
ECO for the Contraction of the De Aar & Prieska PV Facilities, Northern Cape	GeStamp	Project Manager
ECO for the Construction of the Kathu PV Facility, Northern Cape	REISA / Building Energy	Project Manager

#### **Compliance Advice and ESAP Reporting**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
ACWA Power SolarReserve Redstone Solar Plant, Northern Cape	SolarReserve	Environmental Advisor
Bokpoort PV SEF, Northern Cape	Solafrica	Environmental Advisor
Boshof PV SEF, Free State	BlueWave	Environmental Advisor
Hennenman PV SEF, Free State	BlueWave	Environmental Advisor
Kathu II SEF, Northern Cape	Building Energy	Environmental Advisor
Kathu PV SEF, Northern Cape	Building Energy / REISA	Environmental Advisor
Prieska PV SEF, Northern Cape	VentuSA	Environmental Advisor
San Solar SEF, Northern Cape	VentuSA / Acciona	Environmental Advisor
Sishen PV SEF Phase 1, Northern Cape	Aveng / Acciona	Environmental Advisor
Wolmaransstad Municipality Solar PV SEF, North West	BlueWave	Environmental Advisor
ESAP reporting for the operation phase of the Mulilo Solar PV De Aar and Mililo Solar PV Prieska	Mulilo and X-Elio	Environmental Advisor

#### **Due Diligence Reporting**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Kabi Kimberley PV Plant, Northern Cape	Enertis Solar	Environmental Advisor

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Sishen Solar Farm, Northern Cape	Acciona (Windfall 59 Properties)	Environmental Advisor
Vaal River Solar 1 PV plant, North West	Enertis Solar	Environmental Advisor

#### **Environmental Permitting & Water Use License (WUL) Applications**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Permitting for the Kathu PV SEF, Northern Cape	Abengoa Solar	Project Manager & EAP
S53 application for Kabi Kimberley De Beers PV Plant, Northern Cape	Kabi Energy	Project Manager & EAP
S53 application for the Blackwood PV SEF, Free State	VentuSA Energy	Project Manager & EAP
S53 application for the Boundary PV SEF, Northern Cape	VentuSA Energy	Project Manager & EAP
S53 application for Vaalkop & Witkop PV SEF's, North West	Kabi Energy	Project Manager & EAP
S53 applications for various projects (Amandla Welang, Didar, Inkululeko, Kleinfontein, Klip Gat, Naau Poort, Toitdale & Tollie PV SEF's), Northern Cape	Terra Solar	Project Manager & EAP
WUL application for the Woodhouse PV1 & PV2 SEF's, North West	Genesis Eco-Energy	Project Manager & EAP

#### **RENEWABLE POWER GENERATION PROJECTS: CONCENTRATED SOLAR FACILITIES (CSP)**

##### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
De Aar CSP Energy facility, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Khi Solar One CSP facility, Northern Cape	Abengoa Solar	Project Manager & EAP
Noupoort CSP facility, Northern Cape	Cresco	Project Manager & EAP
Paulputs CSP facility, Northern Cape	Abengoa Solar	Project Manager & EAP
Pofadder & Upington CSP facilities, Northern Cape	Abengoa Solar	Project Manager & EAP
SolarReserve Kotulo Tsatsi CSP facility, Northern Cape province	SolarReserve	Project Manager & EAP
SolarReserve Kotulo Tsatsi CSP1 facility, Northern Cape	Kotulo Tsatsi Energy and SolarReserve South Africa	Project Manager & EAP
SolarReserve Kotulo Tsatsi CSP2 facility, Northern Cape	Kotulo Tsatsi Energy and SolarReserve South Africa	Project Manager & EAP
SolarReserve Kotulo Tsatsi CSP3 facility, Northern Cape	Kotulo Tsatsi Energy and SolarReserve South Africa	Project Manager & EAP
Upington 2 CSP facility, Northern Cape	Abengoa Solar	Project Manager & EAP
Upington 3 CSP facility, Northern Cape	Abengoa Solar	Project Manager & EAP
Xina Solar One CSP facility, Northern Cape	Abengoa Solar	Project Manager & EAP

##### **Environmental Compliance, Auditing and ECO**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
KaXu Solar One facility, Northern Cape	Abengoa Solar	Project Manager
Khi Solar One facility, Northern Cape	Abengoa Solar	Project Manager
Xina Solar One facility, Northern Cape	Abengoa Solar	Project Manager

##### **Screening Studies**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Site Identification Tool for Proposed CSP Projects, Limpopo	Exxaro	Environmental Advisor

#### **Compliance Advice and ESAP reporting**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Kaxu Solar One CSP facility, Northern Cape	Abengoa Solar	Environmental Advisor
Khi Solar One CSP facility, Northern Cape	Abengoa Solar	Environmental Advisor
SolarReserve Kotulo Tsatsi CSP facility, Northern Cape province	SolarReserve	Environmental Advisor
Xina One CSP facility, Northern Cape	Abengoa Solar	Environmental Advisor

#### **RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES**

##### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
ABs WEF near Indwe, Eastern Cape	Rainmaker Energy	Project Manager & EAP
Amakhala Emoyeni WEF, Eastern Cape	Windlab Developments	Project Manager & EAP
Amatole (2 phases) WEF, Eastern Cape	Genesis ECO-Energy	Project Manager & EAP
Boulders Wind Farm, Western Cape	IPD Power	Project Manager & EAP
Britannia Bay WEF, Western Cape	Terra Power Solutions	Project Manager & EAP
Castle WEF in De Aar, Northern Cape	Juwi Renewable Energies	Project Manager & EAP
Cookhouse WEF, Eastern Cape	African Clean Energy Developments (ACED) & Tertia Waters	Project Manager & EAP
Deep River Wind Energy Facility, Eastern Cape	VentuSA Energy	Project Manager & EAP
Dorper Phase 1 WEF, Eastern Cape	Rainmaker Energy	Project Manager & EAP
Elliot WEF, Eastern Cape	Rainmaker Energy	Project Manager & EAP
Garob WEF, Northern Cape	Juwi Renewable Energies	Project Manager & EAP
Gouda WEF, Western Cape	VentuSA Energy	Project Manager & EAP
Great Karoo WEF, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Gunstfontein WEF, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Happy Valley WEF, Eastern Cape	REISA	Project Manager & EAP
Hidden Valley WEF, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Hopefield WEF, Western Cape	Umoya Energy	Project Manager & EAP
Karoo Renewable Energy Facility, Northern & Western Cape	SARGE	Project Manager & EAP
Karreebosch Wind Farm (Roggeveld Phase 2), Northern Cape & Western Cape	G7 Renewable Energies	Project Manager & EAP
Karusa Wind Farm, Northern Cape	African Clean Energy Development	Project Manager & EAP
Klipheuwel / Dassiesfontein WEF, Western Cape	BioTherm Energy	Project Manager & EAP
Nojoli WEF, Eastern Cape	African Clean Energy Developments	Project Manager & EAP
Nxuba WEF, Eastern Cape	African Clean Energy Developments	Project Manager & EAP
Olifants River WEF, Western Cape	SARGE	Project Manager & EAP

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Oyster Bay WEF, Eastern Cape	RES	Environmental Advisor
Pofadder x3 WEF's, Northern Cape	Mainstream Renewable	Project Manager & EAP
Project Blue WEF, Northern Cape	Windy World	Project Manager & EAP
Rheboksfontein WEF, Western Cape	Moyeng Energy	Project Manager & EAP
Riverbank WEF near Wesley, Eastern Cape	Just Energy	Project Manager & EAP
Sere WEF, Western Cape	Eskom Generation	Project Manager & EAP
Soetwater Wind Farm, Northern Cape	African Clean Energy Development	Project Manager & EAP
Springfontein WEF, Northern Cape	Mainstream Renewable	Project Manager & EAP
Stormberg WEF, Eastern Cape	Networx / Prana Energy	Project Manager & EAP
Suurplaat WEF, Western & Northern Cape	Moyneg Energy	Project Manager & EAP
Uiekraal WEF, Western Cape	Crenergol	Project Manager & EAP
West Coast One WEF, Western Cape	Moyeng Energy	Project Manager & EAP
West Coast WEF, Western Cape	Exxaro	Project Manager & EAP
Zen WEF near Gouda, Western Cape	VentuSA Energy	Project Manager & EAP

#### **Basic Assessments**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Britannia Bay Wind Monitoring Mast, Western Cape	Terra Power Solutions	Project Manager & EAP
Caledon, Worcester & Tulbach Wind Monitoring Masts, Western Cape	SAGIT	Project Manager & EAP
Deep River Wind monitoring Mast, Eastern Cape	VentuSA Energy	Project Manager & EAP
Denhami Wind Farm, Western Cape	Richard Young	Project Manager & EAP
Dorper, Abs & Dobos Wind Monitoring Masts, Eastern Cape	Rainmaker Energy	Project Manager & EAP
Hopefield Wind Monitoring Mast, Western Cape	Umoya Energy	Project Manager & EAP
Klawer Wind Energy Facility, Western Cape	Vendiwell	Project Manager & EAP
Klipheuwel / Dassiesfontein Wind Monitoring Mast, Western Cape	BioTherm Energy	Project Manager & EAP
Riverbank Wind Monitoring Mast, Eastern Cape	Just Energy	Project Manager & EAP
Wind Monitoring Masts near Suurplaat, Western Cape	Investec Bank	Project Manager & EAP
Wind Monitoring Masts on the West Coast & Darling, Western Cape	Investec Bank	Project Manager & EAP

#### **Screening Studies**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Cookhouse WEF, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
De Aar WEF, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Developments within identified areas in the Overberg, Western Cape	BioTherm Energy	Project Manager & EAP
Hopefield WEF, Western Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Juno WEF, Western Cape	AMDA Developments	Project Manager & EAP
Lambert's Bat WEF, Western Cape	Vaayu Energy SA	Project Manager & EAP
Prospect Sites for various WEF's	Thabo Consulting (on behalf of Eskom Holdings)	Project Manager & EAP
Struis Baai area WEF, Western Cape	Richards Young	Project Manager & EAP
Suurplaat WEF, Western Cape	Investec Bank	Project Manager & EAP
Theewaterskloof Municipality WEF, Western Cape	Theewaterskloof Municipality	Project Manager & EAP



<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
WEF's on x2 site on the West Coast, Western Cape	Investec Bank	Project Manager & EAP
Various WEF's in the Western Cape	Department of Environmental Affairs & Development Planning (DEA&DP)	Project Manager & EAP
Van Reenens WEF, Kwa-Zulu Natal & Free State	4GREEN Development Africa	Project Manager & EAP
WEF Development within the Sandveld area, Western Cape	Kovacs Investments (Nick Prium)	Project Manager & EAP

#### **Environmental Compliance, Auditing and ECO**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
ECO for the Construction of the Dorper Phase 1 WEF, Eastern Cape	Rainmaker Energy	Project Manager
ECO for the Construction of the Gouda Wind Farm, Western Cape	Blue Falcon Trading	Project Manager
EO for the Construction of the Dassiesklip WEF, Western Cape	Group Five	Project Manager

#### **Compliance Advice & ESAP Reporting**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Amakhala Emoyeni WEF, Eastern Cape	Windlab Developments	Environmental Advisor
Cookhouse II WEF, Eastern Cape	African Clean Energy Developments	Environmental Advisor
Cookhouse WEF, Eastern Cape	African Clean Energy Developments	Environmental Advisor
Dorper Phase 1 WEF, Eastern Cape	Rainmaker Energy	Environmental Advisor
Garob WEF, Northern Cape	Juwi Renewable Energies	Environmental Advisor
Gouda WEF, Western Cape	Aveng / Acciona	Environmental Advisor
Happy Valley WEF, Eastern Cape	VentuSA Energy / EDPR	Environmental Advisor
Hidden Valley WEF, Northern Cape	African Clean Energy Developments (ACED)	Environmental Advisor
Hopefield WEF, Western Cape	Umoya Energy	Environmental Advisor
Karusa Wind Farm, Northern Cape	African Clean Energy Development	Environmental Advisor
Loperberg WEF, Eastern Cape	Rainmaker Energy	Environmental Advisor
Nobelsfontein WEF, Northern Cape	Coria / SARGE	Environmental Advisor
Nojoli WEF , Eastern Cape	African Clean Energy Developments (ACED)	Environmental Advisor
Nxuba WEF , Eastern Cape	African Clean Energy Developments	Environmental Advisor
Oyster Bay WEF, Eastern Cape	RES	Environmental Advisor
Riverbank Wind WEF, Eastern Cape	InnoWind	Environmental Advisor
Roggeveld Phase 1 WEF, Northern Cape	Building Energy	Environmental Advisor
Soetwater Wind Farm, Northern Cape	African Clean Energy Development	Environmental Advisor
Springfontein WEF, Northern Cape	Mainstream Renewable	Environmental Advisor
Zen WEF, Western Cape	VentuSA Energy	Environmental Advisor

#### **Due Diligence Reporting**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Gouda WEF, Western Cape	Blue Falcon Trading	Environmental Advisor

Project Name & Location	Client Name	Role
Loeriesfontein, Khobab & Noupoort WEF's, Northern Cape	Actis	Environmental Advisor
Roggeveld Wind Farm, Northern Cape	Building Energy	Environmental Advisor

#### **Environmental Permitting & WUL Applications**

Project Name & Location	Client Name	Role
Permitting for the Cookhouse WEF, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Permitting for the Karusa Wind Farm, Northern Cape	African Clean Energy Development	Project Manager & EAP
Permitting for the Sere WEF, Western Cape	Eskom	Project Manager & EAP
Permitting for the Soetwater Wind Farm, Northern Cape	African Clean Energy Development	Project Manager & EAP
Permitting Riverbank WEF, Eastern Cape	Electrawinds	Project Manager & EAP
S24G for the Klipheuwel / Dassiesfontein WEF, Western Cape		Project Manager & EAP
S53 application for the Nxuba Wind Farm, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
S53 Application for the Zen WEF, Western Cape	VentuSA Energy	Project Manager & EAP
WUL application for the Oyster Bay WEF, Eastern Cape	RES	Project Manager & EAP

#### **CONVENTIONAL POWER GENERATION PROJECTS (COAL)**

##### **Environmental Impact Assessments and Environmental Management Programmes**

Project Name & Location	Client Name	Role
H2 Energy Power Station, Mpumalanga	H2 Energy	Project Manager & EAP

##### **Screening Studies**

Project Name & Location	Client Name	Role
Coal fired power station in the Bethal area, Mpumalanga	ISS Global	Project Manager & EAP
Indwe Power Station, Eastern Cape	IPSA	Project Manager & EAP
IPP Base Load Power Station Development in Lephalale, Limpopo	Exxaro	Project Manager & EAP

##### **Environmental Compliance, Auditing and ECO**

Project Name & Location	Client Name	Role
ISO 14001:2015 Audit for the Hendrina Power Station, Mpumalanga	Eskom Holdings	Project Manager

#### **CONVENTIONAL POWER GENERATION PROJECTS (GAS)**

##### **Environmental Impact Assessments and Environmental Management Programmes**

Project Name & Location	Client Name	Role
Ankerlig OCGT to CCGT Conversion project & the Transmission Power Line between Ankerlig and the Omega Substation, Western Cape	Eskom Generation	Project Manager & EAP
Gourikwa OCGT to CCGT Conversion project & the Transmission Power Line between Gourikwa and the Proteus Substation, Western Cape	Eskom Generation	Project Manager & EAP

Neopak Combined Heat and Power (CHP) Plant, Rosslyn, Gauteng	Neopak	Project Manager & EAP
Richards Bay Combined Cycle Gas Turbine (CCGT) Power Plant, Kwa-Zulu Natal	Eskom	Project Manager & EAP

### Screening Studies

Project Name & Location	Client Name	Role
Environmental Analysis for gas transmission pipelines in the Clayville, Nigel, and Wadeville areas, Gauteng	Eskom Holdings	Project Manager

### GRID INFRASTRUCTURE PROJECTS

#### Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Kyalami/Midrand Substation and 3 Transmission Lines, Gauteng	Eskom Transmission	Project Manager & EAP
Steelpoort Integration Project, Limpopo	Eskom Transmission	Project Manager & EAP

#### Basic Assessments

Project Name & Location	Client Name	Role
Amakhala Emoyeni Power Line & Kopleegte Substation, Eastern Cape	Cennergi	Project Manager & EAP
Bon Espirange Substation & Overhead Power Line for the Roggeveld Wind Farm, Northern Cape	Building Energy (G7 Renewable Energies)	Project Manager & EAP
Castle WEF Powerline, Northern Cape	Juwi Renewable Energies	Project Manager & EAP
Cuprum-Burchell; Burchell-Mooidraai Power Line, Northern Cape	Eskom	Project Manager & EAP
Expansion of the Komsberg Main Transmission Substation, Northern Cape	Enel Green Power	Project Manager & EAP
Garob-Kronos Power Line, Northern Cape	Juwi Renewable Energies	Project Manager & EAP
Golden Valley Dx-Poseidon Power Line Substation & Golden Valley-Kopleegte Power Line, Eastern Cape	BioTherm Energy	Project Manager & EAP
Gunstfontein Switching Station, Power Line & Ancillary Infrastructure, Northern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Ilanga Lethemba-Hydra, Northern Cape	Solar Capital	Project Manager & EAP
Iziduli Emoyeni WEF on-site substation, Power Line & Switching station, Access Roads & Watercourse Crossings, Eastern Cape	Windlab	Project Manager & EAP
Khai-Ma WEF Power Line, Northern Cape	Mainstream Renewable	Project Manager & EAP
Korana WEF Power Line, Northern Cape	Mainstream Renewable	Project Manager & EAP
Korana SEF Power Line, Northern Cape	Mainstream Renewable	Project Manager & EAP
Nobelsfontein WEF Power Line & Substation, Northern Cape	Coria / SARGE	Project Manager & EAP
Nojoli WEF Substation & Power Line Grid Connection, Eastern Cape	African Clean Energy Developments (ACED)	Project Manager & EAP
Olifantshoek Substation & Powerline, Northern Cape	Eskom Holdings	Project Manager & EAP
Poortjies WEF Power Line, Northern Cape	Mainstream Renewable	Project Manager & EAP
Power Line & Substation for the Blackwood WEF, Northern Cape	VentuSA Energy	Project Manager & EAP

Power Line & Substation for the Khobab WEF in Loeriesfontein, Northern Cape	Mainstream Renewable	Project Manager & EAP
Power Line Connecting the Sishen SEF to the Ferrum MTS-UMTU Klip Kop Power Line, Northern Cape	Acciona (Windfall 59 Properties)	Project Manager & EAP
Power Line for the Grid Connection of the 2 SEF's near Kath and Dibeng, Northern Cape	VentuSA Energy	Project Manager & EAP
Power Line for the Rhebokfontein WEF, Western Cape	Moyeng Energy	Project Manager & EAP
Power Line from Aggeneys Solar One to Aggeneis MTS Substation, Northern Cape	BlueWave	Project Manager & EAP
Re-alignment of 3 Eskom Power Line Servitudes within the Hopefield WEF, Western Cape	Umoya Energy	Project Manager & EAP
Re-alignment of the Power Line & Watercourse Crossings for the Loeriesfontein 2 WEF, Northern Cape	Mainstream Renewable	Project Manager & EAP
Re-alignment of the Power Line from Loeriesfontein 1 WEF to the Helios Substation, Northern Cape	Mainstream Renewable	Project Manager & EAP
Re-alignment of the Power Line from Loeriesfontein 3 WEF to the Helios Substation, Northern Cape	Mainstream Renewable	Project Manager & EAP
Substation for the Aggeneys PV SEF, Northern Cape	BioTherm Energy	Project Manager & EAP
Substation, Power Line & Watercourse Crossings for the Springfontein WEF, Free State	Mainstream Renewable	Project Manager & EAP
Wesley-Peddie (Riverbank Phase 2) Power Line for the Uncedo Lwethu WEF, Eastern Cape	Just Energy	Project Manager & EAP

#### ***Environmental Compliance, Auditing and ECO***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
EO for the construction of the Neptune-Vuyani Transmission Line, Western Cape	Trans-Africa Projects on behalf of Eskom	Project Manager

#### **INFRASTRUCTURE DEVELOPMENT PROJECTS (BRIDGES, PIPELINES, ROADS, WATER RESOURCES, STORAGE, ETC)**

#### ***Environmental Impact Assessments and Environmental Management Programmes***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Afguns Road Realignment Project, Limpopo	Eskom Holdings	Project Manager & EAP
Expansion of the existing Welgedacht Water Care Works, Gauteng	ERWAT	Project Manager & EAP
Industrial Metals Cluster, Northern Cape	Northern Cape Department of Economic Development and Tourism	Project Manager & EAP
Modification of the existing Hartebeestfontein Water Care Works, Gauteng	ERWAT	Project Manager & EAP

#### ***Basic Assessments***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
New Raw Water Reservoir & Pipeline for the Medupi Power Station, Limpopo	Eskom Holdings	Project Manager & EAP
Msenge Emoyeni WEF Watercourse Crossings, Eastern Cape	Windlab	Project Manager & EAP
Dilokong Transport Facility, Limpopo	South African National Roads Agency Limited (SANRAL)	Project Manager & EAP
Neopak Water Treatment Plant, Gauteng	Neopak	Project Manager & EAP

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Realignment of MR73 Road for the Construction of the Paulputs CSP Facility, Northern Cape	Abengoa Solar	Project Manager & EAP
Biomass Storage Area in Support of the Mkuze Biomass Power Station, KwaZulu-Natal	Building Energy	Project Manager & EAP
Wastewater Dam & Pipeline in Support of the Mkuze Biomass Power Station, Kwa-Zulu Natal	Building Energy	Project Manager & EAP
Watercourse Crossings for the Klaver Wind Energy Facility, Western Cape	Vendiwell	Project Manager & EAP

#### ***Environmental Compliance, Auditing and ECO***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
ECO for the Construction of the Tiffindell Ski Resort, Eastern Cape	Tiffindell Ski	ECO
ECO for the Distribution centre & warehouse at Lords View Industrial Estate, Gauteng	Oliver & Partners	Project Manager
ECO for the Upgrade of the Waterval Wastewater Treatment Works, Gauteng	BCP Palace (on behalf of ERWAT)	Project Manager

#### ***Compliance Advice and reporting***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Mkuze Biomass Plant, Kwa-Zulu Natal	Building Energy	Environmental Advisor
Tiffindell Ski, Eastern Cape	Tiffindell Ski	Environmental Advisor

#### ***Environmental Permitting & WUL Applications***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Permitting, S53 & WULA for the Mkuze Biomass Plant, Kwa-Zulu Natal	Building Energy	Project Manager & EAP
WULA for the Visserhok Waste Tyre Depot, Western Cape	REDISA	Project Manager & EAP
WULA for the Witbank Waste Tyre Depot, Mpumalanga	REDISA	Project Manager & EAP

### **MINING**

#### ***Environmental Compliance, Auditing and ECO***

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Compliance Audit for the Palesa Coal Mine WML, Mpumalanga province	HCI Coal	Project Manager
Compliance Audit Waste Use Licene for the Mbali Coal Mine, Mpumalanga province	HCI Coal	Project Manager

#### **ENVIRONMENTAL MANAGEMENT TOOLS**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
Review the effectiveness *& efficiency of the environmental impact management (EIA) system in South Africa, and formulate an environmental impact management strategy and action plan	National Department of Environmental Affairs	Environmental Advisor
Drafting a Position Paper: Project Financing and Environmental Risk Management (considering IFC	Standard Bank Group	Environmental Advisor

## CURRICULUM VITAE OF THALITA BOTHA

<b>Profession:</b>	Environmental Assessment Practitioner (EAP)
<b>Specialisation:</b>	Environmental Assessments, Report writing, report reviewing, Geographical Information Systems (GIS), development of project proposals for procuring new projects, project administration
<b>Work Experience:</b>	3 and a half years' experience in Environmental Assessments and GIS

### VOCATIONAL EXPERIENCE

Professional execution of consulting services for projects in the environmental management field, specialising in Environmental Impact Assessment studies, environmental permitting, public participation, compilation of Environmental Management Plans and Programmes, environmental policy, and integrated environmental management. Responsibilities include report writing, analysis and the manipulation of geographical and technical experience with the use of ArcGIS, project management, review of specialist studies and the identification and assessment of potential negative environmental impacts and benefits. Compilation of the reports for environmental studies is in accordance with all relevant environmental legislation.

Experience in conducting environmental impact assessments for Concentrated Solar Power (CSP) Projects, Wind Energy Projects and grid infrastructure projects as well as infrastructure projects. Recent projects have been undertaken for both the public- and private-sector, including electricity generation and transmission projects (wind and solar), linear developments (such local roads and power lines), as well as general environmental planning, development and management. The completion of a diverse set of environmental management studies has resulted in a good working knowledge of environmental legislation and policy requirements.

### SKILLS BASE AND CORE COMPETENCIES

- Compilation of environmental impact assessment reports and environmental management programmes in accordance with relevant environmental legislative requirements;
- Analysis and manipulation of geographical information and data and technical experience with the use of ArcGIS;
- Identification and assessment of potential negative environmental impacts and benefits through the review of specialist studies;
- Public participation/involvement and stakeholder consultation;
- Identification of practical and achievable mitigation measures and the compilation of appropriate management plans; and
- Key experience in the assessment of impacts associated with renewable energy and large infrastructure projects.

## EDUCATION AND PROFESSIONAL STATUS

### Degrees:

- B.Sc. (Hons.) Environmental Management (2014), North-West University, Potchefstroom
- B.Sc. Environmental- and Biological Science (2013), North-West University, Potchefstroom

### Courses:

- Integrated Water Resources Management, the National Water Act and Water Use Authorisations (2017), Carin Bosman Sustainable Solutions

## EMPLOYMENT

Date	Company	Roles and Responsibilities
September 2015 - Current	Savannah Environmental (Pty) Ltd	<p>Environmental Assessment Practitioner</p> <p><i>Tasks include: Compilation of Environmental Impact Assessment (EIA) reports; Basic Assessment (BA) reports and Environmental Management Programmes; Environmental Screening reports; Co-ordination of the public participation process; Project management; project proposals and tenders; Client liaison and Marketing; Process EIA Applications.</i></p> <p>GIS (utilising ArcGIS),</p> <p><i>Tasks include: Analysis and manipulation of data, screening assessments; compilation of maps.</i></p>

## PROJECT EXPERIENCE

### Renewable Power Generation Projects: Solar Energy Facilities

#### Basic Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Thaba Eco Hotel SEF, Gauteng	Camco Clean Energy	EAP
Moeding Solar PV Facility, North West Province	Moeding Solar	EAP

#### Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
Hyperion Solar Development 1, Northern Cape Province	Hyperion Solar Development 1	EAP
Hyperion Solar Development 2, Northern Cape Province	Cyraguard	EAP
Hyperion Solar Development 3, Northern Cape Province	Nomispank	EAP
Hyperion Solar Development 4, Northern Cape Province	Nomispan	EAP
Allepad PV One, Northern Cape Province	ILEnergy Development	EAP

<i>Allepad PV Two, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>EAP</i>
<i>Allepad PV Three, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>EAP</i>
<i>Allepad PV Four, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>EAP</i>

### Screening Studies

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Hotazel, Northern Cape Province</i>	<i>ABO Wind</i>	<i>EAP</i>
<i>Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Vryburg, North West Province</i>	<i>ABO Wind</i>	<i>EAP</i>

### Geographical Information Systems (GIS)

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Sol Invictus PV 1, Aggeneys, Northern Cape</i>	<i>Cyraclox</i>	<i>GIS</i>
<i>Sol Invictus PV 2, Aggeneys, Northern Cape</i>	<i>Cyracraft</i>	<i>GIS</i>
<i>Sol Invictus PV 3, Aggeneys, Northern Cape</i>	<i>Cyrafusion</i>	<i>GIS</i>
<i>Sol Invictus PV 4, Aggeneys, Northern Cape</i>	<i>Cyralex</i>	<i>GIS</i>
<i>Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Hotazel, Northern Cape Province</i>	<i>ABO Wind</i>	<i>GIS</i>
<i>Pre-feasibility desktop screening and fatal flaw analysis for a solar PV project near Aggeneys, North West Province</i>	<i>ABO Wind</i>	<i>GIS</i>
<i>Moeding Solar PV Facility, North West Province</i>	<i>Moeding Solar</i>	<i>GIS</i>
<i>Hyperion Solar Development 1, Northern Cape Province</i>	<i>Hyperion Solar Development 1</i>	<i>GIS</i>
<i>Hyperion Solar Development 2, Northern Cape Province</i>	<i>Cyraguard</i>	<i>GIS</i>
<i>Hyperion Solar Development 3, Northern Cape Province</i>	<i>Nomispark</i>	<i>GIS</i>
<i>Hyperion Solar Development 4, Northern Cape Province</i>	<i>Nomispan</i>	<i>GIS</i>
<i>Allepad PV One, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>GIS</i>
<i>Allepad PV Two, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>GIS</i>
<i>Allepad PV Three, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>GIS</i>
<i>Allepad PV Four, Northern Cape Province</i>	<i>ILEnergy Development</i>	<i>GIS</i>

### Renewable power generation projects: Wind Energy Facilities

#### Environmental Impact Assessments and Environmental Management Programmes

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Hartebeest WEF, Moorreesburg, Western Cape</i>	<i>Hartebeest Wind Farm</i>	<i>EAP</i>

#### Environmental Permitting & WUL Applications

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Karusa WEF WUL Application, Northern Cape</i>	<i>ACED</i>	<i>EAP</i>
<i>Soetwater WEF WUL Application, Northern Cape</i>	<i>ACED</i>	<i>EAP</i>



### **Geographical Information Systems (GIS)**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Hartebeest WEF, Moorreesburg, Western Cape</i>	<i>Hartebeest Wind Farm</i>	<i>GIS</i>
<i>Karusa WEF WUL Application, Northern Cape</i>	<i>ACED</i>	<i>GIS</i>
<i>Soetwater WEF WUL Application, Northern Cape</i>	<i>ACED</i>	<i>GIS</i>

### **Renewable Power Generation Projects: Concentrated Solar Facilities (CSP)**

#### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Ilanga CSP 9, Northern Cape</i>	<i>Emvelo Holdings</i>	<i>EAP</i>
<i>Noupoort CSP, Northern Cape</i>	<i>CRESCO Energy</i>	<i>EAP</i>

### **Geographical Information Systems (GIS)**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Noupoort CSP, Northern Cape</i>	<i>CRESCO Energy</i>	<i>GIS</i>

### **Renewable Power Generation Projects: Hydroelectrical Power Generation Facilities**

#### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Kruisvallei Hydroelectric Power Generation Scheme</i>	<i>Zevobuzz</i>	<i>EAP</i>

### **Geographical Information Systems (GIS)**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Kruisvallei Hydroelectric Power Generation Scheme</i>	<i>Zevobuzz</i>	<i>GIS</i>

### **Environmental Permitting & WUL Applications**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>WULA for the Kruisvallei Hydroelectric Power Generation Scheme</i>	<i>Zevobuzz</i>	<i>EAP</i>
<i>GA for the power line associated with the Kruisvallei Hydroelectric Power Generation Scheme</i>	<i>Zevobuzz</i>	<i>EAP</i>

### **Steam Generation Projects:**

#### **Environmental Impact Assessments and Environmental Management Programmes**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Clayville Thermal Plant, Gauteng</i>	<i>Bellmall Energy</i>	<i>EAP</i>

### **Screening Studies**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Fatal flaw analysis for the Clayville Thermal Plant, Gauteng</i>	<i>Bellmall Energy</i>	<i>EAP</i>

### **Geographical Information Systems (GIS)**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>Clayville Thermal Plant, Gauteng</i>	<i>Bellmall Energy</i>	<i>GIS</i>

## Grid Infrastructure Projects

### Basic Assessments

Project Name & Location	Client Name	Role
<i>Gunstfontein Switching Station and Power Line, Northern Cape</i>	<i>ACED</i>	<i>EAP</i>
<i>Zonnebloem Switching Station and Power Lines, Mpumalanga</i>	<i>Eskom SOC Ltd</i>	<i>EAP</i>

### Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
<i>Zonnebloem Switching Station and Power Lines, Mpumalanga</i>	<i>Eskom SOC Ltd</i>	<i>GIS</i>

## Mining Sector Projects

### Environmental Permitting & WUL Applications

Project Name & Location	Client Name	Role
<i>S53 for Steynsrus PV 1, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>EAP</i>
<i>S53 for Steynsrus PV 2, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>EAP</i>
<i>S53 for Heuningspruit PV 1, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>EAP</i>

### Geographical Information Systems (GIS)

Project Name & Location	Client Name	Role
<i>S53 for Steynsrus PV 1, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>GIS</i>
<i>S53 for Steynsrus PV 2, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>GIS</i>
<i>S53 for Heuningspruit PV 1, Western Cape</i>	<i>Cronimet Power Solutions</i>	<i>GIS</i>

## Infrastructure Development Projects (bridges, pipelines, roads, waste etc)

### Basic Assessments

Project Name & Location	Client Name	Role
<i>MN73 Road Realignment, Northern Cape</i>	<i>Northern Cape Department of Roads and Public Works</i>	<i>EAP</i>
<i>S24G for the unlawful commencement of activities within a watercourse, Honeydew, Gauteng</i>	<i>Soror Language Services cc</i>	<i>EAP</i>
<i>Access Roads and Watercourse Crossings for the Iziduli Emoyeni Wind Energy Facility</i>	<i>Emoyeni Wind Farm Renewable Energy</i>	<i>EAP</i>
<i>Access Roads and Watercourse Crossings for the Msenge Emoyeni Wind Energy Facility</i>	<i>Amakhala Emoyeni Renewable Energy</i>	<i>EAP</i>
<i>Masetjaba Water Reservoir and Elevated Tower, Gauteng</i>	<i>City of Ekurhuleni Metropolitan Municipality</i>	<i>EAP</i>

### Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	Client Name	Role
<i>S24G for the operation of a Aluminium, Alumino-thermic, Briquetting, Separation and Manganese Plant, Gauteng Province</i>	<i>GfE-MIR Alloys and Minerals SA</i>	<i>EAP</i>

**Geographical Information Systems (GIS)**

<b>Project Name &amp; Location</b>	<b>Client Name</b>	<b>Role</b>
<i>MN73 Road Realignment, Northern Cape</i>	<i>Northern Cape Department of Roads and Public Works</i>	<i>GIS</i>
<i>S24G for the unlawful commencement of activities within a watercourse, Honeydew, Gauteng</i>	<i>Soror Language Services cc</i>	<i>GIS</i>
<i>Access Roads and Watercourse Crossings for the Iziduli Emoyeni Wind Energy Facility</i>	<i>Emoynei Wind Farm Renewable Energy</i>	<i>GIS</i>
<i>Access Roads and Watercourse Crossings for the Msenge Emoyeni Wind Energy Facility</i>	<i>Amakhala Emoyeni Renewable Energy</i>	<i>GIS</i>
<i>S24G for the operation of a Aluminium, Alumino-thermic, Briquetting, Separation and Manganese Plant, Gauteng Province</i>	<i>GfE-MIR Alloys and Minerals SA</i>	<i>GIS</i>
<i>Masetjaba Water Reservoir and Elevated Tower, Gauteng</i>	<i>City of Ekurhuleni Metropolitan Municipality</i>	<i>GIS</i>
<i>Wilmar Vegetable Oil Pipeline, KwaZulu-Natal</i>	<i>Wilmar Processing</i>	<i>GIS</i>
<i>Desktop Screening Assessment for a Vegetable Oil Pipeline, KwaZulu-Natal</i>	<i>Wilmar Processing</i>	<i>GIS</i>
<i>Kriel Power Station Lime Plant Upgrade, Mpumalanga</i>	<i>Eskom Holdings SOC</i>	<i>GIS</i>

## Short CV/Summary of Expertise – Simon Todd

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 <p><b>3Foxes Biodiversity Solutions</b> <b>ECOLOGICAL SPECIALIST SERVICES</b> Assessment/Management/Research</p>	<p>Simon Todd <a href="#">Pr.Sci.Nat</a> Director &amp; Principle Scientist C: 082 3326502 O: 021 782 0377 <a href="mailto:Simon.Todd@3foxes.co.za">Simon.Todd@3foxes.co.za</a> 60 Forrest Way <a href="#">Glencairn</a> 7975</p>	<p>Ecological Solutions for People &amp; the Environment</p>
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Simon Todd is Director and principal scientist at 3Foxes Biodiversity Solutions Pty Ltd (Reg. 2016/467883/07) and has over 20 years of experience in biodiversity measurement, management and assessment. He has provided specialist ecological input on more than 200 different developments distributed widely across the country, but with a focus on the three Cape provinces. This includes input on the Wind and Solar SEA (REDZ) as well as the Eskom Grid Infrastructure (EGI) SEA and Karoo Shale Gas SEA. He is on the National Vegetation Map Committee as representative of the Nama and Succulent Karoo Biomes. Simon Todd is a recognised ecological expert and is a past chairman and current deputy chair of the Arid-Zone Ecology Forum. Simon Todd is registered with the South African Council for Natural Scientific Professions (No. 400425/11).

### **Abbreviated CV:**

- Profession: Independent Ecological Consultant - Pr.Sci.Nat 400425/11
- Specialisation: Plant & Animal Ecology
- Years of Experience: 20 Years

### *Skills & Primary Competencies*

- Research & description of ecological patterns & processes in Nama Karoo, Succulent Karoo, Thicket, Arid Grassland, Fynbos and Savannah Ecosystems.
- Ecological Impacts of land use on biodiversity
- Vegetation surveys & degradation assessment & mapping
- Long-term vegetation monitoring
- Faunal surveys & assessment.
- GIS & remote sensing

### *Tertiary Education:*

- 1992-1994 – BSc (Botany & Zoology), University of Cape Town
- 1995 – BSc Hons, Cum Laude (Zoology) University of Natal
- 1996-1997- MSc, Cum Laude (Conservation Biology) University of Cape Town

### *Employment History*

- 2010-Present – Self-employed as consultant and sole proprietor of Simon Todd Consulting, which provides ecological specialist services for conservation, research, management and development projects. This has recently been upgraded to a fully registered and compliant company, 3Foxes Biodiversity Solutions.
- 2007-Present – Senior Scientist (Associate) – Plant Conservation Unit, Department of Botany, University of Cape Town.
- 2004-2007 – Senior Scientist (Contract) – Plant Conservation Unit, Department of Botany, University of Cape Town
- 2000-2004 – Specialist Scientist (Contract) - South African National Biodiversity Institute
- 1997 – 1999 – Research Scientist (Contract) – South African National Biodiversity Institute

### *General Experience & Expertise*

- Conducted a large number of fauna and flora specialist assessments distributed widely across South Africa. Projects have ranged in extent from <50 ha to more than 50 000 ha.
- Widely-recognized arid ecology specialist. Published numerous peer-reviewed scientific publications based on various ecological studies across the country. Past chairman of the Arid Zone Ecology Forum and current executive committee member.
- Extensive experience in the field and exceptional level of technical expertise, particularly with regards to GIS capabilities which is essential with regards to producing high-quality sensitivity maps for use in the design of final project layouts.
- Strong research background which has proved invaluable when working on several ecologically sensitive and potentially controversial sites containing some of the most threatened fauna in South Africa.
- Published numerous research reports as well as two book chapters and a large number of papers in leading scientific journals dealing primarily with human impacts on the vegetation and ecology of the arid and semi-arid parts of South Africa.
- Maintain several long-term vegetation monitoring projects distributed across Namaqualand and the karoo.
- Guest lecturer at two universities and have also served as an external examiner.
- Reviewed papers for more than 10 international ecological journals.
- Past chairman and current committee member of the Arid Zone Ecological Forum.
- SACNASP registered as a Professional Natural Scientist, (Ecology) No. 400425/11.

A selection of recent work is as follows:

### *Specialist Assessments:*

#### **Strategic Environmental Assessments**

Co-Author. Chapter 7 - Biodiversity & Ecosystems - Shale Gas SEA. CSIR 2016.

Co-Author. Chapter 1 Scenarios and Activities – Shale Gas SEA. CSIR 2016.  
Co-Author – Ecological Chapter – Wind and Solar SEA. CSIR 2014.  
Co-Author – Ecological Chapter – Eskom Grid Infrastructure SEA. CSIR 2015.  
Contributor – Ecological & Conservation components to SKA SEA. CSIR 2017.

*Specialist Fauna and Flora Assessments:*

**Electrical Transmission Infrastructure**

Vryheid Grid Strengthening Project, near Swellendam. Nsovo Environmental Consultants. 2016.  
Juno-Gromis 400kV Power Line. Ecological Walk-Through study for EMPr. Nsovo Environmental Consultants. 2017.  
Proposed Weskusfleur Substation at Koeberg. Lidwala Consulting Engineers. 2015.  
Proposed Juno-Aurora 765kV Power Line in the Western Cape: Fauna & Flora Specialist Report for Impact Assessment. Nzumbulolo Heritage Solutions 2015.  
The proposed Mookodi Integration Phase 2 132kV Power Lines and Ganyesa Substation near Vryburg, North West Province: Fauna & Flora Specialist Basic Assessment Report. Sivist 2014.  
Basic Assessment Process for the Proposed Construction of the Transnet 7km 50 kV Power Line from Eskom Juno Substation to the proposed new Transnet Juno Traction Feeder Substation. Nsovo Environmental Consulting. 2014.  
Basic Assessment Process for the Proposed Construction of the Transnet 5km 50 kV Power Line from Eskom Aries Substation to the proposed new Transnet Aries Traction Feeder Substation. Nsovo Environmental Consulting. 2014.  
Basic Assessment Process for the Proposed Construction of the Transnet 15km 50 kV Power Line from Eskom Helios Substation to the proposed new Transnet Helios Traction Feeder Substation. Nsovo Environmental Consulting. 2014.  
Burchell-Caprum-Mooidraai 132kV Power Line - Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2014.  
Proposed Re-Alignment Of The Koeberg – Ankerlig VPower Line: Fauna & Flora Specialist Report For Basic Assessment. Savannah Environmental 2014.  
Grid Connection for Redstone Solar Thermal Energy Plant- Redstone Solar Thermal to Olien Mts: Fauna & Flora Specialist Basic Assessment Report. SiVest 2014.  
Grid Connection for Mainstream South Africa Perdekraal Wind Energy Facility. Fauna & Flora Specialist Report for Basic Assessment. ERM 2014.  
Karoshoek Grid Integration Infrastructure. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.  
Garob to Kronos Power Line - Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.  
Loeriesfontein Wind Energy Facility – Substation & Grid Connection. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.

Gouda Wind Energy Facility – Grid Connection. Walk-Through of Overhead Power Line - Gouda WEF to Eskom Windmill Substation. Specialist Report for Savannah Environmental. 2012.

Proposed Kappa-Omega 765 kV Transmission Line. Fauna, Flora & Ecology Walk-Through Report. Specialist Report for ACER Africa. 2013.

#### **Infrastructure & Mining Developments:**

Environmental Impact Assessment for the Proposed Putsberg Open Cast Mine Near Pofadder, Northern Cape. Fauna & Flora Specialist Report for EIA. Ecopartners 2013.

Proposed Establishment of the Gamsberg Zinc Mine, Concentrator Plant and Associated Infrastructure near the Town of Aggeneys, Northern Cape. Fauna & Flora Specialist Report For ESIA. ERM 2013.

Pella Water Board – Infrastructure Upgrade. Fauna & Flora Specialist Report for Basic Assessment. Environmental Resources Management 2012.

Transnet Manganese Ore Line Upgrade. Fauna & Flora Specialist Report for Basic Assessment. Environmental Resources Management 2012.

Proposed Vryburg Wastewater Treatment Works: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Endemic Vision 2013.

Proposed Mamatwane Compilation Yard, Northern Cape: Fauna & Flora Specialist Report for Impact Assessment. Environmental Resources Management 2013.

Rare Earth Separation Plant Near Vredendal, Western Cape Province. Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2012.

Proposed Mocke Poultry Farm: Fauna & Flora Specialist Report for Basic Assessment. Enviroworks 2015.

Basic Assessment for proposed Neotel Fibre Optic Cable Route 1 from George to Oudtshoorn. Fauna & Flora Specialist Report for Basic Assessment. Enviroworks 2015.

Basic Assessment for proposed Neotel Route 2 Fibre Optic Cables from Prince Albert Road to Oudtshoorn via the N12. Enviroworks 2015.

Basic Assessment for proposed Neotel Route 3 Fibre Optic Cables from Oudtshoorn to George via R328 and R102. Enviroworks 2015.

Basic Assessment for proposed Neotel Route 4 Fibre Optic Cables from Laingsburg to Oudtshoorn via Ladismith along the R323 and R62. Enviroworks 2015.

Improvements to the Ou Kaapse Weg / Silvermine Road Intersection. Specialist Faunal Study For Basic Assessment. Khula Environmental Consultants, 2012.

Upgrading of Tourism Facilities at Goegap Nature Reserve. Specialist Ecological Assessment. Van Zyl Environmental Consultants. 2012.

Plant Sweeps on Portion 2 of the Farm Demaneng 546, Kuruman District, Northern Cape Province for SA Manganese. 2011.

#### **Solar Energy Developments:**

Sol Invictus PV-1-4 Power Plants, near Aggeneys. Fauna and Flora Assessment. Savannah Environmental 2016.

Illanga Karoshoek CSP 1-5 near Upington. Fauna and Flora Assessment. Savannah Environmental 2016.

Mogobe, Legoko & Kathu 75MW Solar PV Plants, near Kathu, Northern Cape. Fauna and Flora Assessment. Cape EAPrac. 2015.

Environmental Impact Assessment for the Proposed Wolmarransstad Solar Energy Facility North West Province. Fauna & Flora Specialist Report for EIA. Savannah Environmental 2015

Environmental Impact Assessment for the proposed Humansrus Solar PV Energy Facility 1 Near Copperton, Northern Cape: Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the proposed Humansrus Solar PV Energy Facility 2 Near Copperton, Northern Cape: Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the proposed Dyasonsklip Solar Energy Facility 1 Near Upington, Northern Cape: Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the proposed Postmasburg Solar PV Energy Facility 2 and Associated Grid Connection Infrastructure, Postmasburg, Northern Cape. Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the proposed Joram Solar Vryheid PV Project, Northern Cape. Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the proposed Richtersveld Solar Farm and Associated Grid Connection Infrastructure. Fauna & Flora Specialist Report for EIA. CapeEAPrac 2015.

Environmental Impact Assessment for the Proposed Re Capital 3 Solar Energy Facility and Associated Grid Connection Infrastructure, Dyason's Klip, Northern Cape. Fauna & Flora Specialist Report for EIA. CapeEAPrac 2013.

Environmental Impact Assessment for the Proposed Richtersveld Solar Farm and Associated Grid Connection Infrastructure. Fauna & Flora Specialist Report for EIA. CapeEAPrac 2014.

Environmental Impact Assessment for the Proposed Bosjesmansberg Solar Energy Facility East of Copperton, Northern Cape Province. Fauna & Flora Specialist Report for EIA. Savannah Environmental 2013.

Specialist Vegetation Assessment for EIA. The Proposed Commercial Concentrated Solar Power Tower Facility and Concentrated Photovoltaic Facility at Van Roois Vley Near Upington. WSP 2012.

Proposed Les Marais \ Buitenfontein 5MW Solar Energy Facility in the Free State: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Savannah Environmental 2013.

Proposed Stella Helpmekaar Solar Energy Facility in the North West Province: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Savannah Environmental 2013.

Proposed Wolmaransstad Municipality 5MW Solar Energy Facility in the North West Province: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Savannah Environmental 2013.

Proposed Heuningspruit PV1 and PV2 Solar Energy Facilities Near Koppies, Free State Province: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Savannah Environmental 2013.

Proposed Hibernia PV Solar Energy Facility near Lichtenburg: Terrestrial Fauna & Flora Specialist Study For Basic Assessment. Savannah Environmental 2013.



Proposed Steynsrus PV1 And PV2 Solar Energy Facilities: Terrestrial Fauna & Flora Specialist Study for Basic Assessment. Savannah Environmental 2013.

Proposed Photovoltaic Solar Energy Facility on Konkoonsies, Northern Cape: Fauna & Flora Specialist Report for Impact Assessment. EScience Associates 2012.

Proposed Padrooi 13 Photovoltaic Solar Energy Facility, Northern Cape: Fauna & Flora Specialist Report for Impact Assessment. EScience Associates 2012.

Adams Photovoltaic Solar Energy Facility, Northern Cape: Fauna & Flora Specialist Report for Impact Assessment. EScience Associates 2012.

Proposed Photovoltaic Solar Energy Facility on Klein Swart Bast, Northern Cape: Fauna & Flora Specialist Report for Impact Assessment. EScience Associates 2012.

Proposed Khoi-Sun Solar Facility. Fauna & Flora Specialist Report for Impact Assessment. Cape EAPrac 2012.

Suurwater 62, Boesmanland 75mw Solar Farm, Aggeneys. Fauna & Flora Specialist Report for Impact Assessment. Cape EAPrac 2012.

Karoshhoek Solar Valley Development, Upington: Fauna & Flora Specialist Impact Assessment Report. Savannah Environmental. 2012.

O’Kiep 3 PV Solar Energy Facility on a Site In O’kiep Near Springbok, Northern Cape Province. Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2012.

Photovoltaic Solar Energy Facility on Voëlklip, South of Springbok. Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2012.

Namaqua Photovoltaic Solar Energy Facility on a Site North of Kamieskroon. Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2012.

Inca Graafwater Photovoltaic Solar Energy Facility, Graafwater, Western Cape Province. Faunal Ecology Specialist Report for Impact Assessment. Savannah Environmental 2012.

Aberdeen Solar Facility. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.

Venetia Solar Facility. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.

Southern Cross Solar Energy Facility: Southern Farm 425. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.

Tutwa Solar Energy Facility: Portion 4 of Narries 7. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Savannah Environmental. 2012.

Valleydora Photovoltaic Solar Power Plant, Free State. Fauna & Flora Specialist Report. CSIR, 2012.

Reddersburg Solar Facility - Fauna & Flora Specialist Assessment. CSIR, 2012.

Melkvele Photovoltaic Solar Power Plant. Fauna & Flora Specialist Report for Basic Assessment. Specialist report for ERM. 2012.

Ruinte Photovoltaic Solar Power Plant. Fauna & Flora Specialist Report for Basic Assessment. Specialist report for ERM. 2012.

Genoegsaam Solar Park. Fauna & Flora Specialist Report for Basic Assessment. Specialist report for ERM. 2012.

Genoegsaam Solar Park. Fauna & Flora Specialist EIA Report. Specialist report for ERM. 2012.

Graspan Solar Facility. Fauna & Flora Specialist Report for Impact Assessment. Specialist report for ERM. 2012.

Olyven Kolk Solar Power Plant, Northern Cape: Botanical and Faunal Specialist Assessment. Specialist Report for Environmental Resources Management (ERM). 2011.

Skuitdrift Solar Facility. Fauna & Flora Specialist Report for Basic Assessment. Specialist Report for Cape EAPrac. 2012.

Beaufort West Solar Facility, Erf 7388 - Fauna & Flora Specialist Assessment. Specialist Report for Cape EAPrac. 2012.

Khoi-Sun Solar Facility. Fauna & Flora Specialist Scoping Report. Specialist Report for Cape EAPrac. 2012.

Boesmanland Solar Farm. Fauna & Flora Specialist Scoping Study. Specialist Report for Cape EAPrac. 2012.

Bitterfontein Solar Plant - Fauna & Flora Specialist Assessment. Specialist Report for Cape EAPrac. 2012.

**Wind Farm Developments:**

Environmental Impact Assessment for the Proposed Komsberg East and Komsberg West Wind Farms and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. Arcus 2014.

Proposed Rietkloof Wind Farm and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. EOH 2016.

Proposed Brandvallei Wind Farm and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. EOH 2016.

Proposed Gunstfontein Wind Farm and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. Savannah Environmental 2016.

Mainstream South Africa Dwarsrug Wind Energy Facility: Fauna & Flora Specialist Impact Assessment Report. Sivist 2014.

Proposed Spitskop Wind Energy Facility near Cookhouse: Fauna & Flora Specialist Study for Impact Assessment. Savannah Environmental 2013.

Environmental Impact Assessment for the Proposed Roggeveld Wind Energy Facility and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Report for EIA. Savannah Environmental 2013.

Proposed Mainstream South Africa Springfontein Wind Energy Facility: Terrestrial Fauna & Flora Specialist Study for EIA. Savannah Environmental 2012.

Environmental Impact Assessment for the Establishment of the Wolseley Wind Farm, Western Cape Province. Fauna & Flora Specialist Report. Arcus Gibb 2012.

Proposed Eskom 300MW Kleinsee Wind Energy Facility. Fauna Specialist Report For Impact Assessment. Savannah Environmental 2012.

Proposed Inca Energy Swellendam Wind Energy Facility: Fauna Specialist Report For Impact Assessment. Savannah Environmental 2012.

Proposed Hartebeest Wind Energy Facility: Fauna & Flora Specialist EIA Report For Impact Assessment. Savannah Environmental 2016.

Terrestrial Ecology Specialist Study for the Proposed Establishment of a Renewable Energy Facility near Sutherland, Western and Northern Cape Provinces. Environmental Resources Management (ERM) 2011.

Roggeveld Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management (ERM). 2011.

Zen Wind Energy Facility. Fauna & Flora Specialist Impact Assessment Report. Savannah Environmental. 2012.

Proposed Project Blue Wind and Solar Energy Facility, Near Kleinsee. Fauna Specialist Report For Impact Assessment. Savannah Environmental 2012.

Garob Wind Farm: Fauna & Flora Specialist Report for Impact Assessment. Savannah Environmental 2012.

Loeriesfontein Wind Energy Facility – Substation & Grid Connection. Fauna & Flora Specialist Report for Basic Assessment. Savannah Environmental 2012.

Noblesfontein Wind Energy Facility, Victoria West. Ecological Walk-Through Report. Savannah Environmental 2012.

Gouda Wind Energy Facility. Fauna And Flora Walk Through Report. Savannah Environmental 2012.

Klawer Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management. 2011.

Lambert's Bay Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management. 2011.


Richtersveld Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management (ERM). 2011.

Witberg Wind Farm: Ecological and Biodiversity Assessment: Terrestrial Vertebrate Fauna & Botanical Specialist Study. Specialist Report for Environmental Resources Management (ERM). 2011.

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## SHORT CV/SUMMARY OF EXPERTISE

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 <p><b>3Foxes Biodiversity Solutions</b> <b>ECOLOGICAL SPECIALIST SERVICES</b> Assessment/Management/Research</p>	<p>Simon Todd <a href="#">Pr.Sci.Nat</a> Director &amp; Principle Scientist C: 082 3326502 O: 021 782 0377 <a href="mailto:Simon.Todd@3foxes.co.za">Simon.Todd@3foxes.co.za</a>  60 Forrest Way <a href="#">Glencairn</a> 7975</p>	<p>Ecological Solutions for People &amp; the Environment</p>
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### Eric Herrmann

Eric Herrmann is an avifaunal specialist with over 15 years of experience in biodiversity research and conservation in the Northern Cape. He completed a B.Tech Degree in Nature Conservation (1997) at the Cape Technikon, followed by a Masters in Conservation Ecology at the University of Stellenbosch (2004). He has worked as a research assistant for the Endangered Wildlife Trust (1999-2001) in the Kgalagadi Transfrontier Park, and then for the Percy FitzPatrick Institute of African Ornithology (University of Cape Town) as project manager of a field research centre near Kimberley (2003 to 2006). In 2006 he joined the provincial Department of Environment and Nature Conservation (DENC) in Kimberley as a faunal scientist until 2012. Since 2016 he has been working independently as an avifaunal specialist largely on wind and solar energy projects in the Western and Northern Cape.

#### *Tertiary Education:*

- 1994 - 1997 – National Diploma: Nature Conservation (cum laude), Cape Technikon
- 1998 - 1999 – B.Tech Degree: Nature Conservation (cum laude), Cape Technikon
- 2000 - 2004 – MFor: Conservation Ecology (cum Laude), University of Stellenbosch

#### *Employment History*

- 2016 - Present – Independent contractor, avifaunal specialist for renewable energy projects.
- 2006 - 2012 – Senior Conservation Scientist, Department of Environment and Nature Conservation, Kimberley.
- 2003 - 2006 – Research Assistant and Field Projects Manager, Percy Fitzpatrick Institute of African Ornithology, Cape Town
- 2001 - 2002 – Field Researcher, Deciduous Fruit Producers Trust, Stellenbosch.
- 1999 - 2001 – Research Assistant, Endangered Wildlife Trust, Johannesburg.

Recent Specialist Avifaunal Studies include the following:

- Dassieklip Wind Facility. Avifaunal post-construction monitoring. BTE Wind Pty (Ltd). 2018/19.
- Excelsior Wind Facility. Avifaunal pre-construction monitoring. BTE Wind Pty (Ltd). 2018/19.
- Kathu Hyperion Solar PV Facility, Kathu. Fauna and Flora EIA Process. Cape EAPrac 2018.
- Gaetsewe Solar PV Facility, Kathu. Avifaunal Scoping Report. Cape EAPrac 2018.
- Mogara Solar PV Facility, Kathu. Avifaunal Scoping Report. Cape EAPrac 2018.

- Mamre Wind Facility. Avifaunal pre-construction monitoring. Mulilo Renewable Project Developments. 2017.
- Soventix Solar PV Facility (De Aar). Avifaunal Specialist Scoping and EIA Reports. Ecoleges. 2017.
- Olifantshoek-Emil 132kV power line, Olifantshoek. Fauna and Flora BA process. Savannah Environmental 2017.
- Klondike (Vryburg) Solar PV Facility. Ecological Specialist Report for EIA. Cape EAPrac 2016.

## CURRICULUM VITAE

### Jenna Lavin

Tel: 083 619 0854 (c)

E-mail address: jenna.lavin@gmail.com

ID number: 8512050014089

Address: 7 Carey Street, Woodstock, cape Town

### EDUCATION:

#### **Tertiary**

- 2014 M.Phil in Conservation of the Built Environment (University of Cape Town)  
- Not completed as of 2017
- 2011 Continued Professional Development Course in Urban Conservation  
Management (University of Cape Town) Part I and Part II
- 2010 M.Sc. with Distinction in Archaeology (University of Cape Town)  
Title: *Palaeoecology of the KBS member of the Koobi Fora Formation: Implications for  
Pleistocene Hominin Behaviour.*
- 2007 B.Sc. Honours in Archaeology (University of Cape Town)  
Title: *The Lost Tribes of the Peninsula: An Investigation into the historical distribution of  
Chacma baboons (*Papio ursinus*) at the Cape Peninsula, South Africa.*  
Koobi Fora Field School, Rutgers University (U.S.A.)/ National Museums of Kenya
- 2006 B.Sc. Archaeology (University of Cape Town)  
B.Sc. Environmental and Geographic Science (University of Cape Town)

#### **Secondary**

- 1999-2003 Rustenburg High School for Girls  
Firsts in English, Afrikaans, Mathematics HG, Biology HG, History HG, Entrepreneurship.

### EMPLOYMENT HISTORY:

#### **PROFESSIONAL DEVELOPMENT**

##### **Environmental and Heritage Management:**

- **Director: Heritage for CTS heritage and member of OpenHeritage NPC.**

*July 2016 to present*

I am a member of the senior management of the company. I am responsible for project management and quality control on all of our heritage-related projects. I provide specialist heritage expertise when required and assist with the drafting of management plans, impact assessments and other specialist reports. I liaise with clients, authorities and other specialists to ensure the highest quality product from CTS Heritage. I manage the budgets and financial compliance for all our projects and for the business in general. In addition, I manage a specialist team of two archaeologists. We have recently been involved in developing the online map for the National Resistance and Liberation Heritage Route with DAC.

Through OpenHeritage, I have been intimately involved with the development, and successful implementation of, of a digital heritage objects management system for the National Museum in Kenya as well as Tristan da Cunha.

- **Assistant Director for Policy, Research and Planning at Heritage Western Cape (HWC).**

*August 2014 to June 2016*

As a member of the management structure of HWC, I was responsible for the drafting of new heritage related policy, the grading and declaration of Provincial Heritage Sites, the development of Conservation Management Plans, facilitating the development of inventories of heritage resources through local authorities as well as managing the development of the Western Cape's Heritage Information Management System (HIMS). I was also responsible for managing the project to nominate the Modern Human Origins proposed World Heritage Site.

I performed the role of Acting Deputy Director for HWC from April to December 2015, including financial management responsibilities, problem solving and the training of new staff.

- **Heritage Officer for Palaeontology and for the Mpumalanga Province at the South African Heritage Resources Agency (SAHRA).**

*January 2013 to June 2014*

Responsibilities include managing palaeontological permit applications in terms of Section 35 of the NHRA and development applications in terms of Section 38 of the NHRA. Projects included the development of a National Palaeotechnic Report identifying significant palaeontological deposits throughout SA, as well as developing professional relationships between SAHRA and the Palaeontological Society of South Africa (PSSA) and the Geological Society of South Africa (GSSA). During this time, I was part of the team that developed the digitised National Palaeontological Sensitivity Map, the first of its kind in the world.

- **Heritage Officer for Archaeology, Palaeontology and Meteorites at Heritage Western Cape (HWC).**

*September 2010 to December 2012*

HWC is a Public Entity that forms part of the Heritage Resource Management Component of the Provincial Governments' Department of Cultural Affairs and Sport (DCAS). Projects included the declaration of Pinnacle Point and the West Coast Fossil Park as Provincial Heritage Sites (PHSs), the management of the development of the Baboon Point PHS Conservation Management Plan as well as an educational outreach program as part of the DCAS MOD Centre Project.

- **Heritage Officer for the Archaeology, Palaeontology and Meteorites Unit of the South African Heritage Resources Agency (SAHRA) as part of a three month contract.**

*January 2010 to March 2010*

- **Environmental Control Officer, Amathemba Environmental Management Consulting**

*Part time: 2007 to 2009*

### Field Work Experience:

- 2008-2009 Field Assistant, Dr. D. Braun, Elandsfontein Excavation Locality, University of Cape Town (UCT)  
Field Assistant, Dr. D. Braun, Koobi Fora Research Project (Kenya), Rutgers University, New Jersey
- 2006 Field Assistant, Damiana Ravasi (PhD), Zoology Department, University of Cape Town.
- 2005 Research Assistant, Dr. Becky Ackerman, Archaeology Department, University of Cape Town
- 2004 Field Assistant, Prestwich Place Excavation Locality, Archaeology Contracts Office, UCT

### Teaching Positions:

- 2017 Guest Lecturer, South African Heritage Legislation, George Washington University Heritage Management Field School
- 2016 Guest Lecturer, South African Heritage Legislation, Archaeology Honours Course, University of Cape Town
- 2015 Guest Lecturer, South African Heritage Legislation, Archaeology Honours Course, University of Cape Town
- 2014 Guest Lecturer, South African Heritage Legislation, Archaeology Honours Course, University of Cape Town
- 2013 Guest Lecturer, South African Heritage Legislation, Archaeology Honours Course, University of Cape Town
- 2010 Teaching Assistant, Langebaanweg Field School, Arizona State University
- 2009 Demonstrator, Archaeology in Practice, University of Cape Town (AGE3013H)  
Demonstrator, Introduction to Geography, Earth and Environmental Science, University of Cape Town (GEO1009F)  
Teaching Assistant, Koobi Fora Field School (Kenya), Rutgers University, New Jersey  
Lecturer, Introduction to Geography, Earth and Environmental Science: Supplementary Course, University of Cape Town (EGS1004S)
- 2008 Demonstrator, Elandsfontein Honours Field School, University of Cape Town (AGE4000W)  
Demonstrator, Introduction to Geography, Earth and Environmental Science, University of Cape Town (ERT1000F)  
Demonstrator, Elandsfontein Honours Field School, University of Cape Town (AGE4000W)  
Teaching Assistant, Koobi Fora Field School (Kenya), Rutgers University, New Jersey

### Conferences and Papers

- 2017 ASAPA, Pretoria, RSA: *“Using Heritage Data to Guide Responsible Development: Tools to ensure high quality recording of heritage sites”*  
ICAHM, Bagomoyo, Tanzania: *“OpenHeritage: Development and implementation of national heritage management systems - Lessons from South Africa, Namibia and Kenya”*
- 2016 ICAHM, Salalah, Oman: *“Straight to the (Baboon) Point: A look at the Conservation of Archaeological Landscapes in South Africa using Baboon Point as a Case Study”*
- 2015 Leakey Foundation, Sonoma County, San Francisco, USA: *““Straight to the (Baboon) Point: A look at the Conservation of Archaeological Landscapes in South Africa using Baboon Point as a Case Study”*
- 2012 PSSA, Johannesburg, RSA: *“SAHRIS Palaeosensitivity Map - Methodology and Implementation”*



## **Other**

In 2013 I was asked to join the panel of judges for the Ministerial awards for Heritage in the Western Cape. From 2013 to July 2014, I was a member of the Heritage Western Cape Archaeology, Palaeontology and Meteorites Committee and I currently sit on the Heritage Western Cape Inventories, Gradings and Interpretations Committee.

In November 2013, I was awarded a bursary from the Department of Arts and Culture to complete a Masters in Philosophy in Conservation of the Built Environment through the UCT Faculty of Engineering and the Built Environment in 2014 and 2015. I was in the process of finalising this degree in 2017, however the arrival of my son has temporarily halted my progress.

I am a paid up member of the Association for Southern African Professional Archaeologists (ASAPA), the Association of Professional Heritage Practitioners (APHP) and I have been a member of the Executive Council of APHP since 2014.

In June 2017, I was selected as Chair of APHP. I am a member of the Palaeontological Society of South Africa (PSSA) and ICOMOS South Africa, for which I am Vice-President of the Board. I am also a member of the International Committee for Archaeological Heritage Management (ICAHM), a committee of UNESCO.

I am an active participant in a not-for-profit company called OpenHeritage which is dedicated to opening access to heritage resources through digital innovation. To this end, we have been involved in a number of projects including Wikipedia Training with Africa Centre, the development and implementation of a Collections Management System for the National Museums of Kenya and the development of a digital Inventory of the Vernacular Architecture of the Eastern Cape.

## **Referees**

Mary Leslie

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082 733 2611

Janette Deacon

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082 491 5067

Laura Robinson

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083 463 4765

Andrew Hall

[waitabout191@gmail.com](mailto:waitabout191@gmail.com)

(Currently based in Oman)

Wendy Black

[wblack@iziko.org.za](mailto:wblack@iziko.org.za)

021 481 3883

<b>PROJECT</b>	<b>PROJECT DESCRIPTION</b>	<b>DURATION</b>
SKA Scoping Project	<b>Provision of Heritage Specialist Assessment Services for SKA Scoping Phase</b>	09/2015 - 09/2016
National Liberation & Khoisan Heritage Routes	<b>Development of online mapping interface to promote national liberation and Khoisan heritage routes</b>	02/2017 - present
Western Cape Coastal Access Strategy	<b>Heritage statements describing changing utilisation of Western Cape coast through time</b>	01/2016 - 02/2017
Robben Island PV Facility	<b>Heritage survey, Heritage Impact Assessment, monitoring, mapping, report writing</b>	01/2016 - 02/2017
Stawelklip Rock Art Conservation Management Plan	<b>Site documentation, stakeholder consultation, CMP compilation, development of signage</b>	10/2015 - 01/2016
Phillipskop Rock Art Conservation Management Plan	<b>Site documentation, stakeholder consultation, CMP compilation, development of signage</b>	04/2016 - 08/2016
Cape Winelands Heritage Inventory	<b>Data processing, heritage management and mapping services</b>	08/2016 - 09/2017

#### CTS Heritage Impact Assessments

<b>HIA Title</b>	<b>Date Completed</b>
<b>HIA: Brakke Kuyl Sand Mine</b>	05/12/2016
<b>HIA: Gouritz Abalone Farm</b>	28/10/2016
<b>HIA: Malmesbury Granite Quarry</b>	28/11/2016
<b>HIA: Expansion of Jacobsbaai Abalone Farm</b>	26/08/2016
<b>HIA: Mutsho Power Project near Makhado</b>	02/02/2017
<b>HIA: Vanrhynsdorp Prospecting</b>	06/03/2017
<b>HIA: Spitskop Power Lines</b>	02/03/2007
<b>Desktop HIA Namakwa Prospecting</b>	21/06/2017
<b>HIA: San Miguel Citrus</b>	26/04/2017
<b>HIA : Ash River Hydro</b>	In process
<b>HIA: 22kv Powerlines Eastern Cape</b>	22/08/2017
<b>HIA: Langa Telecommunications Mast</b>	18/08/2017
<b>HIA: Ouwerv HF Radar Wave Monitoring Antennae</b>	In process

# Lourens du Plessis

## Professional GISc Practitioner



### Personal Information:

- Date of Birth: 1969-11-13
- Marital Status: Married
- Nationality: South African
- Contact no: 082 922 9019
- Email: lou.dp@outlook.com

### Years of Industry Experience

- 28 years'

### Countries of Experience

- South Africa; Lesotho; Swaziland; Mozambique; Botswana; Zimbabwe; Namibia; Angola; Guinea; Ghana; Uganda

### Qualifications and Memberships

- BA (University of Pretoria) Geography and Anthropology (Majors), 1993
- Professional Geo-Information Sciences (GISc) Practitioner registered with the South African Geomatics Council (SAGC). Membership no. PGP0147
- Member: GISSA

### Key Skills and Competencies

- Arc/Info and ArcGIS
- Arcview
- QGIS
- Postflight Terra 3D
- PlanetGIS
- Vistapro
- Various GIS support applications
- Microsoft (Word/Excel/Access)

### Professional Overview

Lourens provides professional Geographical Information Systems (GIS) services to a wide range of clients that require the processing, analysis and presentation of geospatial data. His overarching function is the application of GIS in environmental management and planning, impact assessments and spatial modelling, but his services often extend to a much broader range of business sectors. These include the application of GIS in:

- Agriculture
- Bulk service providers and utilities
- The renewable energy sector
- Electricity generation and distribution
- Mining and exploration
- Urban and rural development planning
- Conservation and tourism
- Strategic integrated planning
- Environmental education and social awareness
- Engineering, transport and infrastructure development

Lourens has a multi-disciplinary approach to projects and therefore specialises in creating synergy between planning professionals and project specialists (regardless of the type of project) in order to provide uniform, quality spatial data products, solutions and services.

### Experience and expertise

- Data sourcing and acquisition
- Data capture and processing
- Data evaluation, conversion and transfer
- Geodatabase development/implementation/maintenance
- System design and development
- Spatial analysis/modelling (visibility, slope, aspect, etc.)
- Digital terrain modeling
- Terrain evaluation and site screening
- Image processing and analysis
- Impact assessment and impact management
- Environmental management
- GIS-based decision support systems development
- Project management and report writing
- Map production, display, queries and reporting
- Environmental sciences expertise
- Process development
- Visual impact assessment
- GPS fieldwork and aerial surveys
- Drone data processing

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## Project Experience

### General projects *(A brief description of some prominent and relevant projects)*

GIS mapping and database for Black Eagle habitats and flight patterns in the Karoo National Park

Environmental planning and development control schemes for the Drakensberg Babangibone, Cathkin Peak and Garden Castle development nodes

Goukou River (Stilbaai) Environmental Structure Plan

Conservation and open space proposals for the Umhlanga Forest

Grootvlei mine water pumping operation (Blesbokspruit sub-catchment)

GIS services for the Saldanha steel plant

ENPAT Provincial (1:250,000 scale GIS decision support systems) based on an inventory of environmental and socio-economic geographic data

- ENPAT Northern Province (Limpopo Province)
- ENPAT Mpumalanga
- ENPAT North-West

ENPAT Metropolitan (1:50,000 scale GIS decision support systems) containing environmental and socio-economic geographic data that were evaluated for conservation opportunities, development constraints and agricultural constraints

- ENPAT Gauteng
- ENPAT Cape Town
- ENPAT Durban Functional Region (DFR)
- ENPAT Bloemfontein/Botshabello
- ENPAT Port Elizabeth

ENPAT National (1:1,000,000 scale GIS decision support system) and ENPAT publication

Environmental Management Frameworks (EMF). Frameworks of spatially represented information connected to environmental management parameters designed to aid in the pro-active identification of potential conflict between development proposals and critical and/or sensitive environments

- EMF Northern Province (Limpopo Province)
- EMF Mpumalanga
- EMF North-West

Spatial Development Initiatives (SDI). The fast tracking of the EMF concept for priority SDI's

- Lubombo Corridor SDI
- Coega Industrial Development Zone (IDZ)
- Wild Coast SDI
- West Coast Investment Initiative

Sigma colliery: North-West strip operation

Development masterplan for the Tswaing Crater Museum

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Conservation plan for the Rietvlei Nature Reserve

GIS services for the planning and management of the Chobe National Park (Botswana)

GIS services for an environmental overview of South Africa

Demarcation/delineation of regions in South Africa

Orange-Vaal (ORVAAL) transfer scheme - Caledon cascades scheme

ENPAT Provincial (1:250,000 scale GIS decision support systems) based on an inventory of environmental and socio-economic geographic data

- ENPAT Eastern Cape
- ENPAT Free State
- ENPAT Kwa-Zulu Natal

Environmental Management Frameworks (EMF). Frameworks of spatially represented information connected to environmental management parameters designed to aid in the pro-active identification of potential conflict between development proposals and critical and/or sensitive environments

- EMF Eastern Cape
- EMF Free State
- EMF Kwa-Zulu Natal

Hennops River EMF (environmental inventory and management proposals in Centurion)

The Important Bird Areas (IBA) of South Africa map and database

Centurion Metropolitan Substructure Environmental Management Framework (EMF)

Alexandra renewal project EMF

Carbon Sinks and Sequestration - Eastern Cape Wild Coast. Information maps for the "Carbon Sinks - A Rehabilitation Option for South Africa's Natural Environment" report

Prince Edward and Marion Islands. Maps for the World Heritage Site (WHS) bid document

Theewaterskloof and Genadendal - Integrated spatial data management system

Gauteng Communication Network Strategy (GAUCONS). Environmental zones for the control of the construction of telecommunication structures

Gauteng Industries Buffer Zones. The mapping of industrial and mining activities, the creation of buffer control zones and the development of a GIS-based decision support system for the Gauteng Province

Limpopo National Park (LNP) Mozambique. Base maps for fieldwork and planning

Schmidtsdrift Environmental Management Program Report (EMPR)

Loch Vaal Environmental Management Framework (EMF)

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Rustenburg - Strategic Environmental Assessment (SEA). The creation of environmental control zones, a GIS-based decision support system and information poster

Faerie Glen Nature Reserve Strategic Environmental Assessment (SEA)

Willow Quarries - Environmental Impact Assessment (EIA). Modeling of mining expansion plan and the potential impact on Golden Mole habitats

Ekurhuleni Metropolitan Municipality (EMM) Environmental Management Framework (EMF)

Limpopo - State of the Environment Report (SoER)

Windhoek (Namibia) - Environmental Structure Plan (ESP)

Gauteng Supplementation and Implementation of EIA Regulations Project (EIA SIP)

Siyanda District Municipality Environmental Management Framework (EMF)

Olifants and Letaba River Catchments Environmental Management Framework (EMF)

Barberton Nature Reserve environmental sensitivity mapping and land use zoning plan

### **Regional Strategic Environmental Assessments (Regional Assessments)**

Regional assessment for the Eskom Wind Energy Facility (Sere) in the Western Cape

Regional assessments for the Eskom Wind Integration Project (WIP)

- Area 1: West Coast (Saldanha to Garies)
- Area 2: Overberg Region
- Area 3: Beaufort West region
- Area 4: Eastern Cape (Tsitsikamma to Port Elizabeth)
- Area 5: Northern Cape (Hondeklipbaai to Port Nolloth)

Sandveld wind energy Regional Assessment

West Coast National Park (Saldanha area) Regional Assessment

Regional Assessment for the Theewaterskloof Municipal area

Brand-se-Baai (Exxaro) wind energy regional assessment

Overberg (BioTherm) wind energy regional assessments

- Area 1: Gordons Bay to Pearly Beach
- Area 2: Napier RA (Agulhas NP/Swellendal region)

Suurplaat/Sutherland (Investec Wind Energy Development) Regional Assessment

Waterberg (Limpopo) Concentrating Solar Power (CSP) Regional Assessment (Exxaro)

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Western Cape Province Regional SEA for Wind Energy facility developments

ISS Global Mining Regional SEA for Power Station Developments in Mpumalanga Province

Northern Cape Province Regional SEA for Wind Energy facility developments

*Etc. (a comprehensive list of general projects can be provided upon request)*

### **Visual Impact Assessments (VIA), viewshed analyses and visual assessments**

Some recent or current projects include:

- Coal strip mining in Zimbabwe viewshed analyses
- Viewshed analyses and sensitivity mapping for telecommunication masts in the northern provinces (Limpopo, Mpumalanga and North-West)
- Siemens 3rd license cellular communications infrastructure EIAs. Viewshed analyses and sensitivity mapping for over 4,000 telecommunication mast sites in all major metropolitan areas of South Africa.
- CSIR high mast viewshed analysis and sensitivity mapping
- Atlantis Open Cycle Gas Turbine power station VIA
- Kynoch Gypsum Tailings dam extension VIA
- N1 Western Bypass Shell service station VIA
- Coega regional hazardous waste processing facility VIA
- Robinson Deep landfill extension VIA
- Hazardous waste blending platform VIA
- Mercury-Ferrum-Garona transmission line integration VIA
- Matimba B (Medupi) coal-fired power station VIA
- Concentrating Solar Power (CSP) plant in Upington VIA
- Zeus to Mercury transmission line (comparative viewshed analyses)
- Mmamabula (Botswana) transmission line and power station viewshed analyses
- Petronet new multi-products pipeline VIA
- Wind energy facility (Sere) in the Western Cape province VIA
- Ankerlig power station conversion and transmission line VIA
- Gourikwa power station conversion and transmission line VIA
- Kyalami strengthening project VIA
- Steelpoort integration project VIA
- Medupi reservoir and telecommunication mast VIA
- VIA's for Basic Assessment Reports (wind monitoring masts)
  - Cookhouse, Hopefield, Amakhala, Caledon, Worcester, Tulbach, Overberg, Britannia Bay, Brand-se-Baai, Deep River, Happy Valley, River Bank, Uiekraal, Beaufort West, Laingsburg, Rhebokfontein, Suurplaat and West Coast
- Cookhouse wind energy facility VIA
- Hopefield wind energy facility VIA
- Mokopane Integration Project VIA
- Cradle of Humankind World Heritage Site (WHS) viewshed protection zone, visual character assessment and visual zonation plan
- Indwe wind energy facility VIA
- Amakhala wind energy facility VIA
- Boontjieskraal wind energy facility VIA
- Britannia Bay wind energy facility VIA
- Brand-se-Baai wind energy facility VIA
- Upington and Pofadder solar thermal facilities VIAs

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- Dorper wind energy facility VIA
  - Flagging Trees wind energy facility VIA
  - Rheboksfontein, Suurplaat and West Coast wind energy facilities VIAs
  - Riverbank wind energy facility VIA
  - Waterberg photovoltaic plant VIA
  - Eskom wind intergration projects VIAs
  - Welgedacht water care works VIA
  - Aberdeen wind energy facility
  - Aggeneis-Oranjemund power line intergration
  - Project Blue wind energy facility
  - Inca De Aar solar energy facility
  - Aced De Aar solar energy facility
  - Exxaro Lephale solar energy facility
  - Happy Valley wind energy facility
  - Hendrina power station ash dam extension
  - Hidden Valley wind energy facility
  - Kakamas photovoltaic plant
  - Karoo renewable energy facility
  - Ilanga (Karoskraal) solar thermal power plant
  - Keimoes photovoltaic plants (Sonnenberg, Ofir and Geelkop)
  - Kimberley photovoltaic solar plant
  - Kleinbegin photovoltaic plant
  - Kleinzee wind energy facility
  - Koingnaas wind energy facility
  - Oyster Bay wind energy facility
  - Ilanga Lethemba (Paardevelei) PV solar energy facility
  - Upington photovoltaic solar facility
  - Ramphela (Ritchie) PV solar energy facility
  - Ruukie (Mpumalanga) coal fired power station
  - Saldanha Steel wind energy facility
  - Spitskop wind energy facility
  - Tsitsikamma community wind energy facility
  - Uyekraal wind energy facility
  - Veldrift and Saldanha wind energy facilities
  - Vredendal photovoltaic solar energy facility
  - Wag'nBiekiespan solar energy facility
  - Walker Bay wind energy facility
  - Etc. *(a comprehensive list can be provided upon request)*

### Professional History

**4/2017:** Professional GISc Practitioner (sole proprietor/self employed)

**1/2016 – 3/2017:** SMEC South Africa, Pretoria – Technical Specialist

**11/1999 – 12/2015:** MetroGIS (Pty) Ltd, Pretoria – Director

**10/1997 – 10/1999:** GISBS (GIS Business Solutions - Q Data Consulting) – Project Manager

**4/1990 - 9/1997:** GisLAB CC (GIS Laboratory - University of Pretoria) – Member / Project Manager



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### Courses & Conferences attended

1997 ESRI International User Conference – United States of America

### Publications & Papers presented

**Name:** Gateway to Kruger Map and Guide

**Authors:** Andy Tinker Photography

**Publisher:** ATP Publishing

**Date:** 2010

**Name:** Kruger National Park Map and Photographic Guide

**Authors:** Andy Tinker Photography

**Publisher:** ATP Publishing

**Date:** 2007

**Name:** Lowveld and Kruger Guide

**Authors:** High Branching Team

**Publisher:** Jacana Media (Pty) Ltd

**Date:** 2004

**Name:** Heights to Homes to Oceans (H2O) Water Wise information poster

**Authors:** Rand Water

**Publisher:** Rand Water

**Date:** 2004

**Name:** Garden Route - Still Bay to Storms River (Discover the Magic)

**Authors:** Jacana

**Publisher:** Jacana Media (Pty) Ltd

**Date:** 2003

**Name:** KwaZulu-Natal - A celebration of biodiversity

**Authors:** Jacana

**Publisher:** Jacana Media (Pty) Ltd

**Date:** 2001

**Name:** Pilanesberg Official Map and Park Guide

**Authors:** North-West Parks & Tourism Board and Jacana

**Publisher:** Jacana Media (Pty) Ltd

**Date:** 2001

**Name:** ESRI Map Book (Volume 13)

**Authors:** Various

**Publisher:** Environmental Systems Research Institute (ESRI)

**Date:** 1998

**Name:** Environmental Potential Atlas for South Africa

**Authors:** W. van Riet, J. van Rensburg, P. Claassen, L. du Plessis and T. van Viegen

**Publisher:** J.L. van Schaik

**Date:** 1997

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**Award:** Best South African Environmental Technical Paper  
**Awarded for:** National Environmental Potential Atlas (ENPAT National)  
**Awarded by:** Environmental Planning Professions Interdisciplinary Committee (EPPIC)  
**Date:** 1995

**Award:** Map Gallery Most Analytical Competition - 3rd Place  
**Awarded for:** Environmental Potential Atlas for South Africa  
**Awarded by:** Environmental Systems Research Institute (ESRI)  
**Date:** 1997 International ESRI User Conference

**Award:** Best Cartographic Map Gallery Competition - 3rd Place  
**Awarded for:** Environmental Potential Atlas for South Africa (Publication)  
**Awarded by:** Environmental Systems Research Institute (ESRI)  
**Date:** 1998 International ESRI User Conference

**Award:** QDC Performance Award  
**Awarded for:** ENPAT Development  
**Awarded by:** Q Data Consulting  
**Date:** 1998

**Award:** Best South African Environmental Technical Paper  
**Awarded for:** Environmental Potential Atlas for South Africa (Publication)  
**Awarded by:** Environmental Planning Professions Interdisciplinary Committee (EPPIC)  
**Date:** 1998

### Language Skills

<b>Mother Tongue:</b>	Afrikaans		
<b>Languages</b>	<b>Speak</b>	<b>Read</b>	<b>Write</b>
English	Good	Good	Good
Afrikaans	Good	Good	Good



## Dr. Neville Bews & Associates – Johannesburg, South Africa

### EDUCATION

- *B.A. (Soc), University of South Africa, 1980*
- *B.A. (Soc) (Hons), University of South Africa, 1984*
- *The Henley Post Graduate Certificate in Management, Henley Management College, United Kingdom*
- *M.A. (Cum Laude), Rand Afrikaans University, 1999*
- *D. Litt. et Phil., Rand Afrikaans University, 2000*

Dr Neville Bews is a senior social scientist and human resource professional with 36 years' experience. He consults in the fields of Social Impact Assessments and research, and human resource management. He has worked on a number of large infrastructure, mining and water resource projects. He at times lectures at both the Universities of Pretoria and Johannesburg and is a Senior Fellow in the Centre for Sociological Research, Department of Sociology, University of Johannesburg.

## EMPLOYMENT HISTORY

### ***Dr Neville Bews & Associates, Johannesburg, South Africa***

*Social Impact Assessment consultant and part-time lecturer, 2001 – date.*

Leads social impact assessments, provides strategic social management advice to clients, acts as reviewer and mentor to young social scientists.

### ***S A Eagle Company Ltd, Johannesburg, South Africa***

*Employee Relations Manager, 1992 - 2001*

Human Resource management and administration; industrial relations; human resource related research projects; designing and leading implementation of research strategies; disciplinary and grievance hearings; negotiating with unions; corporate social responsibility.

### **Status Management Services**

Human Resources Consultant, 1986 – 1992

Management training; employee assistance programmes; industrial relations; recruitment; disciplinary and grievance hearings; negotiating with unions; job evaluation.

### **City of Johannesburg**

Professional Officer - Human Resources, 1977 - 1986

Industrial relations; disciplinary and grievance hearings; negotiating with unions; recruitment, selection and placement; management training; job evaluation.

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## EXPERIENCE – EXAMPLES

### Water resources and regional planning Social Impact Assessments

**Department of Water Affairs and Forestry**

**South Africa**

Social impact assessment for the Mokolo and Crocodile River (West) Water Augmentation Project for increased and assurance of water supply. Research socio-economic circumstances, data analysis, assessment, authored report.

**The Aveng (Africa) Group Limited (Grinaker LTA)**

**South Africa**

Assisting the construction company with the social management of the Mokolo and Crocodile River (West) Water Augmentation Project. Consult and mediate between contractors and affected parties advise on strategies to reduce tensions between contractors and the public.

**Department of Water Affairs and Forestry**

**South Africa**

Ncwabeni Off-Channel Storage Dam for security of water supply in Umzumbe, KwaZulu-Natal. Research socio-economic circumstances, data analysis, assessment, authored report.

**Sedibeng District Municipality**

**South Africa**

Social impact assessment for the Environmental Management Plan for the Sedibeng District, on behalf of Felehetsa Environmental (Pty) Ltd. Research socio-economic circumstances, data analysis, assessment, authored report.

**Felehetsa Environmental (Pty) Ltd**

**South Africa**

Social Impact Assessment for Waterfall Wedge housing and business development situated in Midrand Gauteng. Research socio-economic circumstances, data analysis, assessment, authored report.

**NEMAI Consulting Environmental & Social Consultants**

**South Africa**

Ncwabeni: Off-Channel Storage Dam, KwaZulu-Natal. Research socio-economic circumstances, data analysis, assessment, authored report.

**Department of Water and Sanitation**

**South Africa**

Mzimvubu Water Project Eastern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

### Social Assessments for mining clients

**Vale**

**Mozambique**

Socio-economic impact assessment of proposed Moatize power plant, Tete. Research socio-economic circumstances, data analysis, assessment, authored report.

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**Exxaro Resources Limited** **South Africa**  
Social impact assessment for the social and labour plan for Leeuwpan Coal Mine, Delmas. Research socio-economic circumstances, data analysis, assessment, authored report.

**Exxaro Resources Limited** **South Africa**  
Social impact assessment for the social and labour plan for Glen Douglas Dolomite Mine, Henley-on-Klip. Research socio-economic circumstances, data analysis, assessment, authored report.

**Exxaro Resources Limited** **South Africa**  
Social impact assessment for the social and labour plan for Grootegeluk Open Cast Coal Mine, Lephalale. Research socio-economic circumstances, data analysis, assessment, authored report.

**Exxaro Resources Limited** **South Africa**  
Social and labour plan for the Paardekraal Project, Belfast. Research socio-economic circumstances, data analysis, assessment, authored report.

**Exxaro Resources Limited** **South Africa**  
Social impact assessment for the Paardekraal Belfast Project Belfast. Research socio-economic circumstances, data analysis, assessment, authored report.

**Kumba Resources Ltd** **South Africa**  
Social Impact Assessments for the Sishen Iron Ore Mine in Kathu Northern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

**Kumba Resources Ltd** **South Africa**  
Social Impact Assessments for the Sishen South Project in Postmasburg, Northern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

**Kumba Resources Ltd** **South Africa**  
Social Impact Assessments for the Dingleton resettlement project at Sishen Iron Ore Mine Kathu, Northern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

**Gold Fields** **South Africa**  
Social Impact Assessment for the Gold Fields West Wits Project. Research socio-economic circumstances, data analysis, assessment, authored report.

**Anglo Coal** **South Africa**  
Review of social impact assessment for the proposed Waterberg Gas 37-spot coalbed methane (CBM) bulk yield test project.

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**Sekoko Mining**

**South Africa**

Sekoko Wayland Iron Ore, Molemole Local Municipalities in Limpopo Province. Research socio-economic circumstances, data analysis, assessment, authored report.

**Memor Mining (Pty) Ltd**

**South Africa**

Langpan Chrome Mine, Thabazimbi, Limpopo. Research socio-economic circumstances, data analysis, assessment, authored report.

**Prescali Environmental Consultants (Pty) Ltd**

**South Africa**

Vlakpoort Open Cast Mine – Thabazimbi, Limpopo. Research socio-economic circumstances, data analysis, assessment, authored report.

**Afrimat Ltd**

**South Africa**

1. Marble Hall Lime Burning Project: Social Impact Assessment – Limpopo.
2. Glen Douglas Lime Burning Project: Social Impact Assessment - Henley-on Klip, Midvaal

**Social assessments for regional and linear projects**

**Gautrans**

**South Africa**

Social impact for the Gautrain Rapid Rail Link, Pretoria to Johannesburg and Kempton Park. Managed a team of 10 field workers, research socio-economic circumstances, data analysis, assessment, and co-authored report.

**South African National Road Agency Limited**

**South Africa**

Social Impact of tolling the Gauteng Freeway Improvement Project. Research socio-economic circumstances, data analysis, assessment, authored report.

**South African National Road Agency Limited**

**South Africa**

Social Impact of the N2 Wild Coast Toll Highway. Managed a team of three specialists. Research socio-economic circumstances, data analysis, assessment, co-authored report.

**South African National Road Agency Limited**

**South Africa**

SIA for the N3 Keversfontein to Warden (De Beers Pass Section). Research socio-economic circumstances, data analysis, assessment, authored report.

**Transnet**

**South Africa**

Social impact assessment for the Transnet New Multi-Product Pipeline Project (555 km) (Commercial Farmers). Research socio-economic circumstances, data analysis, assessment, authored report.

**Eskom Holdings Limited**

**South Africa**

Social Impact Assessment for the Ubertas 88/11kV Substation in Sandton, Johannesburg. Research socio-economic circumstances, data analysis, assessment, authored report.

**Eskom Holdings Limited**

**South Africa**

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Nuclear 1 Power Plant. Assisted with the social impact assessment consulting to Arcus GIBB Engineering & Science. Peer review and adjusted the report and assisted at the public participation feedback meetings.

**Eskom Holdings Limited, Transmission Division** **South Africa**

Social impact assessment for Eskom Holdings Limited, Transmission Division's Neptune-Poseidon 400kV Power Line in the Eastern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

**Eskom Holdings Limited, Transmission Division** **South Africa**

Social Impact assessment for Eskom Holdings Limited, Transmission Division, Forskor-Mernsky 275kV±130km Powerline and Associated Substation Works in Limpopo Province. Research socio-economic circumstances, data analysis, assessment, authored report.

**MGTD Environmental** **South Africa**

Social impact assessment for a 150MW Photovoltaic Power Plant and Associated Infrastructure in Mpumalanga. Research socio-economic circumstances, data analysis, assessment, authored report.

**MGTD Environmental** **South Africa**

10MWp Photovoltaic Power Plant & Associated Infrastructure, North West Province. Research socio-economic circumstances, data analysis, assessment, authored report.

**eThekwini Municipality** **South Africa**

Social impact assessment for the proposed infilling of the Model Yacht Pond at Blue Lagoon, Stiebel Place, Durban. Research socio-economic circumstances, data analysis, assessment, authored report.

**MGTD Environmental** **South Africa**

ABC Prieska Solar Project; Proposed 75 MWp Photovoltaic Power Plant and its associated infrastructure on a portion of the remaining extent of ERF 1 Prieska, Northern Cape. Research socio-economic circumstances, data analysis, assessment, authored report.

**MGTD Environmental** **South Africa**

ABC Prieska Solar Project; Proposed 75 MWp Photovoltaic Power Plant and its associated infrastructure on a portion of the remaining extent of ERF 1 Prieska, Northern Cape;

**Assessments for social projects and social research**

**Australia – Africa 2006 Sport Development Program** **South Africa**

To establish and assess the impact of the Active Community Clubs Initiative on the communities of NU2 (in the township of Mdantsane)\* and Tshabo (a rural village). Lead researcher social, data collection and analysis, assessment.

**United Nations Office on Drugs and Crime** **South Africa**

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Evaluation of a Centre for Violence Against Women in Upington. Research socio-economic circumstances, data analysis, assessment, co-authored report.

**University of Johannesburg**

**South Africa**

Research into research outputs of academics working in the various departments of the university.  
Research socio-economic circumstances, data analysis, assessment, authored report.

**Human Resource and management training**

**Various national companies**

**South Africa**

Developed and run various management courses such as, recruitment selection & placement; industrial relations / disciplinary hearings; team building workshops; multiculturalism workshop.

1986-2007

**University of South Africa, Department of Industrial Psychology**

**South Africa**

Developed the performance development study guide for industrial psychology 3.

2000

**Authored Chapters in HR books**

**South Africa**

In Slabbert J.A. de Villiers, A.S. & Parker A (eds.). Managing employment relations in South Africa.

Teamwork within the world-class organisation.

2005

In Muchinsky, P. M. Kriek, H. J. & Schreuder, A. M. G. Personnel Psychology 3rd Edition

Chapter 9 – Human resource planning.

Chapter 10 – The changing nature of work.

2005.

In Rossouw, G. J. and van Vuuren, L. Business Ethics - Made in Africa 4th Edition.

Chapter 11 – Building Trust with Ethics.

**South African Management Development Institute (SAMDI) Democratic Republic of the Congo**

Developed a course on Strategic Human Resource Planning for SAMDI and the Democratic Republic of the Congo as well as trainer's manuals for this course.

2006.

**Competition Tribunal**

**South Africa**

Developed a Performance Management System and Policy for the Competition Tribunal South Africa.

2006



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## PUBLICATIONS

Bews, N. & Martins, N. 2002. An evaluation of the facilitators of trustworthiness. SA Journal of Industrial Psychology. 28(4), 14-19.

Bews, N. Martins, N. & von der Ohe, H. 2002. Editorial. SA Journal of Industrial Psychology. 28(4), 1.

Bews, N. & Rossouw, D. 2002. Contemporary organisational change and the importance of trust. SA Journal of Industrial Psychology. 28(4), 2-6.

Bews, N. & Uys, T. 2002. The impact of organisational restructuring on perceptions of trustworthiness. SA Journal of Industrial Psychology. 28(4), 21-28.

Bews, N & Rossouw, D. 2002. A role for business ethics in facilitating trustworthiness. Journal of Business Ethics. 39: 377-390.

Bews, N. 2009. A matter of trust – Gaining the confidence of the public and client. IAIA Newsletter Forthcoming (Spring 2009).

Bews, N. 2009. Does he who pays the bill call the shots? Sitting astride client and public interest – the dilemma of maintaining credibility in impact assessments. IAIA Newsletter Winter – 2009.

Bews, N. 2002. Reducing your company's risk of sexual harassment claims. HR Future. (2) 2 10-11.

Bews, N. & Martins, N. von der Ohe, H. 2002. Organisational change and trust: Experiences here and abroad. Management Today, (18) 8 34-35.

Martins, N. Bews, N. & von der Ohe, H. 2002. Organisational change and trust. Lessons from Europe and South African organisations. HR Future, (2)9 46-47.

Rossouw, D. & Bews, N. 2002. The importance of trust within a changing business environment. Management Today. 18(2) 26-27.

Bews, N. 2001. You can put a value to trust in the new economy. HR Future, (1)1 48-49.

Bews, N. 2001. Maintaining trust during organisational change. Management Today, (17) 2 36-39.

Bews, N. 2001. Business ethics, trust and leadership: how does Africa fare? Management Today, (17) 7 14-15.

Rossouw, D & Bews, N. 2001. Trust is on the decline in the workplace, yet it's vital for modern organisational success. People Dynamics. (18) 6 28-30.

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Bews, N. & Uys, T. 2001. The effects of restructuring on organisational trust. *HR Future*, (1)8 50-52.

Rossouw, G. J. & Bews, N. F. 2010. Building Trust with Ethics. In Rossouw, G. J. and van Vuuren, L. *Business Ethics - Made in Africa 4th Edition*. Cape Town: Oxford University Press.

Bews N. 2005. Teamwork within the world-class organisation. In Slabbert J.A. de Villiers, A.S. & Parker A (eds.). *Managing employment relations in South Africa*. Durban : Butterworths.

Bews, N. F. 2005. Human resource planning. In Muchinsky, P. M. Kriek, H. J. & Schreuder, A. M. G. 2005. *Personnel Psychology 3rd Edition*. Cape Town; Oxford University Press.

Bews, N. F. 2005. The changing nature of work. In Muchinsky, P. M. Kriek, H. J. & Schreuder, A. M. G. 2005. *Personnel Psychology 3rd Edition*. Cape Town; Oxford University Press.

Bews, N. F. 2005. Chapter 9 & 13. In Muchinsky, P. M. Kriek, H. J. & Schreuder, A. M. G. 2005. *Instructor's Manual. Personnel Psychology 3rd Edition*. Cape Town; Oxford University Press.

Bews, N. F., Schreuder, A. M. G. & Vosloo, S. E. 2000. *Performance Development. Study guide for Industrial Psychology 3*. Pretoria: University of South Africa.

Uys, T. and Bews, N. 2003. "Not in my Backyard": Challenges in the Social Impact Assessment of the Gautrain. Department of Sociology Seminar, RAU. 23 May 2003.

Bews, N. 2002. The value of trust in the new economy. Industrial Relations Association of South Africa (Irasa). Morning seminar 21 August 2002.

Bews, N. 2002. The issue of trust considered. Knowledge Recourses seminar on Absenteeism. The Gordon Institute of Business. 27 August 2002.

Bews, N. & Uys, T. 2001. The impact of organisational trust on perceptions of trustworthiness. South African Sociological Association Conference. Pretoria.

Bews, N. 2001. Business Trust, Ethics & Leadership:- Made in Africa. International Management Today/Productivity Development Conference. Hosted by Productivity Development (Pty) Ltd & Management Today. Best Knowledge in Leadership Practice Conference 23-24 July 2001.

Bews, N. 2001. Charting new directions in leading organisational culture and climate change. Workplace Transformation and Organisational Renewal. Hosted by The Renaissance Network. November 2001.

Bews, N. 2000. Towards a model for trust. South African Sociological Association Conference. Saldanha.

Bews, N. 2003. 'Social Impact Assessments, theory and practice juxtaposed – Experience from a South African rapid rail project.' New Directions in Impact Assessment for Development: Methods and Practice Conference. University of Manchester, Manchester, England.

### **MEMBERSHIP OF PROFESSIONAL BODIES**

Member of South African Affiliate of the International Association for Impact Assessment (IAIASa).

Membership Number: 2399

Registered on database for scientific peer review of iSimangaliso GEF project outputs