

environmental affairs

REPUBLIC OF SOUTH AFRICA

Environmental Affairs

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number: NEAS Reference Number: Date Received: (For official use only)

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

DEA/EIA/

PROJECT TITLE

Great Karoo Wind Energy Facility

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address:

Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

Page 1 (

1. SPECIALIST INFORMATION

| Specialist Company Name: | Arcus Consultancy Services South Africa (Pty) Ltd | | | | | |
|--|---|-----------|-----------------------------------|---------------|-------------------|--|
| B-BBEE | Contribution level (indicate 1 to 8 or non-compliant) | 4 | Percenta Procurer recogniti | ment | 100% | |
| Specialist name: | Andrew Pearson | | | | | |
| Specialist Qualifications: | BSc. Conservation Ecology | | | | | |
| Professional affiliation/registration: | SACNASP as Professional Na | atural Sc | ientist | | | |
| Physical address: | Office 220, Cube WS, Icon Bu | ilding, c | /o Long Street & | Hans Strijdom | Avenue, Cape Town | |
| Postal address: | Office 220, Cube WS, Icon Bu | ilding, c | /o Long Street & | Hans Strijdom | Avenue, Cape Town | |
| Postal code: | 8001 | | Cell: | 0725580080 | | |
| Telephone: | 0214121529 | | Fax: | | | |
| E-mail: | andrewp@arcusconsulting.co | za | | · | | |

2. DECLARATION BY THE SPECIALIST

I, __Andrew Pearson_____, declare that -

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

Signature of the Specialist

ARCUS CONSULTANCY SERVICES SOUTH AFRICA (PTY) LTD

Name of Company:

12/06/2019

Date

Details of Specialist, Declaration and Undertaking Under Oath

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, ____Andrew Pearson ______, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

ARCUS CONSULTANCY SERVICES SOUTH AFRICA (PTY) LTD

Name of Company

66 12 2014 Date

Brittany MU Signature of the Commissioner of Oaths Uler

06/2019 12

Brittany Elizabeth Muller Commissioner of Oaths Practising Attorney SA ENSafrica 1 North Wharf Square Loop Street Cape Town 8001





environmental affairs

Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

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

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

PROJECT TITLE

Great Karoo Wind Energy Facility

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- 2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address:

Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

| Specialist Company Name: | Arcus Consultancy Services S | outh Africa | a (Pty) Ltd | | |
|----------------------------|--------------------------------|-------------|-------------|----------|------|
| B-BBEE | Contribution level (indicate 1 | 4 | Percentag | je | 100% |
| | to 8 or non-compliant) | | Procurem | | |
| | | | recognitio | n | |
| Specialist name: | Jonathan Aronson | | | | |
| Specialist Qualifications: | Master of Science (Zoology) | | | | |
| Professional | SACNASP #400238/14 | | | | |
| affiliation/registration: | South African Bat Assessme | nt Associa | tion | | |
| Physical address: | Office 220 Cube Workspace | | | | |
| | Cnr Long Street and Hans St | rijdom | | | |
| | Road Cape Town | | | | |
| Postal address: | Office 220 Cube Workspace | | | | |
| | Cnr Long Street and Hans St | rijdom | | | |
| | Road Cape Town | | | | |
| Postal code: | 8001 | (| Cell: | 07909885 | 95 |
| Telephone: | 0214121535 | F | ax: | n/a | |
| E-mail: | JonathanA@arcusconsulting.c | o.za | | | |

2. DECLARATION BY THE SPECIALIST

I, Jonathan Aronson , declare that -

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

Signature of the Specialist

Arcus Consultancy Services South Africa (Pty) Ltd

Name of Company:

2019

Date Details of Specialist, Declaration and Undertaking Under Oath

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I. Jonathan Aronson, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist Arans South Africa Services (PTY) Consultancy Udd Name of Company 09/07/2019 Peter Hugh Martyn Cohen Commissioner of Oaths Date Practising Attorney SA ENSafrica 4 North Wharf Square Signature of the Commissioner of Oaths Loop Street Cape Town 8004 2019 Date



environmental affairs

Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

 File Reference Number:
 (For official use only)

 NEAS Reference Number:
 DEA/EIA/

 Date Received:
 DEA/EIA/

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

PROJECT TITLE

PROPOSED AMENDMENT TO THE GREAT KARDO WEF, FRIEM KENTUCKY ZOG AND PTN I OF FARM WOLVENKOP ZOF, NORTHERN CAPE

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

 Postal address:

 Department of Environmental Affairs

 Attention: Chief Director: Integrated Environmental Authorisations

 Private Bag X447

 Pretoria

 0001

 Physical address:

 Department of Environmental Affairs

 Attention: Chief Director: Integrated Environmental Authorisations

 Environment House

 473 Steve Biko Road

 Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

1,

SPECIALIST INFORMATION

| Specialist Company Name: | CTS HERITAGE | | | | |
|----------------------------|--------------------------------|----------|-----------|--------------|--|
| B-BBEE | Contribution level (indicate 1 | | Percenta | ge | |
| | to 8 or non-compliant) | 4 | Procurer | | |
| | | | recogniti | on | |
| Specialist name: | JENNA LAVIN | | | | |
| Specialist Qualifications: | | | | | |
| Professional | ASAPA | | | | |
| affiliation/registration: | APHP | | | | |
| Physical address: | 16 EDISON WAY, CEN | JTURY (| UTY | | |
| Postal address: | 34 MARRIES ST. PLUI | MSTEAD | | | |
| Postal code: | | Cell | 5 | 083 619 0854 | |
| Telephone: | | Fax | | / | |
| E-mail: | jenna lavine ctshen | tage . u | om | | |
| | V | U | | | |

2. DECLARATION BY THE SPECIALIST

I, JENNA LAVIN , declare that -

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

Signature of the Specialist

CTS HERIMAGE

Name of Company:

30 MA1 2019

Date

Details of Specialist, Declaration and Undertaking Under Oath

3. UNDERTAKING UNDER OATH/ AFFIRMATION

_____, swear under oath / affirm that all the information submitted or to be JENNA LAVIN Ι, submitted for the purposes of this application is true and correct. Signature of the Specialist CTS HERITAGE Name of Company 30 MAY 2019 Date SUID-AFRIKAANSE POLISIEDIENS MIO BOTHASIG Signature of the Commissioner of Oaths 3 0 MAY 2019 P MIØ BOTHASIG Date POHTLI AEDRAM POLICE SERVICE



environmental affairs

REPUBLIC OF SOUTH AFRICA

Environmental Affairs

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number: NEAS Reference Number: Date Received: (For official use only)

DEA/EIA/

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

PROJECT TITLE

Proposed amendment of the Great Karoo Wind Farm within the Karoo Hoogland Local Municipality, Northern Cape Province

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- 2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

| Specialist Company Name: | 3Foxes Biodiversity Solutions | | | | | |
|----------------------------|--------------------------------|--------------|---------------|------------|------|--|
| B-BBEE | Contribution level (indicate 1 | | Percenta | ge | | |
| | to 8 or non-compliant) | Level 4 | Procurem | nent | 100% | |
| | | | recognitio | n | | |
| Specialist name: | Simon Todd | | | | | |
| Specialist Qualifications: | BSc (Zool. & Bot.) BSc Hons (| Zool.) MSc (| (Cons. Biol.) | | | |
| Professional | SACNASP Pr.Sci.Nat 400425/ | 44 | | | | |
| affiliation/registration: | SACINASE FI.Sci.Nat 400425/ | | | | | |
| Physical address: | 60 Forrest Way, Glencaim | | | | | |
| Postal address: | 60 Forrest Way, Glencairn | | | | | |
| Postal code: | 7975 | Ce | li: | 0823326503 | 2 | |
| Telephone: | | Fax | x: | | | |
| E-mail: | Simon.Todd@3foxes.co.za | | | | | |

2. DECLARATION BY THE SPECIALIST

I, _____Simon Todd______, declare that –

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

Signature of the Specialist

3Foxes Biodiversity Solutions

Name of Company:

10/06/2019

Date

Details of Specialist, Declaration and Undertaking Under Oath

1. A

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, _____Simon Todd______, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

3Foxes Biodiversity Solutions

Name of Company

10/06/2019 Date 258 of 24 Felly 1871, us appreciate BRANCH MANAGER Post Office MINKUE KUL 10 JUN 2019 ex ellicio: Republic of S-0 HSHOEK 7974 Date Addite



environmental affairs Department:

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

(For official use only)

File Reference Number: NEAS Reference Number: Date Received:

DEA/EIA/

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

PROJECT TITLE

Great Karoo Wind Energy Facility

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- 2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; 5. emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

| Specialist Company Name: | Enviro Acoustic Research cc | | | | | | |
|----------------------------|--------------------------------|-------------------------------|-----------|------------|------|--|--|
| B-BBEE | Contribution level (indicate 1 | 4 | Percenta | age | 100% | | |
| | to 8 or non-compliant) | | Procurer | | | | |
| <u>E</u> 1 | | | recogniti | on | | | |
| Specialist name: | Morné de Jager | Morné de Jager | | | | | |
| Specialist Qualifications: | B. Ing (Chemical) | | | | | | |
| Professional | SAAI, ASA | SAAI, ASA | | | | | |
| affiliation/registration: | | | | | | | |
| Physical address: | 726 Wiedrigh Street, Moreleta | Park, Preto | гіа | | | | |
| Postal address: | PO Box 2047, Garsfontein Eas | PO Box 2047, Garsfontein East | | | | | |
| Postal code: | 0060 | Ce | II: | 082 565 40 |)59 | | |
| Telephone: | 012 004 0362 | Fax | K: | 086 621 02 | 292 | | |
| E-mail: | morne@menco.co.za | | | | | | |

2. DECLARATION BY THE SPECIALIST

Momé de Jager_, declare that -

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

Signature of the Specialist

Enviro Acoustic Research cc

Name of Company:

2019 - 06 - 04

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

Norne Taer de , swear under oath / affirm that all the information submitted or to be ł, submitted for the purposes of this application is true and correct.

Signature of the Specialist

Enviro Acoustic Research cc

Name of Company

2019 - 06 - 04

Date

Signature of the Commissioner of Oaths

Date

Commissioner of Oaths/Kommissaris van Ede MJ MILLARD Ex Officio Professional Accountant (SA) Professionele Rekenmeester (SA) Lid No: 8916 PO Box / Posbus 90803, Garsfontein Pretoria 0040



environmental affairs

Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number: NEAS Reference Number: Date Received: (For official use only)

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

DEA/EIA/

PROJECT TITLE

| Great | Huroo | Wind | Energy | Facility | |
|-------|-------|------|--------|----------|--|
| • | | | | , | |

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- 2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

| Specialist Company Name: | Lourens du Plessis t/a LOGIS | | | | | | | |
|----------------------------|--------------------------------|---|------------|----------|------------|------|-----|----|
| B-BBEE | Contribution level (indicate 1 | Exempt | Percenta | ige | 0 | | | |
| | to 8 or non-compliant) | | Procurer | nent | | | | |
| | | | recogniti | on | | | | |
| Specialist name: | Lourens du Plessis | Lourens du Plessis | | | | | | |
| Specialist Qualifications: | ВА | | | | | | | |
| Professional | Professional Geo-Information | Science (G | SISc) Prac | titioner | registered | with | the | SA |
| affiliation/registration: | Geomatics Council (SAGC) Re | Geomatics Council (SAGC) Reg. No. GPr GISc 0147 | | | | | | |
| Physical address: | 531A Witogie Street Die Wilge | 531A Witogie Street Die Wilgers Pretoria | | | | | | |
| Postal address: | PO Box 384 La Montagne | | | | | | | |
| Postal code: | 0184 | Cell: | | 082 922 | 2 9019 | | | |
| Telephone: | | Fax: | | | | | | |
| E-mail: | lourens@logis.co.za | | | | | | | |

2. DECLARATION BY THE SPECIALIST

I, Lourens du Plessis, declare that -

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

Signature of the Specialist

t/a LOGIS

Name of Company:

2019/5/31

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Lourens du Plessis, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

6 Signature of the Specialist t/a LOGIS Name of Company 2019/5/31 Date 65328528 1ATSEMELA Signature of the Commissioner of Oaths 2019-06-04 Date Termination and the start Termination of the start termination of the start start we start the start start start termination of the start start start termination of the start start start start termination of the start start start start start termination of the start sta Tint 1 Cont 211 labit interiority was placed thereon mad his in my prosence. om 285 77 SIGNER OF OATHS ECS FULL AN IN DRUKSKRI ME IN BLOCK LETTERS An ADDRESS)

SA POLIGIEDIENS SA POLICE SERVICE

Details of Specialist, Declaration and Undertaking Under Oath

Jonathan Aronson MSc Pr.Sci.Nat

CURRICULUM VITAE

Ecologist



Email:JonathanA@arcusconsulting.co.za

| Specialisms Summary of Experience | Ecological Impact Assessments Pre-construction and Operational monitoring at wind energy developments Data analysis and statistical assessment of ecological data GIS mapping and Analysis Jonathan has 12 years of experience studying and researching bats and has presented at the International Bat Research Conference and local bat workshops. He has been at the forefront of bats and wind energy research in South Africa and has worked on more than 40 WEF projects in South Africa, Kenya, Mozambique, Zambia and the UK undertaking pre-construction monitoring, operational monitoring, impact assessments and mitigation strategy design. He is a co-author of the Good Practise Guidelines for Surveying Bats at Wind Energy Facilities in South Africa, is the lead author on the operational monitoring guidelines for bats and is a founding member of the South African Bat Assessment Advisory Panel (SABAAP). He has experience managing wind energy facility projects including developing survey strategies, implementing field surveys, data analysis and report writing. He has provided extensive input to Environmental Impact Assessments (EIA) and post-construction Environmental Management Plans (EMP) for bats. |
|---|--|
| Professional History | 2013 to current - Ecology Specialist, Arcus Consultancy Services Ltd, Cape Town 2011 to 2013 - Director, Gaia Environmental Services Pty (Ltd), Cape Town 2008 to 2008 - Research Assistant, Percy Fitzpatrick Inst. of African Ornithology, Cape Town |
| Qualifications and Professional Interests | University of Cape Town, 2009-2010 Msc Zoology University of Cape Town, 2007 BSc (Hons) Freshwater Biology University of Cape Town, 2003-2006 BSc Zoology Member of Society for Conservation Biology (2011 to present) South African Bat Assessment Advisory Panel (2013 to present) Professional Natural Scientist (Ecological Science) – SACNASP Registration #400238/14 |
| Project Experience | Bat Monitoring and Environmental Impact Assessments Banna Ba Phifu Wind Energy Facility. Bat Monitoring (WKN Windcurrent SA (Pty) Ltd). Choje Wind Farm. Pre-construction bat monitoring (Wind Relic (Pty) Ltd). Kwagga Wind Energy Facility. Pre-construction bat monitoring (ABO Wind renewable energies (Pty) Ltd). Wind Farm in Zambia. Pre-construction bat monitoring (SLR Consulting). Namaacha Wind Farm. Pre-construction bat monitoring and EIA services in Mozambique (Consultec). West Coast One Wind Energy Facility. Post-construction Monitoring (Aurora Wind Power (RF) (Pty) Ltd). Beck Burn Wind Farm. Post-construction Monitoring. (EDF Energy). Fazakerly Waste Water Treatment Works. Post-construction Monitoring. (United Utilities). Paulputs Wind Energy Facility. 12 months pre-construction bat monitoring study (WKN Windcurrent SA (Pty) Ltd). Zingesele Wind Energy Facility. 12 months pre-construction bat monitoring study (juwi Renewable Energies (Pty) Ltd). Highlands Wind Energy Facility. 12 months pre-construction bat monitoring study (juwi Renewable Energies (Pty) Ltd). Kap Vley Wind Energy Facility. 12 months pre-construction bat monitoring study (juwi Renewable Energies (Pty) Ltd). Kap Vley Wind Energy Facility. 12 months pre-construction bat monitoring study (juwi Renewable Energies (Pty) Ltd). Kap Vley Wind Energy Facility. 12 months pre-construction bat monitoring study (juwi Renewable Energies (Pty) Ltd). Kolkies and Sonop Wind Energy Faculties. Pre-construction bat monitoring (JG Afrika). Kolkies and Karee Wind Energy Facility. 12 months pre-construction bat monitoring tudy (Ministream Renewable Power South Africa). Komsberg East and West Wind Energy Facility. 12 months pre-construction bat monitoring JG Afrika). |

Jonathan Aronson MSc Pr.Sci.Nat

Ecologist

Email:JonathanA@arcusconsulting.co.uk Tel: +27 (0) 790 988 595



- Gouda Wind Energy Facility. 24 months of operational monitoring for bats including activity and fatality surveys. (Blue Falcon 140 (Rf) Pty Ltd) and fatality surveys.
- Pofadder Wind Energy Facility. 12 months pre-construction bat monitoring study (Mainstream Renewable Power South Africa).
- Elliot Wind Energy Facility. Pre-construction bat monitoring study. (Rainmaker Energy).
- Hopefield Wind Farm. 12 months of operational monitoring for bats including activity (Umoya Energy).
- Spitskop West Wind Energy Facility. 12 months pre-construction bat monitoring study (RES Southern Africa/Gestamp).
- Spitskop East Wind Energy Facility. Analysis of 12 months of pre-construction bat monitoring data (RES Southern Africa).
- Patryshoogte Wind Energy Facility. Pre-construction bat monitoring study (RES Southern Africa).
- Swartberg Wind Energy Facility. 12 months pre-construction monitoring and surveys for the presence of bats roosting in farm buildings (CSIR).
- Clover Valley and Groene Kloof Wing Energy Facility. Arcus staff undertook 12 months
 of pre-construction bat monitoring which included acoustic surveys and mist-netting to
 catch bats. (Western Wind Energy).
- Spitskopvlakte Wind Energy Project. Arcus staff assisted with the implementation of a survey of bat activity on this site located near Laingsburg in the Western Cape. This work included acoustic monitoring at several locations including monitoring at height.

Ecological Surveys

- Killean Wind Farm. Bat acoustic surveys including a driven transect and commissioning of bat detectors for this proposed site in Scotland, UK. (Renewable Energy Systems Ltd).
- Maple Road, Tankersely. Bat acoustic surveys including a walked transect for this proposed site near Barnsley, UK (Rula Developments).

Due Diligence

- Due Diligence of Bat Monitoring at the Copperton Wind Enery Facility (SLR Consulting).
- Due Diligence of Bat Monitoring at the Kangas, Excelsior and Golden Valley Wind Farms (ERM).
- Due Diligence of Bat Monitoring at the Roggeveld Wind Farm (IBIS Consulting).

Amendment Applications

- Review and impact assessment for amendment to turbine dimensions for the Great Karoo Wind Energy Facility (Savannah Environmental (Pty) Ltd).
- Review and impact assessment for amendment to turbine dimensions for the Gunstfontein Wind Energy Facility (Savannah Environmental (Pty) Ltd).
- Review and impact assessment for amendment to turbine dimensions for the Komserberg East and West Wind Energy Facilities (Aurecon South Africa (Pty) Ltd).
- Review and impact assessment for amendment to turbine dimensions for the Soetwater Wind Energy Facility (Savannah Environmental (Pty) Ltd).
- Review and impact assessment for amendment to turbine dimensions for the Karusa Wind Energy Facility (Savannah Environmental (Pty) Ltd).
- Review and impact assessment for amendment to turbine dimensions for the Zen Wind Energy Facility (Savannah Environmental (Pty) Ltd).

Peer Review

- Peer Review for Three Bat Monitoring Reports for the Bokpoort II Solar Developments (Golder Associates)
- Peer Review of Operational Monitoring at the Jeffreys Bay Wind Farm, including updating the operational mitigation strategy for bats (Globeleq South Africa Management Services (Pty) Ltd).
- Oyster Bay Wind Energy Facility. Reviewing a pre-construction bat monitoring study and providing input into a stand-alone study (RES Southern Africa).
- Review and design mitigation strategies for bats at the Kinangop Wind Park, Kenya (African Infrastructure Investment Managers).

Jonathan Aronson MSc Pr.Sci.Nat

Ecologist

Email:JonathanA@arcusconsulting.co.uk Tel: +27 (0) 790 988 595

Feasibility Studies

- Feasibility assessment for four potential wind farms in the Northern Cape (ABO Wind renewable energies (Pty) Ltd).
- Feasibility assessment for four potential wind farms in Mozambique (Ibis Consulting (Pty) Ltd).
- Assessment of the Feasibility of a Wind Farm in the Northern Cape (juwi Renewable Energies (Pty) Ltd).
- Assessment of the Feasibility of a Wind Farm in the Eastern Cape (WKN Windcurrent SA (Pty) Ltd).

Research Projects

• Darling National Demonstration Wind Farm Project. Designed and implemented a research project investigating bat fatality in the Western Cape.

Publications

- MacEwan, K., Aronson, J., Richardson, E., Taylor, P., Coverdale, B., Jacobs, D., Leeuwner, L., Marais, W., Richards, L. South African Bat Fatality Threshold Guidelines for Operational Wind Energy Facilities – South African Bat Assessment Association (1st Edition).
- **Aronson, J.B.** and Sowler, S. (2016). Mitigation Guidance for Bats at Wind Energy Faculties in South Africa.
- **Aronson, J.B.**, Richardson, E.K., MacEwan, K., Jacobs, D., Marais, W., Aiken, S., Taylor, P., Sowler, S. and Hein, C (2014). South African Good Practise Guidelines for Operational Monitoring for Bats at Wind Energy Facilities (1st Edition).
- Sowler, S. and S. Stoffberg (2014). South African Good Practise Guidelines for Surveying Bats in Wind Energy Facility Developments - Pre-Construction (3rd Edition). Kath Potgieter, K., MacEwan, K., Lötter, C., Marais, M., **Aronson, J.B.**, Jordaan, S., Jacobs, D.S, Richardson, K., Taylor, P., Avni, J., Diamond, M., Cohen, L., Dippenaar, S., Pierce, M., Power, J. and Ramalho, R (eds).
- **Aronson, J.B.**, Thomas, A. and Jordaan, S. 2013. Bat fatality at a Wind Energy Facility in the Western Cape, South Africa. *African Bat Conservation News* 31: 9-12.
- The Ecosystem Approach and Systems Thinking Course, United Nationals Environment Programme, Currently undertaking.
- Why Carbon Footprinting Makes Business Sense, African Climate and Development Initiative Seminar, September 2016.
- The Age of Sustainable Development Course, The SDG Academy, 2016.
- Planetary Boundaries and Human Opportunities Course, The SDG Academy, 2015.
- Endangered Wildlife Trust (EWT) Bats and Wind Energy Training Course, October 2013.
- Ecological Networks Course, Kirstenbosch Botanical Gardens, July 2013.
- Social and Economic Network Analysis Course, online via Stanford University, 2013.
- Social Network Analysis Course, online via University of Michigan, 2013
- Introduction to Complexity Science Course, online via Santa Fe Institute, 2013.
- Introduction to Spatial Analysis using R, Kirstenbosch Botanical Gardens, May 2013.
- Google Geo Tools for Conservation, University of Cape Town, February 2013.
- Endangered Wildlife Trust (EWT) Bats and Wind Energy Training Course, January 2012
- Statistical Modelling Workshop for Biologists, University of Cape Town, September 2010.
- ESRI Virtual Campus Online GIS Courses, 2010.
- WAYS/ScholarShip IT Workshop: Remote Sensing and GIS Course, March 2009.

Andrew Pearson Ecology Specialist (Avifauna) Email: AndrewP@arcusconsulting.co.za Tel: +27 (0) 21 412 1529



- Specialisms
- Avifauna Impact Assessment
 - Operational Phase Avifaunal Monitoring
- Environmental Management Processes
- Survey Design and Management

Summary of Experience

Andrew is an Avifauna Specialist with nine years in environmental management experience and over six years as an avifaunal specialist. He has gained a strong level of experience in avifauna assessments across a multitude of industries, including various powerline assessments and walk-downs. To date, Andrew has provided avifaunal specialist services on over 6 solar, 26 power line and 25 wind farm projects in South Africa. Andrew can provide input into the design of projects and environmental management plans, assess environmental due diligence and compliance with international environmental policies (World Bank, IFC, Equator Principles) and peer review avifaunal specialist reports. Andrew is a professional natural scientist registered with SACNASP, and is a selected member of the Birds and Renewable Energy Specialist Group (BARESG). Andrew has been bird watching for 24 years, worked as a birding field guide in 2006 and 2007, and attended bird identification training at the Lawsons Birding Academy in 2007.

Professional History

January 2014 to Present - Avifauna Specialist, Arcus Consultancy Services Ltd

- Specialist Bird Impact Assessment Studies for energy infrastructure
- Design of high quality bird surveys in line with applicable guidance and legal requirements
- Design and implementation of operational carcass search programme including the
 - training and management of locally based observers.
- Specialist raptor nest surveys

March 2011 to December 2013 - Environmental Impact Assessment & Avifaunal Specialist, Endangered Wildlife Trust

- Specialist Bird Impact Assessment Studies for energy infrastructure
- Extensive work in the Wind Energy Sector to reduce possible impacts on birds and bats
- 12 month Bird Monitoring on WEF sites: compilation of monitoring protocol; recruitment, management and co-ordination of observers; on site Bird observation as part of a 12 month monitoring programme; and compilation of final monitoring reports
- Presentations and Environmental Training

January 2008 to March 2011 - Group Environmental Manager, Basil Read (Pty) Ltd

- Environmental management of Roads and Civil construction projects.
- Implementation and certification of an ISO 14001:2004 Environmental Management System
- Group Internal Environmental Audits
- Compilation of EMP's and Environmental site inspections
- Assistance in ENV authorisations and applications
- Environmental Awareness Training
- Compilation of Group Carbon Footprint

February 2006 to January 2008 - Game Ranger and Walking Guide, CC Africa (now *&BEYOND*), Phinda Private Game Reserve

- Game drives and walks in a Big 5 reserve
- Hosting guests and sharing environmental and wildlife knowledge
- Environmental management, waste management

| Qualifications and Professional Interests | August 2010 - Hazard Identification and Risk Assessment (HIRA) Course, IRCA Global April 2010 - SAMTRAC, NOSA, East Rand Office April 2009 - Green Star Accredited Professional Exam, (GBCSA), PROMETRIC May 2008 - Environmental Auditing: ISO 14001:2004, a Lead Auditors Course (SAACTA approved), Centre for Environmental Management at North West University (NWU), Potchestroom February 2008 - Environmental Law for Managers, Centre for Environmental Management at NWU February 2008 - Implementing Environmental Management Systems-ISO 14001:2004, Centre for Environmental Management at NWU August 2007 - Bird Identification Course, Lawson's Birding Academy, 7 day intensive training in Melabele Parker Parke |
|---|--|
| | training in Makuleke, Kruger National Park, SA <u>2001 to 2005 - Bachelor of Science: Conservation Ecology, University of Stellenbosch</u> |
| Recent Conferences and Seminars | Windaba 2013, 2014 and 2015; Solar Indaba 2013; Africa Utility Week 2014 and 2015 IAIA SA National Conference 2013 Endangered Wildlife Trust's Birds of Prey Programme (BoPP), Annual Conference 2012 Power & Electricity World Africa 2012 Wind Energy and Birds – Information Week. Endangered Wildlife Trust, 2011 August 2011 IAIA South Africa, 2011 Conference March 2011 Wildlife and Energy Symposium |
| Additional Skills | ArcGIS, Google GEO tools and Google Earth Computer Skills: Office 2013 incl. Microsoft Word, Excel, Outlook and PowerPoint Field work skills involving various sampling methods, data capturing & analysis Excellent knowledge of fauna (especially birds) and flora 4x4 driving skills |
| Project Experience | • Due Diligence Due Diligence of Bird Work conducted at the Kangnas WEF (ERM); Due Diligence of Bird Work conducted at the Excelsior WEF (ERM);Due Diligence of Bird Work conducted at the Golden Valley WEF (ERM); Due Diligence of Bird Work at the Roggeveld Wind Farm (IBIS Consulting). |
| | • Peer Review Peer Review of Operational Monitoring at the Jeffreys Bay Wind Farm (Globeleq South Africa Management Services (Pty) Ltd); Review and design mitigation strategies for birds at the Kinangop Wind Park, Kenya (African Infrastructure Investment Managers). |
| | • Feasibility Studies Assessment of the Feasibility of a Wind Farm in the Eastern Cape near Somerset East (WKN Windcurrent SA (Pty) Ltd). |
| | Pre-Constriction Monitoring and/or Impact Assessment- Wind Energy Facility (WEF) Projects: Kouga WEF; Aberdeen WEF; Hidden Valley WEF; Middleton WEF; Springfontein WEF, Moorreesburg WEF; Grassridge WEF; Ukomeleza WEF; Chaba WEF; Waainek WEF; Vryheid WEF; Kouga Western Cluster WEF; Hopefield WEF; DNA Elliot WEF; Confidential WEF near Elliot; Umsinde Emoyeni WEF; Grassridge II WEF; Komsberg East WEF; Komsberg West WEF; Gouda WEF; Confidential WEF near Touws River; Confidential WEF near Kleinsee. |
| | Operational Monitoring -WEF Projects: |



Andrew Pearson Ecology Specialist (Avifauna) Email: AndrewP@arcusconsulting.co.uk Tel: +27 (0) 21 412 1529

Hopefield WEF; Gouda WEF

• Impact Assessment-Power-line Projects:

St Francis Bay Kouga 66kV; Ncwane Okuku 88kV; Vulcan Ekangala 132kV; Merapi Everest 400kV; Mathibestad Majaneng 132kV; Majaneng Themba Main-Babelegi 132kV; Ngoma Pandamatenga 400kV (ZIZABONA Phase 2); Estancia Thuli 132kV; Estancia Zamokuhle 132kV; Gumeni Bosloop 132kV; Mbumbu Tsakani 132kV; Normandie Heyshope 132kV; Mookodi Integration Project; Wildebees Bethal 132kV; Zaaifontein Mathondwane 88kV; Hlabisa Nongoma 88kV; Mandeni Gingindlovu 132kV; Tabor Nzhelele 400kV; Leksand St James 88kV; Emondlo St James 88kV; Randfontein Mine 132kV; Droogfontein CSP 132kV; Mtubatuba St Lucia 132kV; Ndumo Gezisa 132kV; Ermelo Uitkoms 88kV; TCTA Spring Grove 88kV; Springfontein 132kV.

• Pre-construction Monitoring and/or Impact Assessment- Concentrated Solar Power (CSP) Plants and Solar Photovoltaic (PV) Plants:

Humansrus 100MW CSP; Arriesfontein 100MW CSP; Arriesfontein 225MW PV; Eenzaamheid PV; Vaal Dam PV; Mokopole PV; Kalkaar CSP and PV; Droogfontein PV; Bokpoort II CSP; Metsimatala CSP.

Other:

Expansion of Hendrina Power Station Ash Disposal Facilities; Expansion of Majuba Power Station Ash Disposal Facilities; Expansion of Tutuka Power Station Ash Disposal Facilities; Eskom Distribution Cedarville Upgrade; Eskom Limpopo Operating Unit (LOU) Head Office, Polokwane

Affiliations

Member of the Birds and Renewable Energy Specialist Group (BARESG), South Africa
 South African Council for Natural Scientific Professions (SACNASP) Registration number 400423/11





<u>Jenna Lavin</u>

Tel: 083 619 0854 (c); 013 0131 (w) E-mail address: jenna.lavin@cedartower.co.za ID number: 8512050014089

EDUCATION:

Tertiary

| rerciary | |
|----------|--|
| 2014 - | M.Phil in Conservation of the Built Environment (University of Cape Town) |
| | Ongoing - expected to graduate in 2015 |
| 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 (<u>Papio ursinus</u>) 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

1999-2003Rustenburg High School for GirlsFirsts in English, Afrikaans, Mathematics HG, Biology HG, History HG, Entrepeneurship.



EMPLOYMENT HISTORY:

PROFESSIONAL DEVELOPMENT Environmental and Heritage Management:

- Head of Heritage Operations for Heritage CTS Consultants and member of OpenHeritage NPC. July 2016 to present
- Assistant Director for Policy, Research and Planning at Heritage Western Cape. *August 2014 to June 2016*

Responsibilities include 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).

Acting Deputy Director from April to December 2015.

 Heritage Officer for Palaeontology and for the Mpumalanga Province at the South African Heritage Resources Agency (SAHRA).
 January 2013 to June 2014

Responsibilities include dealing with 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 Sensitvity Map (http://www.sahra.org.za/about/news/nov2013/palaeosensitivitymap), 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 (PHS), 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*

Other

My private experience as a traveler in South Africa, Tanzania, Kenya, Namibia, Zambia, Malawi and Mozambique has inspired a passion for the conservation of environmental and heritage resources. I am passionate about sustainable living, with my Bachelor of Science in Environmental and Geographical Science providing a framework on which to base my values.

With a friend, I established the fundraising initiative, Chicks4Change, through which we managed to organize a number of successful events and raise R40 000 for Project Rhino to assist with anti-poaching initiatives.

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. In July 2014, I presented at the Conference for the Palaeontological Society of South Africa on the use of GIS in the management of palaeontological resources in the face of increased development pressures. In April 2015 I participated in a conference on Landscape Archaeology hosted by the Leakey Foundation in San Fransisco, presenting on the management of archaeological landscapes in South Africa. In April 2016, I presented at the ICAHM Conference in Salalah, Oman on the management of archaeological heritage in South Africa.

In November 2013, I was awarded a bursary from the Department of Arts and Culture to complete the Masters in Philosophy in Conservation of the Built Environment through the UCT Faculty of Engineering and the Built Environment in 2014 and 2015.

I am a paid up member of the Association for Southern African Professional Archaeologists (ASAPA), the Association of Professional Heritage Practitioners (APHP), 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).

Short CV/Summary of Expertise – Simon Todd



| Simon Todd Pr.Sci.Nat |
|--|
| C: 082 3326502 O: 021 782 0377 Simon.Todd@3foxes.co.za |
| 60 Forrest Way Glencairn 7975 |

Ecological Solutions for eople & the Environmer

Professional Profile

Simon Todd has extensive experience in biodiversity management and ecological assessment across South African ecosystems. This includes a variety of broad-scale strategic assessments and bestpractice guidelines for a range of industries. In addition, Simon Todd has conducted a large amount of research on the impacts of land-use on biodiversity and has published numerous scientific papers in international peer-reviewed journals on this topic. Simon Todd is a recognised ecological expert and is a past chairman and current executive committee member of the Arid-Zone Ecology Forum and has over 20 years' experience working throughout the country. Simon Todd is registered with the South African Council for Natural Scientific Professions (No. 400425/11).

Recent notable projects include:

- First-author of a book chapter on the ecological impacts of Shale Gas development on the Karroo of South Africa. (2017)
- Co-author on the Biodiversity chapter of the Shale Gas SEA being conducted by CSIR. (2016)
- Co-author on the Eskom Grid Infrastructure SEA, managed by CSIR. (2016)
- Co-author on the Wind and Solar SEA, managed by CSIR. (2015)

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 Thicket, Savannah Nama Karoo, Succulent Karoo, Arid Grassland and Fynbos Ecosystems.
- Ecological Impacts of land use on biodiversity and provision of associated management advice.

- 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

- 1997 1999 Research Scientist (Contract) South African National Biodiversity Institute
- 2000-2004 Specialist Scientist (Contract) South African National Biodiversity Institute
- 2004-2007 Senior Scientist (Contract) Plant Conservation Unit, Department of Botany, University of Cape Town
- 2007-Present Senior Scientist (Associate) Plant Conservation Unit, Department of Botany, University of Cape Town.
- 2010-Present Self-employed as consultant and sole proprietor of Simon Todd Consulting, which has conducted more than 150 specialist assessments.

General Experience & Expertise

- Lead ecologist on several SEA chapters, including Eskom Grid Infrastructure, Wind and Solar SEA and Shale Gas SEA.
- 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 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 field and personal experience across a broad range of South African ecosystems, with particular focus on the Western, Northern and Eastern Cape.
- Strong research background which has proved invaluable when working on ecologically sensitive and endangered ecosystems, habitats and species.
- 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 South African ecosystems.
- Maintain several long-term vegetation monitoring projects which have led to several publications.
- Guest lecturer at two universities and have also served as an external examiner.
- Reviewed papers for more than 12 international ecological journals.
- SACNASP registered as a Professional Natural Scientist, (Ecology) No. 400425/11.

Current Committees

- SANBI Vegmap Committee 2015 present
- CSIR Wind and Solar SEA Phase II advisory committee 2016-present
- AZEF deputy chair 2012-present
- SANBI Karoo Biogaps Taxon leads' committee and executive committee member.

Recent & Relevant Outputs & Publications

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:

Specialist Ecological studies for many different developments distributed across the country including:

- Over 30 Wind Energy projects
- More than 60 Solar Energy developments
- More than 30 different housing, roads, mining and other infrastructure development projects.
- More than 20 electricity transmission infrastructure projects.

A full list of projects is available on request.



726 Wiedrigh st Moreleta Park 0181 Cell: Tel: Fax E-mail:

Momé de Jager

Personal Data

- Identity Number Date of Birth Sex Marital Status Driver's license Nationality Home Language Other Languages Higher Educational Qualifications Previous Employment
- 711221 5062 080 21 December 1971 Male Married, three children Code 08 South African Afrikaans (speak, read and write) English (speak, read and write) B.Ing (Chemical Engineering) [Pretoria University] JCl Wates Meiring and Barnard Department of Water Affairs and Forestry M2 Environmental Connections cc Enviro-Acoustic Research cc

Current Employment

Short Resumé

Morné started his career in the mining industry as a bursar Learner Official (JCI, Randfontein), working in the mining industry, doing various mining related courses (Rock Mechanics, Surveying, Sampling, Safety and Health [Ventilation, noise, illumination etc] and Metallurgy. He did work in both underground (Coal, Gold and Platinum) as well as opencast (Coal) for 4 years. He changed course from Mining Engineering to Chemical Engineering after his second year of his studies at the University of Pretoria.

After graduation he worked as a Water Pollution Control Officer at the Department of Water Affairs and Forestry for two years (first year seconded from Wates, Meiring and Barnard), where duties included the perusal (evaluation, commenting and recommendation) of various regulatory required documents (such as EMPR's, Water Licence Applications and EIA's), auditing of licence conditions as well as the compilation of Technical Documents.

Since leaving the Department of Water Affairs, Morné has been in private consulting for the last 15 years, managing various projects for the mining and industrial sector, private developers, business, other environmental consulting firms as well as the Department of Water Affairs. During that period he has been involved in various projects, either as specialist, consultant, trainer or project manager, successfully completing these projects within budget and timeframe. During that period he gradually moved towards environmental acoustics, focusing on this field exclusively since 2007.

He has been interested in acoustics as from school days, doing projects mainly related to loudspeaker design. Interest in the matter brought him into the field of Environmental Noise Measurement, Prediction and Control. He has been doing work in this field for the past 8 years, and was involved with the following projects in the last few years:

Project Experience – Acoustics

| Wind Energy Facilities | Full Environmental Noise Impact Assessments for - Bannf (Vidigenix), iNCa Gouda (Aurecon SA), Kangnas (Aurecon), Plateau East and West (Aurecon), Wolf (Aurecon), Outeniqwa (Aurecon), Zen (Savannah Environmental – SE), Goereesoe (SE), Springfontein (SE), Garob (SE), Project Blue (SE), ESKOM Kleinzee (SE), Walker Bay (SE), Oyster Bay (SE), Hidden Valley (SE), Happy Valley (SE), Deep River (SE), Tsitsikamma (SE), AB (SE), West Coast One (SE), Hopefield II (SE), Namakwa Sands (SE), VentuSA Gouda (SE), Dorper (SE), Amakhala Emoyeni (SE), Klipheuwel (SE), Cookhouse (SE), Cookhouse II (SE), Rheboksfontein (SE), Suurplaat (SE), Karoo Renewables (SE), Koningaas (SE), Eskom Aberdene (SE), Spitskop (SE), Castle (SE), Khai Ma (SE), Poortjies (SE), Korana (SE), IE Moorreesburg (SE), Saldanha (Terramanzi), Loeriesfontein (SiVEST), , Rhenosterberg (SiVEST), Noupoort (SiVEST), Prieska (SiVEST), Canyon Springs (Canyon Springs), Msenge Emoyeni (Windlab), Gunstfontein (SE), Komsberg (ARCUS), Umsinde Emoyeni (ARCUS), Dwarsrug (SiVEST) |
|---|---|
| Mining and Industry | Full Environmental Noise Impact Assessments for - BECSA – Middelburg (Golder Associates), Kromkrans Colliery (Geovicon Environmental), SASOL Borrow Pits Project (JMA Consulting), Lesego Platinum (AGES), Tweefontein Colliery (Cleanstream), Evraz Vametco Mine and Plant (JMA), Goedehoop Colliery (Geovicon), Hacra Project (Prescali Environmental), Der Brochen Platinum Project (J9 Environment), Delft Sand (AGES), Brandbach Sand (AGES), Verkeerdepan Extension (CleanStream), Dwaalboom Limestone (AGES), Jagdlust Chrome (MENCO), WPB Coal (MENCO), Landau Expansion (CleanStream), Otjikoto Gold (AurexGold), Klipfontein Colliery (MENCO), Imbabala Coal (MENCO), ATCOM East Expansion (Jones and Wagner), IPP Waterberg Power Station (SE), Kangra Coal (ERM), Schoongesicht (CleanStream), EastPlats (CleanStream), Chapudi Coal (Jacana Environmental), Generaal Coal (JE), Mopane Coal (JE), Glencore Boshoek Chrome (JMA), Langpan Chrome (PE), Vlakpoort Chrome (PE), Sekoko Coal (SE), Frankford Power (REMIG), Strahrae Coal (Ferret Mining), Transalloys Power Station (Savannah), Pan Palladum Smelter, Iron and PGM Complex (Prescali), Fumani Gold (AGES), Leiden Coal (EIMS), Colenso Coal and Power Station (SiVEST/EcoPartners), Klippoortjie Coal (Gudani), Rietspruit Crushers (MENCO), Assen Iron (Tshikovha), Transalloys (SE), ESKOM Ankerlig (SE), Pofadder CSP (SE), Nooitgedacht Titano Project (EcoPartners), Algoa Oil Well (EIMS), Spitskop Chrome (EMAssistance), Klippoortjie Coal (Gudani), Vlakfontein South (Gudani), Leandra Coal (Jacana), Grazvalley and Zoetveld (Prescali), Tjate Chrome (Prescali), Langpan Chromite (Prescali), Vereeniging Recycling (Pro Roof), Meyerton Recycling (Pro Roof), Hammanskraal Billeting Plant 1 and 2 (Unica) |
| Road and Railway | K220 Road Extension (Urbansmart), Boskop Road (MTO), Sekoko Mining (AGES), Davel-Swaziland-Richards Bay Rail Link (Aurecon), Moloto Transport Corridor Status Quo Report and Pre-Feasibility (SiVEST), Postmasburg Housing Development (SE), Tshwane Rapid Transport Project, Phase 1 and 2 (NRM Consulting/City of Tshwane), Transnet Apies-river Bridge Upgrade (Transnet), Gautrain Due-diligence (SiVest), N2 Piet Retief (SANRAL) |
| Airport | Oudtshoorn Noise Monitoring (AGES), Sandton Heliport (Alpine Aviation), Tete Airport Scoping |
| Noise monitoring | Peerboom Colliery (EcoPartners), Thabametsi (Digby Wells), Doxa Deo (Doxa Deo), Harties Dredging (Rand Water), Xstrata Coal – Witbank Regional (Xstrata), Sephaku Delmas (AGES), Amakhala Emoyeni WEF (Windlab Developments), Oyster Bay WEF (Renewable Energy Systems), Tsitsikamma WEF (Cennergi and SE), Hopefield WEF (Umoya), Wesley WEF (Innowind), Ncora WEF (Innowind), Boschmanspoort (Jones and Wagner), Nqamakwe WEF (Innowind), Hopefield WEF Noise Analysis (Umoya), Dassiesfontein WEF Noise Analysis (BioTherm), Transnet Noise Analysis (Aurecon), Jeffries Bay Wind Farm (Globeleq), Sephaku Aganang (Exigo), Sephaku Delmas (Exigo), Beira Audit (BP/GPT), Nacala Audit (BP/GPT), NATREF (Nemai), Rappa Resources (Rayten) |
| Small Noise Impact Assessments | TCTA AMD Project Baseline (AECOM), NATREF (Nemai Consulting), Christian Life Church (UrbanSmart), Kosmosdale (UrbanSmart), Louwlardia K220 (UrbanSmart), Richards Bay Port Expansion (AECOM), Babalegi Steel Recycling (AGES), Safika Slag Milling Plant (AGES), Arcelor Mittal WEF (Aurecon), RVM Hydroplant (Aurecon), Grootvlei PS Oil Storage (SiVEST), Rhenosterberg WEF, (SiVEST), Concerto Estate (BPTrust), Ekuseni Youth Centre (MENCO), Kranskop Industrial Park (Cape South Developments), Pretoria Central Mosque (Noman Shaikh), Soshanguve Development (Maluleke Investments), Seshego-D Waste Disposal (Enviroxcellence), Zambesi Safari Equipment (Owner), Noise Annoyance Assessment due to the Operation of the Gautrain (Thornhill and Lakeside Residential Estate), Upington Solar (SE), Ilangalethu Solar (SE), Pofadder Solar (SE), Flagging Trees WEF (SE), Uyekraal WEF (SE), Ruuki Power Station (SE), Richards Bay Port Expansion (AECOM), Babalegi Steel Recycling (AGES), Safika Ladium (AGES), Safika Cement Isando (AGES), RareCo (SE), Struisbaai WEF (SE), Perdekraal WEF (ERM), Kotula Tsatsi Energy (SE), Olievenhoutbosch Township (Nali) |
| Project reviews and amendment reports | Loperberg (Savannah), Dorper (Savannah), Penhoek Pass (Savannah), Oyster Bay (RES), Tsitsikamma (Cennergi), Amakhala Emoyeni (Windlab), Spreeukloof (Savannah), Spinning Head (SE), Kangra Coal (ERM), West Coast One (Moyeng Energy), Rheboksfontein (Moyeng Energy), De Aar WEF (Holland) |

CURRICULUM VITAE LOURENS MARTINUS DU PLESSIS

MetroGIS (Pty) Ltd

Visual Assessment and Geographic Information Systems Specialist

SKILLS BASE AND CORE COMPETENCIES

- More than 17 years experience in the application of Geographical Information Systems (GIS) in Environmental Planning and Management.
- Extensive practical knowledge in spatial analysis, environmental modelling and digital mapping.
- Experience in applying GIS in EIAs, State of the Environment Reports and Environmental Management Plans.
- Lourens has been involved in the application of Geographical Information Systems (GIS) in Environmental Planning and Management since 1990. He has extensive practical knowledge in spatial analysis, environmental modeling and digital mapping, and applies this knowledge in various scientific fields and disciplines. His GIS expertise are often utilised in Environmental Impact Assessments, State of the Environment Reports, Environmental Management Plans, tourism development and environmental awareness projects and mining rehabilitation plans.
- Lourens holds a BA degree in Geography and Anthropology from the University of Pretoria and worked at the Geographic Information Systems Laboratory (GisLAB CC, at the Department of Landscape Architecture) from 1990 to 1997. He later became a member of the GisLAB and in 1997, when Q Data Consulting acquired the GisLAB, worked for Geographic Information Systems Business Solutions (GISBS, a division of Q Data Consulting) for two years as project manager and senior consultant. In 1999 he joined MetroGIS (Pty) Ltd and still functions as a director and project manager to this day.
- Lourens has received various awards for his work over the past decade, including EPPIC Awards for ENPAT, a Q Data Consulting Performance Award and two 3rd place ESRI (Environmental Systems Research Institute) awards for Most Analytical and Best Cartographic Maps, at Annual International ESRI User Conferences. He is a coauthor of the ENPAT book and has had several of his maps published in Jacana Media's educational publications and environmental books.

TERTIARY EDUCATION

• BA (University of Pretoria) Geography and Anthropology (Majors), 1993

EMPLOYMENT HISTORY

1999-present: MetroGIS, Director 1997-1999: GISBS, Project Manager 1990-1997: GisLAB, Project Manager / Member

SELECTED RELEVANT PROJECT EXPERIENCE

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

- 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, Rheboksfontein, 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
- 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 Lephalale 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 (Paardevlei) PV solar energy facility
- Upington photovoltaic solar facility
- Ramphele (Ritchie) PV solar energy facility
- Ruukie (Mpumalanga) coal fired power station
- Saldanha Steel wind energy facility

- Spitskop wind energy facility ٠
- 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 •
- •
- •
- •
- •



Email: joanne@savannahsa.com Tel: +27 (11) 656 3237

CURRICULUM VITAE OF JO-ANNE THOMAS

| Profession: | Environmental Management and Compliance Consultant; Environmental Assessment |
|------------------|---|
| | Practitioner |
| Specialisation: | Environmental Management; Strategic environmental advice; Environmental compliance |
| | advice & monitoring; Environmental Impact Assessments; Policy, strategy & guideline |
| | formulation; Project Management; General Ecology |
| Work experience: | Twenty one (21) years in the environmental field |
| | |

VOCATIONAL EXPERIENCE

Provide technical input for projects in the environmental management field, specialising in Strategic Environmental Advice, Environmental Impact Assessment studies, environmental auditing and monitoring, environmental permitting, public participation, Environmental Management Plans and Programmes, environmental policy, strategy and guideline formulation, and integrated environmental management. Key focus on integration of the specialist environmental studies and findings into larger engineering-based projects, strategic assessment, and providing practical and achievable environmental management solutions and mitigation measures. Responsibilities for environmental studies include project management (including client and authority liaison and management of specialist teams); review and manipulation of data; identification and assessment of potential negative environmental impacts and benefits; review of specialist studies; and the identification of mitigation measures. Compilation of the reports for environmental studies is in accordance with all relevant environmental legislation.

Undertaking of numerous environmental management studies has resulted in a good working knowledge of environmental legislation and policy requirements. Recent projects have been undertaken for both the public- and private-sector, including compliance advice and monitoring, electricity generation and transmission projects, various types of linear developments (such as National Road, local roads and power lines), waste management projects (landfills), mining rights and permits, policy, strategy and guideline development, as well as general environmental planning, development and management.

SKILLS BASE AND CORE COMPETENCIES

- Project management for a range of projects
- Identification and assessment of potential negative environmental impacts and benefits through the review and manipulation of data and specialist studies
- Identification of practical and achievable mitigation and management measures and the development of appropriate management plans
- Compilation of environmental reports in accordance with relevant environmental legislative requirements
- External and peer review of environmental reports & compliance advice and monitoring
- Formulation of environmental policies, strategies and guidelines
- Strategic and regional assessments; pre-feasibility & site selection
- Public participation processes for a variety of projects
- Strategic environmental advice to a wide variety of clients both in the public and private sectors
- Working knowledge of environmental planning processes, policies, regulatory frameworks and legislation

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Sc Earth Sciences, University of the Witwatersrand, Johannesburg (1993)
- B.Sc Honours in Botany, University of the Witwatersrand, Johannesburg (1994)
- M.Sc in Botany, University of the Witwatersrand, Johannesburg (1996)

Short Courses:

- Environmental Impact Assessment, Potchefstroom University (1998)
- Environmental Law, Morgan University (2001)
- Environmental Legislation, IMBEWU (2017)
- Mining Legislation, Cameron Cross & Associates (2013)
- Environmental and Social Risk Management (ESRM), International Finance Corporation (2018)

Professional Society Affiliations:

- Registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist: Environmental Scientist (400024/00)
- Registered with the International Associated for Impact Assessment South Africa (IAIAsa): 5601
- Member of the South African Wind Energy Association (SAWEA)

EMPLOYMENT

| Date | Company | Roles and Responsibilities |
|------------------------|----------------------------------|--|
| January 2006 - Current | Savannah Environmental (Pty) Ltd | Director Project manager Independent specialist environmental consultant, Environmental Assessment Practitioner (EAP) and advisor. |
| 1997 – 2005 | Bohlweki Environmental (Pty) Ltd | Senior Environmental Scientist at. Environmental Management and Project Management |
| January – July 1997 | Sutherland High School, Pretoria | Junior Science Teacher |

PROJECT EXPERIENCE

Project experience includes large infrastructure projects, including 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

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Christiana PV 2 SEF, North West | Solar Reserve South Africa | Project Manager & EAP |
| De Aar PV facility, Northern Cape | iNca Energy | Project Manager & EAP |
| Everest SEF near Hennenman, Free State | FRV Energy South Africa | Project Manager & EAP |
| Graafwater PV SEF, Western Cape | iNca Energy | Project Manager & EAP |
| Grootkop SEF near Allanridge, Free State | FRV Energy South Africa | Project Manager & EAP |
| Hertzogville PV 2 SEF with 2 phases, Free State | SunCorp / Solar Reserve | Project Manager & EAP |
| Karoshoek CPV facility on site 2 as part of the larger | FG Emvelo | Project Manager & EAP |
| Karoshoek Solar Valley Development East of | | |
| Upington, Northern Cape | | |

| Project Name & Location | Client Name | Role |
|---|-------------------------------|-----------------------|
| Kgabalatsane SEF North-East for Brits, North West | Built Environment African | Project Manager & EAP |
| | Energy Services | |
| Kleinbegin PV SEF West of Groblershoop, Northern | MedEnergy Global | Project Manager & EAP |
| Саре | | |
| Lethabo Power Station PV Installation, Free State | Eskom Holdings SoC Limited | Project Manager & EAP |
| Majuba Power Station PV Installation, Mpumalanga | Eskom Holdings SoC Limited | Project Manager & EAP |
| Merapi PV SEF Phase 1 – 4 South-East of Excelsior, | SolaireDirect Southern Africa | Project Manager & EAP |
| Free State | | |
| Sannaspos Solar Park, Free State | SolaireDirect Southern Africa | Project Manager & EAP |
| Ofir-Zx PV Plant near Keimoes, Northern Cape | S28 Degrees Energy | Project Manager & EAP |
| Oryx SEF near Virginia, Free State | FRV Energy South Africa | Project Manager & EAP |
| Project Blue SEF North of Kleinsee, Northern Cape | WWK Development | Project Manager & EAP |
| S-Kol PV Plant near Keimoes, Northern Cape | S28 Degrees Energy | Project Manager & EAP |
| Sonnenberg PV Plant near Keimoes, Northern Cape | S28 Degrees Energy | Project Manager & EAP |
| Tutuka Power Station PV Installation, Mpumalanga | Eskom Transmission | Project Manager & EAP |
| Two PV sites within the Northern Cape | MedEnergy Global | Project Manager & EAP |
| Two PV sites within the Western & Northern Cape | iNca Energy | Project Manager & EAP |
| Upington PV SEF, Northern Cape | MedEnergy Global | Project Manager & EAP |
| Vredendal PV facility, Western Cape | iNca Energy | Project Manager & EAP |
| Waterberg PV plant, Limpopo | Thupela Energy | Project Manager & EAP |
| Watershed Phase I & II SEF near Litchtenburg, North | FRV Energy South Africa | Project Manager & EAP |
| West | | |
| Alldays PV & CPV SEF Phase 1, Limpopo | BioTherm Energy | Project Manager & EAP |
| Hyperion PV Solar Development 1, 2, 3, 4, 5 & 6 | Building Energy | Project Manager & EAP |

Basic Assessments

| Project Name & Location | Client Name | Role |
|--|-------------------------------|-----------------------|
| Aberdeen PV SEF, Eastern Cape | BioTherm Energy | Project Manager & EAP |
| Christiana PV 1 SEF on Hartebeestpan Farm, North- | Solar Reserve South Africa | Project Manager & EAP |
| West | | |
| Heuningspruit PV1 & PV 2 facilities near Koppies, | Sun Mechanics | Project Manager & EAP |
| Free State | | |
| Kakamas PV Facility, Northern Cape | iNca Energy | Project Manager & EAP |
| Kakamas II PV Facility, Northern Cape | iNca Energy | Project Manager & EAP |
| Machadodorp 1 PV SEF, Mpumalanga | Solar To Benefit Africa | Project Manager & EAP |
| PV site within the Northern Cape | iNca Energy | Project Manager & EAP |
| PV sites within 4 ACSA airports within South Africa, | Airports Company South Africa | Project Manager & EAP |
| National | (ACSA) | |
| RustMo1 PV Plant near Buffelspoort, North West | Momentous Energy | Project Manager & EAP |
| RustMo2 PV Plant near Buffelspoort, North West | Momentous Energy | Project Manager & EAP |
| RustMo3 PV Plant near Buffelspoort, North West | Momentous Energy | Project Manager & EAP |
| RustMo4 PV Plant near Buffelspoort, North West | Momentous Energy | Project Manager & EAP |
| Sannaspos PV SEF Phase 2 near Bloemfontein, Free | SolaireDirect Southern Africa | Project Manager & EAP |
| State | | |
| Solar Park Expansion within the Rooiwal Power | AFRKO Energy | Project Manager & EAP |
| Station, Gauteng | | |
| Steynsrus SEF, Free State | SunCorp | Project Manager & EAP |

| Project Name & Location | Client Name | Role |
|---|--------------------|-----------------------|
| Sirius Solar PV Project Three and Sirius Solar PV | SOLA Future Energy | Project Manager & EAP |
| Project Four (BA in terms of REDZ regulations), | | |
| Northern Cape | | |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Allemans Fontein SEF near Noupoort, Northern Cape | Fusion Energy | Project Manager & EAP |
| Amandel SEF near Thabazimbi, Limpopo | iNca Energy | Project Manager & EAP |
| Arola/Doornplaat SEF near Ventersdorp, North West | FRV & iNca Energy | Project Manager & EAP |
| Bloemfontein Airport PV Installation, Free State | The Power Company | Project Manager & EAP |
| Brakspruit SEF near Klerksorp, North West | FRV & iNca Energy | Project Manager & EAP |
| Carolus Poort SEF near Noupoort, Northern Cape | Fusion Energy | Project Manager & EAP |
| Damfontein SEF near Noupoort, Northern Cape | Fusion Energy | Project Manager & EAP |
| Everest SEF near Welkom, Free State | FRV & iNca Energy | Project Manager & EAP |
| Gillmer SEF near Noupoort, Northern Cape | Fusion Energy | Project Manager & EAP |
| Grootkop SEF near Allansridge, Free State | FRV & iNca Energy | Project Manager & EAP |
| Heuningspruit PV1 & PV 2 near Koppies, Free State | Cronimat | Project Manager & EAP |
| Kimberley Airport PV Installation, Northern Cape | The Power Company | Project Manager & EAP |
| Kolonnade Mall Rooftop PV Installation in Tshwane, | Momentous Energy | Project Manager & EAP |
| Gauteng | | |
| Loskop SEF near Groblersdal, Limpopo | S&P Power Unit | Project Manager & EAP |
| Marble SEF near Marble Hall, Limpopo | S&P Power Unit | Project Manager & EAP |
| Morgenson PV1 SEF South-West of Windsorton, | Solar Reserve South Africa | Project Manager & EAP |
| Northern Cape | | |
| OR Tambo Airport PV Installation, Gauteng | The Power Company | Project Manager & EAP |
| Oryx SEF near Virginia, Free State | FRV & iNca Energy | Project Manager & EAP |
| Rhino SEF near Vaalwater, Limpopo | S&P Power Unit | Project Manager & EAP |
| Rustmo2 PV Plant near Buffelspoort, North West | Momentous Energy | Project Manager & EAP |
| Spitskop SEF near Northam, Limpopo | FRV & iNca Energy | Project Manager & EAP |
| Steynsrus PV, Free State | Suncorp | Project Manager & EAP |
| Tabor SEF near Polokwane, Limpopo | FRV & iNca Energy | Project Manager & EAP |
| UpingtonAirport PV Installation, Northern Cape | The Power Company | Project Manager & EAP |
| Valeria SEF near Hartebeestpoort Dam, North West | Solar to Benefit Africa | Project Manager & EAP |
| Watershed SEF near Lichtenburg, North West | FRV & iNca Energy | Project Manager & EAP |
| Witkop SEF near Polokwane, Limpopo | FRV & iNca Energy | Project Manager & EAP |
| Woodmead Retail Park Rooftop PV Installation, Gauteng | Momentous Energy | Project Manager & EAP |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|------------------------|-----------------|
| ECO and bi-monthly auditing for the construction of | Enel Green Power | Project Manager |
| the Adams Solar PV Project Two South of Hotazel, | | |
| Northern Cape | | |
| ECO for the construction of the Kathu PV Facility, | REISA | Project Manager |
| Northern Cape | | |
| ECO and bi-monthly auditing for the construction of | Enel Green Power | Project Manager |
| the Pulida PV Facility, Free State | | |
| ECO for the construction of the RustMo1 SEF, North | Momentous Energy | Project Manager |
| West | | |
| ECO for the construction of the Sishen SEF, Northern | Windfall 59 Properties | Project Manager |

| Project Name & Location | Client Name | Role |
|---|-------------------|-----------------|
| Саре | | |
| ECO for the construction of the Upington Airport PV | Sublanary Trading | Project Manager |
| Facility, Northern Cape | | |
| Quarterly compliance monitoring of compliance | REISA | Project Manager |
| with all environmental licenses for the operation | | |
| activities at the Kathu PV facility, Northern Cape | | |
| ECO for the construction of the Konkoonsies II PV SEF | BioTherm Energy | Project Manager |
| and associated infrastructure, Northern Cape | | |
| ECO for the construction of the Aggeneys PV SEF | BioTherm Energy | Project Manager |
| and associated infrastructure, Northern Cape | | |

Compliance Advice and ESAP Reporting

| Project Name & Location | Client Name | Role |
|---|--------------------------|-----------------------|
| Aggeneys Solar Farm, Northern Cape | BioTherm Energy | Environmental Advisor |
| Airies II PV Facility SW of Kenhardt, Northern Cape | BioTherm Energy | Environmental Advisor |
| Kalahari SEF Phase II in Kathu, Northern Cape | Engie | Environmental Advisor |
| Kathu PV Facility, Northern Cape | Building Energy | Environmental Advisor |
| Kenhardt PV Facility, Northern Cape | BioTherm Energy | Environmental Advisor |
| Kleinbegin PV SEF West of Groblershoop, Northern | MedEnergy | Environmental Advisor |
| Саре | | |
| Konkoonises II SEF near Pofadder, Northern Cape | BioTherm Energy | Environmental Advisor |
| Konkoonsies Solar Farm, Northern Cape | BioTherm Energy | Environmental Advisor |
| Lephalale SEF, Limpopo | Exxaro | Environmental Advisor |
| Pixley ka Seme PV Park, South-East of De Aar, | African Clean Energy | Environmental Advisor |
| Northern Cape | Developments (ACED) | |
| RustMo1 PV Plant near Buffelspoort, North West | Momentous Energy | Environmental Advisor |
| Scuitdrift 1 SEF & Scuitdrift 2 SEF, Limpopo | Building Energy | Environmental Advisor |
| Sirius PV Plants, Northern Cape | Aurora Power Solutions | Environmental Advisor |
| Upington Airport PV Power Project, Northern Cape | Sublunary Trading | Environmental Advisor |
| Upington SEF, Northern Cape | Abengoa Solar | Environmental Advisor |
| Ofir-ZX PV SEF near Keimoes, Northern Cape | Networx \$28 Energy | Environmental Advisor |
| Steynsrus PV1 & PV2 SEF's, Northern Cape | Cronimet Power Solutions | Environmental Advisor |
| Heuningspruit PV SEF, Northern Cape | Cronimet Power Solutions | Environmental Advisor |

Due Diligence Reporting

| Project Name & Location | Client Name | Role |
|--|------------------------|-----------------------|
| 5 PV SEF projects in Lephalale, Limpopo | iNca Energy | Environmental Advisor |
| Prieska PV Plant, Northern Cape | SunEdison Energy India | Environmental Advisor |
| Sirius Phase One PV Facility near Upington, Northern | Aurora Power Solutions | Environmental Advisor |
| Саре | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|------------------|-----------------------|
| Biodiversity Permit & WULA for the Aggeneys SEF | BioTherm Energy | Project Manager & EAP |
| near Aggeneys, Northern Cape | | |
| Biodiversity Permit for the Konkoonises II SEF near | BioTherm Energy | Project Manager & EAP |
| Pofadder, Northern Cape | | |
| Biodiversity Permitting for the Lephalale SEF, | Exxaro Resources | Project Manager & EAP |
| Limpopo | | |

| Project Name & Location | Client Name | Role |
|---|--------------------------|-----------------------|
| Environmental Permitting for the Kleinbegin PV SEF | MedEnergy | Project Manager & EAP |
| West of Groblershoop, Northern Cape | | |
| Environmental Permitting for the Upington SEF, | Abengoa Solar | Project Manager & EAP |
| Northern Cape | | |
| Environmental Permitting for the Kathu PV Facility, | Building Energy | Project Manager & EAP |
| Northern Cape | | |
| Environmental Permitting for the Konkoonsies Solar | BioTherm Energy | Project Manager & EAP |
| Farm, Northern Cape | | |
| Environmental Permitting for the Lephalale SEF, | Exxaro Resources | Project Manager & EAP |
| Limpopo | | |
| Environmental Permitting for the Scuitdrift 1 SEF & | Building Energy | Project Manager & EAP |
| Scuitdrift 2 SEF, Limpopo | | |
| Environmental Permitting for the Sirius PV Plant, | Aurora Power Solutions | Project Manager & EAP |
| Northern Cape | | |
| Environmental Permitting for the Steynsrus PV1 & PV2 | Cronimet Power Solutions | Project Manager & EAP |
| SEF's, Northern Cape | | |
| Environmental Permitting for the Heuningspruit PV | Cronimet Power Solutions | Project Manager & EAP |
| SEF, Northern Cape | | |
| Permits for the Kleinbegin and UAP PV Plants, | MedEnergy Global | Project Manager & EAP |
| Northern Cape | | |
| S53 Application for Arriesfontein Solar Park Phase 1 – | Solar Reserve / SunCorp | Project Manager & EAP |
| 3 near Danielskuil, Northern Cape | | |
| S53 Application for Hertzogville PV1 & PV 2 SEFs, Free | Solar Reserve / SunCorp | Project Manager & EAP |
| State | | |
| \$53 Application for the Bloemfontein Airport PV | Sublunary Trading | Project Manager & EAP |
| Facility, Free State | | |
| \$53 Application for the Kimberley Airport PV Facility, | Sublunary Trading | Project Manager & EAP |
| Northern Cape | | |
| \$53 Application for the Project Blue SEF, Northern | WWK Developments | Project Manager & EAP |
| Саре | | |
| \$53 Application for the Upington Airport PV Facility, | Sublunary Trading | Project Manager & EAP |
| Free State | | |
| WULA for the Kalahari SEF Phase II in Kathu, Northern | Engie | Project Manager & EAP |
| Саре | | |
| Environmental Permitting for the Steynsrus PV1 & PV2 | Cronimet Power Solutions | Project Manager & EAP |
| SEF's, Northern Cape | | |
| Environmental Permitting for the Heuningspruit PV | Cronimet Power Solutions | Project Manager & EAP |
| SEF, Northern Cape | | |

RENEWABLE POWER GENERATION PROJECTS: CONCENTRATED SOLAR FACILITIES (CSP)

| Project Name & Location | Client Name | Role |
|--|------------------|-----------------------|
| llanga CSP 2, 3, 4, 5, 7 & 9 Facilities near Upington, | Emvelo Holdings | Project Manager & EAP |
| Northern Cape | | |
| llanga CSP near Upington, Northern Cape | llangethu Energy | Project Manager & EAP |
| llanga Tower 1 Facility near Upington, Northern | Emvelo Holdings | Project Manager & EAP |
| Cape | | |

| Project Name & Location | Client Name | Role |
|---|-------------|-----------------------|
| Karoshoek CPVPD 1-4 facilities on site 2 as part of | FG Emvelo | Project Manager & EAP |
| the larger Karoshoek Solar Valley Development East | | |
| of Upington, Northern Cape | | |
| Karoshoek CSP facilities on sites 1.4; 4 & 5 as part of | FG Emvelo | Project Manager & EAP |
| the larger Karoshoek Solar Valley Development East | | |
| of Upington, Northern Cape | | |
| Karoshoek Linear Fresnel 1 Facility on site 1.1 as part | FG Emvelo | Project Manager & EAP |
| of the larger Karoshoek Solar Valley Development | | |
| East of Upington, Northern Cape | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|---|---------------------|-----------------|
| ECO for the construction of the !Khi CSP Facility, | Abengoa Solar | Project Manager |
| Northern Cape | | |
| ECO for the construction of the Ilanga CSP 1 Facility | Karoshoek Solar One | Project Manager |
| near Upington, Northern Cape | | |
| ECO for the construction of the folar Park, Northern | Kathu Solar | Project Manager |
| Саре | | |
| ECO for the construction of the KaXu! CSP Facility, | Abengoa Solar | Project Manager |
| Northern Cape | | |
| Internal audit of compliance with the conditions of | Karoshoek Solar One | Project Manager |
| the IWUL issued to the Karoshoek Solar One CSP | | |
| Facility, Northern Cape | | |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|---------------------|-----------------------|
| Upington CSP (Tower) Plant near Kanoneiland, | iNca Energy and FRV | Project Manager & EAP |
| Northern Cape | | |

Compliance Advice and ESAP reporting

| Project Name & Location | Client Name | Role |
|--|------------------|-----------------------|
| Ilanga CSP Facility near Upington, Northern Cape | llangethu Energy | Environmental Advisor |
| llangalethu CSP 2, Northern Cape | FG Emvelo | Environmental Advisor |
| Kathu CSP Facility, Northern Cape | GDF Suez | Environmental Advisor |
| Lephalale SEF, Limpopo | Cennergi | Environmental Advisor |
| Solis I CSP Facility, Northern Cape | Brightsource | Environmental Advisor |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|--|------------------|-----------------------|
| Environmental Permitting for the Ilanga CSP Facility | llangethu Energy | Project Manager & EAP |
| near Upington, Northern Cape | | |
| Environmental Permitting for the Kathu CSP, Northern | GDF Suez | Project Manager & EAP |
| Cape | | |
| WULA for the Solis I CSP Facility, Northern Cape | Brightsource | Project Manager & EAP |

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

| • | 2 | |
|-------------------------|----------------------------|------|
| Project Name & Location | Client Name | Role |
| Sere WEF, Western Cape | Eskom Holdings SoC Limited | EAP |

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Aberdeen WEF, Eastern Cape | Eskom Holdings SoC Limited | Project Manager & EAP |
| Amakhala Emoyeni WEF, Eastern Cape | Windlab Developments | Project Manager & EAP |
| EXXARO West Coast WEF, Western Cape | EXXARO Resources | Project Manager & EAP |
| Goereesoe Wind Farm near Swellendam, Western | iNca Energy | Project Manager & EAP |
| Саре | | |
| Hartneest WEF, Western Cape | Juwi Renewable Energies | Project Manager & EAP |
| Hopefield WEF, Western Cape | Umoya Energy | EAP |
| Kleinsee WEF, Northern Cape | Eskom Holdings SoC Limited | Project Manager & EAP |
| Klipheuwel/Dassiesfontein WEF within the Overberg | BioTherm Energy | Project Manager & EAP |
| area, Western Cape | | |
| Moorreesburg WEF, Western Cape | iNca Energy | Project Manager & EAP |
| Oyster Bay WEF, Eastern Cape | Renewable Energy Resources | Project Manager & EAP |
| | Southern Africa | |
| Project Blue WEF, Northern Cape | Windy World | Project Manager & EAP |
| Rheboksfontein WEF, Western Cape | Moyeng Energy | Project Manager & EAP |
| Spitskop East WEF near Riebeeck East, Eastern Cape | Renewable Energy Resources | Project Manager & EAP |
| | Southern Africa | |
| Suurplaat WEF, Western Cape | Moyeng Energy | Project Manager & EAP |
| Swellendam WEF, Western Cape | IE Swellendam | Project Manager & EAP |
| Tsitsikamma WEF, Eastern Cape | Exxarro | Project Manager & EAP |
| West Coast One WEF, Western Cape | Moyeng Energy | Project Manager & EAP |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|--------------------------|-----------------------|
| Amakhala Emoyeni Wind Monitoring Masts, Eastern | Windlab Developments | Project Manager & EAP |
| Саре | | |
| Beaufort West Wind Monitoring Masts, Western Cape | Umoya Energy | Project Manager & EAP |
| Hopefield Community Wind Farm near Hopefield, | Umoya Energy | Project Manager & EAP |
| Western Cape | | |
| Koekenaap Wind Monitoring Masts, Western Cape | EXXARO Resources | Project Manager & EAP |
| Koingnaas WEF, Northern Cape | Just Palm Tree Power | Project Manager & EAP |
| Laingsburg Area Wind Monitoring Masts, Western | Umoya Energy | Project Manager & EAP |
| Саре | | |
| Overberg Area Wind Monitoring Masts, Western | BioTherm Energy | Project Manager & EAP |
| Cape | | |
| Oyster Bay Wind Monitoring Masts, Eastern Cape | Renewable Energy Systems | Project Manager & EAP |
| | Southern Africa (RES) | |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|------------------------|-----------------------|
| Albertinia WEF, Western Cape | BioTherm Energy | Project Manager & EAP |
| Koingnaas WEF, Northern Cape | Just Pal Tree Power | Project Manager & EAP |
| Napier Region WEF Developments, Western Cape | BioTherm Energy | Project Manager & EAP |
| Tsitsikamma WEF, Eastern Cape | Exxarro Resources | Project Manager & EAP |
| Various WEFs within an identified area in the | BioTherm Energy | Project Manager & EAP |
| Overberg area, Western Cape | | |
| Various WEFs within an identified area on the West | Investec Bank Limited | Project Manager & EAP |
| Coast, Western Cape | | |
| Various WEFs within an identified area on the West | Eskom Holdings Limited | Project Manager & EAP |
| Coast, Western Cape | | |

| Project Name & Location | Client Name | Role |
|---|-------------------------------|-----------------------|
| Various WEFs within the Western Cape | Western Cape Department of | Project Manager & EAP |
| | Environmental Affairs and | |
| | Development Planning | |
| Velddrift WEF, Western Cape | VentuSA Energy | Project Manager & EAP |
| Wind 1000 Project | Thabo Consulting on behalf of | Project Manager & EAP |
| | Eskom Holdings | |
| Wittekleibosch, Snylip & Doriskraal WEFs, Eastern | Exxarro Resources | Project Manager & EAP |
| Саре | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|-------------------|-----------------|
| ECO for the construction of the West Coast One | Aurora Wind Power | Project Manager |
| WEF, Western Cape | | |
| ECO for the construction of the Gouda WEF, | Blue Falcon | Project Manager |
| Western Cape | | |
| EO for the Dassiesklip Wind Energy Facility, Western | Group 5 | Project Manager |
| Саре | | |
| Quarterly compliance monitoring of compliance | Blue Falcon | Project Manager |
| with all environmental licenses for the operation | | |
| activities at the Gouda Wind Energy facility near | | |
| Gouda, Western Cape | | |
| Annual auditing of compliance with all | Aurora Wind Power | Project Manager |
| environmental licenses for the operation activities at | | |
| the West Coast One Wind Energy facility near | | |
| Vredenburg, Western Cape | | |
| External environmental and social audit for the | Cennergi | Project Manager |
| Amakhala Wind Farm, Eastern Cape | | |
| External environmental and social audit for the | Cennergi | Project Manager |
| Tsitsikamma Wind Farm, Eastern Cape | | |
| ECO for the construction of the Excelsior Wind Farm | BioTherm Energy | Project Manager |
| and associated infrastructure, Northern Cape | | |
| External compliance audit of the Dassiesklip Wind | BioTherm Energy | Project Manager |
| Energy Facility, Western Cape | | |

Compliance Advice

| Project Name & Location | Client Name | Role |
|--|----------------------|-----------------------|
| Amakhala Phase 1 WEF, Eastern Cape | Cennergi | Environmental Advisor |
| Dassiesfontein WEF within the Overberg area, | BioTherm Energy | Environmental Advisor |
| Western Cape | | |
| Excelsior Wind Farm, Western Cape | BioTherm Energy | Environmental Advisor |
| Great Karoo Wind Farm, Northern Cape | African Clean Energy | Environmental Advisor |
| | Developments (ACED) | |
| Hopefield Community WEF, Western Cape | African Clean Energy | Environmental Advisor |
| | Developments (ACED) | |
| Rheboksfontein WEF, Western Cape | Moyeng Energy | Environmental Advisor |
| Tiqua WEF, Western Cape | Cennergi | Environmental Advisor |
| Tsitsikamma WEF, Eastern Cape | Cennergi | Environmental Advisor |
| West Coast One WEF, Western Cape | Moyeng Energy | Environmental Advisor |

Due Diligence Reporting

| Project Name & Location | Client Name | Role |
|--|--------------------------|-----------------------|
| Witteberg WEF, Western Cape | EDPR Renewables | Environmental Advisor |
| IPD Vredenburg WEF within the Saldanha Bay area, | IL&FS Energy Development | Environmental Advisor |
| Western Cape | Company | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|-----------------------|-----------------------|
| Biodiversity Permitting for the Power Line between | Cennergi | Project Manager & EAP |
| the Tsitikamma Community WEF & the Diep River | | |
| Substation, Eastern Cape | | |
| Biodiversity Permitting for the West Coast One WEF, | Aurora Wind Power | Project Manager & EAP |
| Western Cape | | |
| Environmental Permitting for the Excelsior WEF, | BioTherm Energy | Project Manager & EAP |
| Western Cape | | |
| Plant Permits & WULA for the Tsitsikamma | Cennergi | Project Manager & EAP |
| Community WEF, Eastern Cape | | |
| S24G and WULA for the Rectification for the | Hossam Soror | Project Manager & EAP |
| commencement of unlawful activities on Ruimsig AH | | |
| in Honeydew, Gauteng | | |
| S24G Application for the Rheboksfontein WEF, | Ormonde - Theo Basson | Project Manager & EAP |
| Western Cape | | |
| \$53 Application & WULA for Suurplaat and Gemini | Engie | Project Manager & EAP |
| WEFs, Northern Cape | | |
| \$53 Application for the Hopefield Community Wind | Umoya Energy | Project Manager & EAP |
| Farm near Hopefield, Western Cape | | |
| \$53 Application for the Project Blue WEF, Northern | WWK Developments | Project Manager & EAP |
| Саре | | |
| \$53 for the Oyster Bay WEF, Eastern Cape | RES | Project Manager & EAP |
| WULA for the Great Karoo Wind Farm, Northern | African Clean Energy | Project Manager & EAP |
| Саре | Developments (ACED) | |

CONVENTIONAL POWER GENERATION PROJECTS (COAL)

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|--|-------------------|-----------------------|
| Mutsho Power Station near Makhado, Limpopo | Mutsho Consortium | Project Manager & EAP |
| Coal-fired Power Station near Ogies, Mpumalanga | Ruukki SA | Project Manager & EAP |
| Thabametsi IPP Coal-fired Power Station, near | Axia | Project Manager & EAP |
| Lephalale, Limpopo | | |
| Transalloys Coal-fired Power Station, Mpumalanga | Transalloys | Project Manager & EAP |
| Tshivasho IPP Coal-fired Power Station (with WML), | Cennergi | Project Manager & EAP |
| near Lephalale, Limpopo | | |
| Umbani Coal-fired Power Station, near Kriel, | ISS Global Mining | Project Manager & EAP |
| Mpumalanga | | |
| Waterberg IPP Coal-Fired Power Station near | Exxaro Resources | Project Manager & EAP |
| Lephalale, Limpopo | | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|----------------|-----------------------|
| Coal Stockyard on Medupi Ash Dump Site, Limpopo | Eskom Holdings | Project Manager & EAP |

| Project Name & Location | Client Name | Role |
|---|----------------|-----------------------|
| Biomass Co-Firing Demonstration Facility at Arnot | Eskom Holdings | Project Manager & EAP |
| Power Station East of Middleburg, Mpumlanaga | | |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Baseload Power Station near Lephalale, Limpopo | Cennergi | Project Manager & EAP |
| Coal-Fired Power Plant near Delmas, Mpumalanga | Exxaro Resources | Project Manager & EAP |
| Makhado Power Station, Limpopo | Mutsho Consortium, Limpopo | Project Manager & EAP |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|----------------|-----------------|
| ECO for the Camden Power Station, Mpumalanga | Eskom Holdings | Project Manager |

Compliance Advice

| Project Name & Location | Client Name | Role |
|---|-------------|-----------------------|
| Thabametsi IPP Coal-fired Power Station, near | Axia | Environmental Advisor |
| Lephalale, Limpopo | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|--|------------------|-----------------------|
| Permit application for the Thabametsi Bulk Water | Axia | Project Manager & EAP |
| Pipeline, near Lephalale, Limpopo | | |
| \$53 & WULA for the Waterberg IPP Coal-Fired Power | Exxaro Resources | Project Manager & EAP |
| Station near Lephalale, Limpopo | | |
| S53 Application for the Tshivasho Coal-fired Power | Cennergi | Project Manager & EAP |
| Station near Lephalale, Limpopo | | |

CONVENTIONAL POWER GENERATION PROJECTS (GAS)

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Ankerlig OCGT to CCGT Conversion project &400 kV | Eskom Holdings SoC Limited | Project Manager & EAP |
| transmission power line between Ankerlig and the | | |
| Omega Substation, Western Cape | | |
| Gourikwa OCGT to CCGT Conversion project & 400 | Eskom Holdings SoC Limited | Project Manager & EAP |
| kV transmission power line between Gourikwa & | | |
| Proteus Substation, Western Cape | | |
| Richards Bay Gas to Power Combined Cycle Power | Eskom Holdings SoC Limited | Project Manager & EAP |
| Station, KwaZulu-Natal | | |
| Richards Bay Gas to Power Plant, KwaZulu-Natal | Richards Bay Gas | Project Manager & EAP |
| Decommissioning & Recommissioning of 3 Gas | Eskom Holdings | Project Manager & EAP |
| Turbine Units at Acacia Power Station & 1 Gas | | |
| Turbine Unit at Port Rex Power Station to the existing | | |
| Ankerlig Power Station in Atlantis Industria, Western | | |
| Саре | | |
| Two 132kV Chickadee Lines to the new Zonnebloem | Eskom Holdings | Project Manager & EAP |
| Switching Station, Mpumalanga | | |

Screening Studies

| Project Name & Location | Client Name | Role |
|---|----------------------------|-----------------------|
| Fatal Flaw Analysis for 3 area identified for the | Globeleq Advisors Limited | Project Manager & EAP |
| establishment of a 500MW CCGT Power Station | | |
| Richards Bay Gas to Power Combined Cycle Power | Eskom Holdings SoC Limited | Project Manager & EAP |
| Station, KwaZulu-Natal | | |

GRID INFRASTRUCTURE PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|--|--------------------|-----------------------|
| Aggeneis-Oranjemond Transmission Line & | Eskom Transmission | Project Manager & EAP |
| Substation Upgrade, Northern Cape | | |
| Ankerlig-Omega Transmission Power Lines, Western | Eskom Transmission | Project Manager & EAP |
| Саре | | |
| Karoshoek Grid Integration project as part of the | FG Emvelo | Project Manager & EAP |
| Karoshoek Solar Valley Development East of | | |
| Upington, Northern Cape | | |
| Koeberg-Omega Transmission Power Lines,, Western | Eskom Transmission | Project Manager & EAP |
| Саре | | |
| Koeberg-Stikland Transmission Power Lines, Western | Eskom Transmission | Project Manager & EAP |
| Саре | | |
| Kyalami Strengthening Project, Gauteng | Eskom Transmission | Project Manager & EAP |
| Mokopane Integration Project, Limpopo | Eskom Transmission | Project Manager & EAP |
| Saldanha Bay Strengthening Project, Western Cape | Eskom Transmission | Project Manager & EAP |
| Steelpoort Integration Project, Limpopo | Eskom Transmission | Project Manager & EAP |
| Transmission Lines from the Koeberg-2 Nuclear | Eskom Transmission | Project Manager & EAP |
| Power Station site, Western Cape | | |
| Tshwane Strengthening Project, Phase 1, Gauteng | Eskom Transmission | Project Manager & EAP |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|----------------------|-----------------------|
| Project Name & Location | | Role |
| Dassenberg-Koeberg Power Line Deviation from the | Eskom Holdings | Project Manager & EAP |
| Koeberg to the Ankerlig Power Station, Western | | |
| Саре | | |
| Golden Valley II WEF Power Line & Substation near | BioTherm Energy | Project Manager & EAP |
| Cookhouse, Eastern Cape | | |
| Golden Valley WEF Power Line near Cookhouse, | BioTherm Energy | Project Manager & EAP |
| Eastern Cape | | |
| Karoshoek Grid Integration project as part of the | FG Emvelo | Project Manager & EAP |
| Karoshoek Solar Valley Development East of | | |
| Upington, Northern Cape | | |
| Konkoonsies II PV SEF Power Line to the Paulputs | BioTherm Energy | Project Manager & EAP |
| Substation near Pofadder, Northern Cape | | |
| Perdekraal West WEF Powerline to the Eskom Kappa | BioTherm Energy | Project Manager & EAP |
| Substation, Westnern Cape | | |
| Rheboksfontein WEF Powerline to the Aurora | Moyeng Energy | Project Manager & EAP |
| Substation, Western Cape | | |
| Soetwater Switching Station near Sutherland, | African Clean Energy | Project Manager & EAP |
| Northern Cape | Developments (ACED) | |

| Solis Power I Power Line & Switchyard Station near | Brightsource | Project Manager & EAP |
|--|---------------------|-----------------------|
| Upington, Northern Cape | | |
| Stormwater Canal System for the Ilanga CSP near | Karoshoek Solar One | Project Manager & EAP |
| Upington, Northern Cape | | |
| Tsitsikamma Community WEF Powerline to the Diep | Eskom Holdings | Project Manager & EAP |
| River Substation, Eastern Cape | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|---------------------------------|-----------------|
| ECO for the construction of the Ferrum-Mookodi | Trans-Africa Projects on behalf | Project Manager |
| Transmission Line, Northern Cape and North West | of Eskom | |
| EO for the construction of the Gamma-Kappa | Trans-Africa Projects on behalf | Project Manager |
| Section A Transmission Line, Western Cape | of Eskom | |
| EO for the construction of the Gamma-Kappa | Trans-Africa Projects on behalf | Project Manager |
| Section B Transmission Line, Western Cape | of Eskom | |
| EO for the construction of the Hydra IPP Integration | Trans-Africa Projects on behalf | Project Manager |
| project, Northern Cape | of Eskom | |
| EO for the construction of the Kappa-Sterrekus | Trans-Africa Projects on behalf | Project Manager |
| Section C Transmission Line, Western Cape | of Eskom | |
| EO for the construction of the Namaqualand | Trans-Africa Projects on behalf | Project Manager |
| Strengthening project in Port Nolloth, Western Cape | of Eskom | |
| ECO for the construction of the Neptune Substation | Eskom | Project Manager |
| Soil Erosion Mitigation Project, Eastern Cape | | |
| ECO for the construction of the Ilanga-Gordonia | Karoshoek Solar One | Project Manager |
| 132kV power line, Northern Cape | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|----------------|-----------------------|
| Environmental Permitting and WULA for the | Eskom Holdings | Project Manager & EAP |
| Rockdale B Substation & Loop in Power Lines, | | |
| Environmental Permitting and WULA for the | Eskom Holdings | Project Manager & EAP |
| Steelpoort Integration project, Limpopo | | |
| Environmental Permitting for Solis CSP near Upington, | Brightsource | Project Manager & EAP |
| Northern Cape | | |

MINING SECTOR PROJECTS

| Project Name & Location | Client Name | Role |
|--|---------------------------|-----------------------|
| Elitheni Coal Mine near Indwe, Eastern Cape | Elitheni Coal | Project Manager & EAP |
| Groot Letaba River Development Project Borrow Pits | liso | Project Manager & EAP |
| Grootegeluk Coal Mine for coal transportation | Eskom Holdings | Project Manager & EAP |
| infrastructure between the mine and Medupi Power | | |
| Station (EMPr amendment) , Limpopo | | |
| Waterberg Coal Mine (EMPr amendment), Limpopo | Seskoko Resources | Project Manager & EAP |
| Aluminium Plant WML & AEL, Gauteng | GfE-MIR Alloys & Minerals | Project Manager & EAP |
| Zero Waste Recovery Plant at Highveld Steel, | Anglo African Metal | Project Manager & EAP |
| Mpumalanga | | |

| asic Assessments | | |
|-------------------------|-------------|------|
| Project Name & Location | Client Name | Role |

| Rare Earth Separation Plant in Vredendal, Western | Rareco | Project Manager & EAP |
|---|--------|-----------------------|
| Саре | | |
| Decommissioning and Demolition of Kilns 5 & 6 at | PPC | Project Manager & EAP |
| the Slurry Plant, Kwa-Zulu Natal | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------|
| ECO for the construction of the Duhva Mine Water | Eskom Holdings SoC Limited | Project Manager |
| Recovery Project, Mpumalanga | | |
| External compliance audit of Palesa Coal Mine's | HCI Coal | Project Manager |
| Integrated Water Use License (IWUL), near | | |
| KwaMhlanga, Mpumalanga | | |
| External compliance audit of Palesa Coal Mine's | HCI Coal | Project Manager |
| Waste Management License (WML) and EMP, near | | |
| KwaMhlanga, Mpumalanga | | |
| External compliance audit of Mbali Coal Mine's | HCI Coal | Project Manager |
| Integrated Water Use License (IWUL), near Ogies, | | |
| Mpumalanga | | |
| Independent External Compliance Audit of Water | Tronox Namakwa Sands | Project Manager |
| Use License (WUL) for the Tronox Namakwa Sands | | |
| (TNS) Mining Operations (Brand se Baai), Western | | |
| Саре | | |
| Independent External Compliance Audit of Water | Tronox Namakwa Sands | Project Manager |
| Use License (WUL) for the Tronox Namakwa Sands | | |
| (TNS) Mineral Separation Plant (MSP), Western Cape | | |
| Independent External Compliance Audit of Water | Tronox Namakwa Sands | Project Manager |
| Use License (WUL) for the Tronox Namakwa Sands | | |
| (TNS) Smelter Operations (Saldanha), Western Cape | | |
| Compliance Auditing of the Waste Management | PetroSA | Project Manager |
| Licence for the PetroSA Landfill Site at the GTL | | |
| Refinery, Western Cape | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|---------------------------|-----------------------|
| Waste Licence Application for the Rare Earth | Rareco | Project Manager & EAP |
| Separation Plant in Vredendal, Western Cape | | |
| WULA for the Expansion of the Landfill site at Exxaro's | Exxaro Resources | Project Manager & EAP |
| Namakwa Sands Mineral Separation Plant, Western | | |
| Cape | | |
| S24G & WML for an Aluminium Plant, Gauteng | GfE-MIR Alloys & Minerals | Project Manager & EAP |

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

| Project Name & Location | Client Name | Role |
|--|----------------|-----------------------|
| Bridge across the Ngotwane River, on the border of | Eskom Holdings | Project Manager & EAP |
| South Africa and Botswana | | |
| Chemical Storage Tanks, Metallurgical Plant | Goldfields | Project Manager & EAP |
| Upgrade & Backfill Plant upgrade at South Deep | | |
| Gold Mine, near Westornaria, Gauteng | | |

| Project Name & Location | Client Name | Role |
|--|-------------------------------|-----------------------|
| Expansion of the existing Welgedacht Water Care | ERWAT | Project Manager & EAP |
| Works, Gauteng | | |
| Golden Valley WEF Access Road near Cookhouse, | BioTherm Energy | Project Manager & EAP |
| Eastern Cape | | |
| Great Fish River Wind Farm Access Roads and | African Clean Energy | Project Manager & EAP |
| Watercourse Crossings near Cookhouse, Eastern | Developments (ACED) | |
| Саре | | |
| Ilanga CSP Facility Watercourse Crossings near | Karoshoek Solar one | Project Manager & EAP |
| Upington, Northern Cape | | |
| Modification of the existing Hartebeestfontein Water | ERWAT | Project Manager & EAP |
| Care Works, Gautng | | |
| N10 Road Realignment for the Ilanga CSP Facility, | SANRAL | Project Manager & EAP |
| East of Upington, Northern Cape | | |
| Nxuba (Bedford) Wind Farm Watercourse Crossings | African Clean Energy | Project Manager & EAP |
| near Cookhouse, Eastern Cape | Developments (ACED) | |
| Pollution Control Dams at the Medupi Power Station | Eskom | Project Manager & EAP |
| Ash Dump & Coal Stockyard, Limpopo | | |
| Qoboshane borrow pits (EMPr only), Eastern Cape | Emalahleni Local Municipality | Project Manager & EAP |
| Tsitsikamma Community WEF Watercourse Crossings, | Cennergi | Project Manager & EAP |
| Eastern Cape | | |
| Clayville Central Steam Plant, Gauteng | Bellmall Energy | Project Manager & EAP |
| Msenge Emoyeni Wind Farm Watercourse Crossings | Windlab | Project Manager & EAP |
| and Roads, Eastern Cape | | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|-------------------------------|-----------------------|
| Harmony Gold WWTW at Doornkop Mine, Gauteng | Harmony Doornkop Plant | Project Manager & EAP |
| Ofir-ZX Watercourse Crossing for the Solar PV Facility, | Networx S28 Energy | Project Manager & EAP |
| near Keimoes, Northern Cape | | |
| Qoboshane bridge & access roads, Eastern Cape | Emalahleni Local Municipality | Project Manager & EAP |
| Relocation of the Assay Laboratory near | Sibanye Gold | Project Manager & EAP |
| Carletonville, Gauteng | | |
| Richards Bay Harbour Staging Area, KwaZulu-Natal | Eskom Holdings | Project Manager & EAP |
| S-Kol Watercourse Crossing for the Solar PV Facility, | Networx S28 Energy | Project Manager & EAP |
| East of Keimoes, Northern Cape | | |
| Sonnenberg Watercourse Crossing for the Solar PV | Networx S28 Energy | Project Manager & EAP |
| Facility, West Keimoes, Northern Cape | | |
| Kruisvallei Hydroelectric Power Generation Scheme, | Building Energy | Project Manager & EAP |
| Free State | | |
| Masetjaba Water Reservoir, Pump Station and Bulk | Naidu Consulting Engineers | Project Manager & EAP |
| Supply Pipeline near Nigel, Gauteng | | |
| Access Road for the Dwarsug Wind Farm, Northern | South Africa Mainsteam | Project Manager & EAP |
| Cape Province | Renewable Power | |
| Upgrade of the Cooling Water Treatment Facility at | Eskom | Project Manager & EAP |
| the Kriel Power Station, Mpumalanga | | |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|----------------------------|-----------------------|
| Roodepoort Open Space Optimisation Programme | TIMAC Engineering Projects | Project Manager & EAP |
| (OSOP) Precinct, Gauteng | | |

| Vegetable Oil Plant and Associated Pipeline, Kwa- | Wilmar Oils and Fats Africa | Project Manager & EAP |
|---|-----------------------------|-----------------------|
| Zulu Natal | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|---|--------------------------------|-----------------|
| ECO and bi-monthly auditing for the construction of | Department of Water and | Project Manager |
| the Olifants River Water Resources Development | Sanitation | Auditor |
| Project (ORWRDP) Phase 2A: De Hoop Dam, R555 | | |
| realignment and housing infrastructure | | |
| ECO for the Rehabilitation of the Blaaupan & Storm | Airports Company of South | Project Manager |
| Water Channel, Gauteng | Africa (ACSA) | |
| Due Diligence reporting for the Better Fuel Pyrolysis | Better Fuels | Project Manager |
| Facility, Gauteng | | |
| ECO for the Construction of the Water Pipeline from | Transnet | Project Manager |
| Kendal Power Station to Kendal Pump Station, | | |
| Mpumalanga | | |
| ECO for the Replacement of Low-Level Bridge, | South African National | Project Manager |
| Demolition and Removal of Artificial Pong, and | Biodiversity Institute (SANBI) | |
| Reinforcement the Banks of the Crocodile River at | | |
| the Construction at Walter Sisulu National Botanical | | |
| Gardens, Gauteng Province | | |
| External Compliance Audit of the Air Emission | PetroSA | Project Manager |
| Licence (AEL) for a depot in Bloemfontein, Free | | |
| State Province and in Tzaneen, Mpumalanga | | |
| Province | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|-----------------------------|-----------------------|
| WULA for the Izubulo Private Nature Reserve, | Kjell Bismeyer, Jann Bader, | Project Manager & EAP |
| Limpopo | Laurence Saad | |
| WULA for the Masodini Private Game Lode, Limpopo | Masodini Private Game Lodge | Environmental Advisor |
| WULA for the Ezulwini Private Nature Reserve, | Ezulwini Investments | Project Manager & EAP |
| Limpopo | | |
| WULA for the Masodini Private Game Lode, Limpopo | Masodini Private Game Lodge | Project Manager & EAP |
| WULA for the N10 Realignment at the Ilanga SEF, | Karoshoek Solar One | Project Manager & EAP |
| Northern Cape | | |
| WULA for the Kruisvallei Hydroelectric Power | Building Energy | Project Manager & EAP |
| Generation Scheme, Free State | | |
| S24G and WULA for the llegal construction of | Sorror Language Services | Project Manager & EAP |
| structures within a watercourse on EFF 24 Ruimsig | | |
| Agricultural Holdings, Gauteng | | |

HOUSING AND URBAN PROJECTS

Basic Assessments

| Project Name & Location | Client Name | Role |
|--|-------------|-----------------------|
| Postmasburg Housing Development, Northern Cape | Transnet | Project Manager & EAP |

Compliance Advice and reporting

| Project Name & Location | Client Name | Role |
|---|---------------------------|-----------------------|
| Kampi ya Thude at the Olifants West Game Reserve, | Nick Elliot | Environmental Advisor |
| Limpopo | | |
| External Compliance Audit of WUL for the | Johannesburg Country Club | Project Manager |
| Johannesburg Country Club, Gauteng | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|---|--------------------------|-----------------|
| Due Diligence Audit for the Due Diligence Audit | Delta BEC (on behalf of | Project Manager |
| Report, Gauteng | Johannesburg Development | |
| | Agency (JDA)) | |

ENVIRONMENTAL MANAGEMENT TOOLS

| Project Name & Location | Client Name | Role |
|---|-------------------------------|-----------------------|
| Development of the 3rd Edition Environmental | Gauteng Department of | Project Manager & EAP |
| Implementation Plan (EIP) | Agriculture and Rural | |
| | Development (GDARD) | |
| Development of Provincial Guidelines on 4x4 routes, | Western Cape Department of | EAP |
| Western Cape | Environmental Affairs and | |
| | Development Planning | |
| Compilation of Construction and Operation EMP for | Eskom Holdings | Project Manager & EAP |
| the Braamhoek Transmission Integration Project, | | |
| Kwazulu-Natal | | |
| Compilation of EMP for the Wholesale Trade of | Munaca Technologies | Project Manager & EAP |
| Petroleum Products, Gauteng | | |
| Operational Environmental Management | Eskom Holdings | Project Manager & EAP |
| Programme (OEMP) for Medupi Power Station, | | |
| Limpopo | | |
| Operational Environmental Management | Dube TradePort Corporation | Project Manager & EAP |
| Programme (OEMP) for the Dube TradePort Site | | |
| Wide Precinct | | |
| Operational Environmental Management | Eskom Holdings | Project Manager & EAP |
| Programme (OEMP) for the Kusile Power Station, | | |
| Mpumalanga | | |
| Review of Basic Assessment Process for the | Exxaro Resources | Project Manager & EAP |
| Wittekleibosch Wind Monitoring Mast, Eastern Cape | | |
| Revision of the EMPr for the Sirius Solar PV | Aurora Power Solutions | Project Manager & EAP |
| State of the Environment (SoE) for Emalahleni Local | Simo Consulting on behalf of | Project Manager & EAP |
| Municipality, Mpumalanga | Emalahleni Local Municipality | |
| Aspects and Impacts Register for Salberg Concrete | Salberg Concrete Products | EAP |
| Products operations | | |
| First State of Waste Report for South Africa | Golder on behalf of the | Project Manager & EAP |
| | Department of Environmental | |
| | Affairs | |
| Responsibilities Matrix and Gap Analysis for the | Building Energy | Project Manager |
| Kruisvallei Hydroelectric Power Generation Scheme, | | |
| Free State Province | | |
| Responsibilities Matrix and Gap Analysis for the | Building Energy | Project Manager |
| Roggeveld Wind Farm, Northern & Western Cape | | |
| Provinces | | |

PROJECTS OUTSIDE OF SOUTH AFRICA

| Project Name & Location | Client Name | Role |
|---|-----------------|-----------------------|
| Advisory Services for the Zizabona Transmission | PHD Capital | Advisor |
| Project, Zambia, Zimbabwe, Botswana & Namibia | | |
| EIA for the Semonkong WEF, Lesotho | MOSCET | Project Manager & EAP |
| EMP for the Kuvaninga Energia Gas Fired Power | ADC (Pty) Ltd | Project Manager & EAP |
| Project, Mozambique | | |
| Environmental Screening Report for the SEF near | Building Energy | EAP |
| Thabana Morena, Lesotho | | |
| EPBs for the Kawambwa, Mansa, Mwense and | Building Energy | Project Manager & EAP |
| Nchelenge SEFs in Luapula Province, Zambia | | |
| ESG Due Diligence for the Hilton Garden Inn | Vatange Capital | Project Manager |
| Development in Windhoek, Namibia | | |
| Mandahill Mall Rooftop PV SEF EPB, Lusaka, Zambia | Building Energy | Project Manager & EAP |
| Monthly ECO for the PV Power Plant for the Mocuba | Scatec | Project Manager |
| Power Station | | |



Email: gideon@savannahsa.com Tel: +27 (11) 656 3237

CURRICULUM VITAE OF GIDEON RAATH

| Profession : | Environmental and Permitting Consultant |
|--------------|--|
| • | Environmental Impact Assessments, Water Use Licencing, Waste Licencing, Environmental Compliance Officer, Ecological Specialist, Wetland Specialist, GIS, MPRDA permitting |
| | 4.5 years' experience in environmental management, National Water Act, Mineral and Petroleum Resources Development Act, ECO and compliance auditing, wetland and ecological specialist reporting |

VOCATIONAL EXPERIENCE

Gideon holds an MSc (Geography and Environmental Management; SU), a BSc Honours (Ecology and Environmental Studies - Cum laude; Wits) and a BSc (Geography and Environmental Management; UJ). His MSc thesis focused on the hydrological impact on the spatial distribution of invasive Eucalyptus trees along the Breede River, while his honours thesis evaluated ethnobotanical relationships around the Rio Tinto copper mine in Phalaborwa. Most recently he has worked as an Environmental Consultant at EOH Coastal and Environmental Services (EOH CES), conducting environmental authorisations applications (NWA, NEMA, MPRDA), Public Participation Processes, GIS specialisation as well as Ecological and Wetland specialist studies. Previously, Gideon worked as the Monitoring & Evaluation Project Manager for the City of Cape Town's invasive species unit (Environmental Resources Management Department).

Gideon's GIS background includes the management of the City of Cape Town invasive species GIS database, involving the storage, management, recall and quality control off all sightings, clearance visits and known infestations. Further experience include mapping for various consulting projects, boundary verification through ground-truthing and the spatial mapping and delineation component of this MSc research. Gideon has further attended public participation workshops, and has been involved with IAP identification, translation, public meetings and engagement for a variety of projects, mainly within the Afrikaans speaking Northern Cape. Gideon is interested in invasion ecology, treatment of groundwater pollution through phytoremediation, botanical and wetland specialist studies, GIS application for ecology and environmental management, and the EIA processes in general.

SKILLS BASE AND CORE COMPETENCIES

- Environmental Management
- GIS data manipulation, storage, management and mapping
- EIA Impact Assessments and Basic Assessment
- Environmental Management Programmes
- Environmental Compliance Monitoring
- Mining Rights, Mining Permits, Prospecting Rights (and renewal) applications (MPRDA & NEMA)
- Public and Stakeholder Engagement (NEMA)
- Ecological/Botanical Specialist Studies

- Wetland Delineation, Functional and Impact Assessment studies
- Water Use Licence Applications (NWA)
- General Authorisations (NWA)

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- M.Sc. Geography and Environmental Science (2014), Stellenbosch University (2014)
- B.Sc. (Hons) Ecology, Environment and Conservation (Cum Laude), University of the Witwatersrand (2011)
- B.Sc. Life and Environmental Sciences, University of Johannesburg (2010)

Short Courses:

- GroundTruth SASS5 competency course, GroundTruth Aquatic Consulting (2017)
- DWS 21C&I GA training workshop, Department of Water and Sanitation (2016)
- IAIAsa Public Participation Process Workshop, IAIA South Africa (2016)
- EIA Theory and application, EOH Coastal and Environmental Services (2015)
- Water Safety Training, City of Cape Town Environmental Resources Department (2014)
- Herbicide safety and application for weed control, City of Cape Town Environmental Resources Department (2014)
- Snake awareness training, City of Cape Town Environmental Resources Department (2014)
- Habitable Planet Workshop, Applied Centre for Climate & Earth Systems Science, Cape Town (2011)

Professional Society Affiliations:

- Golden Key International Honour Society University of the Witwatersrand Chapter
- South African Council for Scientific Natural Professionals (SACNASP): Certified Natural Scientist Pr.Sci.Nat. (Membership No.: 117178)
- IAIAsa (Membership No.: 3619)

Other Relevant Skills:

• GPS use, spatial data capturing and ground truthing

EMPLOYMENT

| Date | Company | Roles and Responsibilities |
|-------------------------|----------------------------------|--|
| October 2018 - Current: | Savannah Environmental (Pty) Ltd | Environmental and Permitting Consultant |
| | | Tasks include: Undertaking environmental impact assessments, basic assessments, environmental management programmes (EMPrs), environmental amendments, water use license applications, general authorisations, wetland assessments, botanical/ecological assessments, mining rights and permit applications, prospecting rights applications, environmental compliance officer audits and reporting, Ensuring environmental compliance on permitting processes, client liaison and relationship management. |

| Date | Company | Roles and Responsibilities |
|------------------------|---------------------------------|---|
| February 2015 – | EOH Coastal and Environmental | Senior Environmental Consultant |
| September 2018 | Services (Pty) Ltd | |
| | | Tasks included: Undertaking environmental |
| | | impact assessments, basic assessments, |
| | | environmental management programmes |
| | | (EMPrs), environmental amendments, water use |
| | | license applications, general authorisations, |
| | | wetland assessments, botanical/ecological |
| | | assessments, mining rights and permit |
| | | applications, prospecting rights applications, |
| | | environmental compliance officer audits and |
| | | reporting, Ensuring environmental compliance on |
| | | permitting processes, client liaison and |
| | | relationship management, public participation |
| | | processes for environmental authorisations. |
| March 2014 – February | Invasive Species Unit (ISU), | Professional Officer |
| 2015 | Environmental Resources | |
| | Management Department (ERMD), | Tasks included: Managed the Monitoring & |
| | City of Cape Town | Evaluation project portfolio, entailing the |
| | | establishment of an invasive species monitoring & |
| | | evaluation system for the ISU, as well as GIS |
| | | database management, quality assurance and |
| | | reporting thereof. Position required managing a |
| | | small staff compliment (dealing directly with GIS |
| | | database management), managing time and |
| | | budgets for the monitoring division, conducting |
| | | monitoring trials and research, writing species |
| | | management plans as well as handling the GIS |
| | | |
| | | database, quality control, verification and integrity for the ISU. |
| January 2012 – March | University of Stellenbosch | Departmental Assistant |
| 2014 | University of Steller Dosch | |
| 2014 | | Tasks included: Technical editing of academic |
| | | reports. |
| | | Formatting of PhD and MSc reports on a weekly |
| | | basis, with short turnaround time and good quality |
| | | feedback. |
| January 2011 – January | University of the Witwatersrand | Departmental Assistant |
| 2012 | | |
| | | Tasks included: Responsible for practical tutorials |
| | | and marking of 1st year medical students. |
| | | Included zoology and botany. |
| January 2006 – | Codeon Networking CC | Co-founder and web developer |
| November 2010 (part | | |
| time) | | Tasks included: Small business owner, responsible |
| | | for all facets of the business. Self-taught HTML, CSS, |
| | | PHP and MySQL. Won and produced two medium |
| | | |
| | | enterprise websites serving the gaming community. Websites required user profiles & |
| | | |
| | | |
| | | payment options as functionality. Development |

| Date | Company | Roles and Responsibilities | |
|------|---------|--|--|
| | | and maintenance of a user database and | |
| | | account management system. | |

PROJECT EXPERIENCE

Project experience includes project management, EIA, BA and EMPr documentation development, integrated water use license applications, general authorisations, specialist botanical and ecological impact assessments, specialist wetland delineation and impact assessments, GIS applications and mapping, compliance auditing and monitoring, vegetation rehabilitation and monitoring plans, integrated waste management plans and waste licencing, mining right & permits, as well as prospecting rights applications.

Industry experience includes the waste sector (IWMP's and waste licencing), road and rail infrastructure (BAR, S&EIR, WUL/GA, Waste Licence), ports and harbours (management plans), private sector clients across varying industries (various permits), mining sector (BAR, S&EIR, mining permits and rights, prospecting rights), conservation sector (biodiversity plans), renewable energy industry (BAR, S&EIR) as well as the gas and oil industry (biodiversity reports).

RENEWABLE POWER GENERATION PROJECTS: SOLAR ENERGY FACILITIES

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|---------------------------|--------------------------|
| Enel Paleisheuwel Solar compliance auditing, | Enel Green Power RSA (EGP | Environmental consultant |
| Paleisheuwel, Northern Cape | RSA) | |

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|---|---------------------------|--------------------------|
| G7 Brandvalley S&EIR, Matjiesfontein, Northern Cape | G7 Renewable Energy (Pty) | Environmental consultant |
| | Ltd | |
| G7 Rietkloof S&EIR, Matjiesfontein, Northern Cape | G7 Renewable Energy (Pty) | Environmental consultant |
| | Ltd | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---------------------------------------|---------------------------|---------------------------|
| G7 Renewable Energy 132kV BAR & EMPr, | G7 Renewable Energy (Pty) | Project Manager, |
| Matjiesfontein, Northern Cape | Ltd | Environmental consultant, |
| | | Public Participation |

Compliance Advice and ESAP reporting

| Project Name & Location | Client Name | Role |
|--|-------------------------|--------------------------|
| Biotherm Energy Golden Valley Wind Energy Facility | Biotherm Energy Pty Ltd | Environmental consultant |
| ESAP, Bedford, Eastern Cape | | |

Amendments

| Project Name & Location | Client Name | Role |
|-------------------------|-------------|------|
| | | |

| Mosselbay Energy EA Amendment, Mosselbay, | Mosselbay Energy IPP (Pty) | Environmental consultant |
|---|----------------------------|--------------------------|
| Western Cape | Ltd | |

GAS PROJECTS

Screening Studies

| Project Name & Location | Client Name | Role |
|---|----------------------------|-------------------------------|
| iGas integrated biodiversity screening, Saldanha, | Central Energy Fund - iGas | Environmental consultant, |
| Western Cape | (subsidiary) | Faunal specialist (assistant) |

MINING SECTOR PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|---|----------------------------|--------------------------|
| Triton Minerals Limited Ancuabe and Nicanda Hills | Triton Minerals Ltd | Environmental consultant |
| EPDA, Ancuabe, Cabo Del Gado Province, | | |
| Mozambique | | |
| Ancuabe graphite mine Environmental and Social | Grafex Limitada Mozambique | Environmental consultant |
| Impact Assessment (ESIA), Cabo Del Gado Province, | | |
| Mozambique | | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|--|------------------------------|-------------------------------|
| SANRAL material sourcing BAR (DMR), Hendrina, | SANRAL SOC Ltd & Leo | Project Manager, |
| Mpumalanga Province | consulting engineers | Environmental consultant, |
| | | Public Participation |
| SANRAL Bierspruit R510 Borrow Pit authorisation, | SANRAL SOC Ltd & Royal | Project Manager, |
| Thabazimbi, Limpopo Province | HaskoningDHV South Africa | Environmental consultant, |
| | | Ecological specialist, Public |
| | | Participation |
| Almenar tin prospecting BAR, Carnarvon, Northern | Almenar Property Investments | Environmental consultant |
| Саре | (Pty) Ltd | |

Rehabilitation Studies

| Project Name & Location | Client Name | Role |
|--|----------------------------|--------------------------|
| Ancuabe baseline vegetation monitoring | Grafex Limitada Mozambique | Botanical specialist |
| assessment and programme, Ancuabe, Cabo Del | | |
| Gado Province, Mozambique | | |
| Prospecting pit rehabilitation programme, Ancuabe, | Grafex Limitada Mozambique | Botanical specialist, |
| Cabo Del Gado Province, Mozambique | | Environmental consultant |
| Mayfield Quarry rehabilitation plan, Grahamstown, | Mayfield Quarry | Environmental consultant |
| Eastern Cape | | |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|---|-----------------------|-----------------------|
| Construction monitoring and DMR environmental | SANRAL SOC Ltd & Leo | Project Manager, ECO, |
| authorisation, Hendrina, Mpumalanga Province | consulting engineers | |
| SANRAL Caledon N2 Section 3 road upgrade ECO | JG Afrika Engineering | Project Manager, ECO |
| Audits and Reporting, Caledon, Western Cape | | |
| Province | | |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|------------------------------|--------------------------|
| VMC Mining permit renewal application, Rust De | Vergenoeg Mining Company | Environmental consultant |
| Winter, Gauteng | (Pty) Ltd | |
| Zirco Resources Kamiesberg heavy mineral sand | Zirco Roode Heuwel (Pty) Ltd | Environmental consultant |
| mine water use licence, Kamiesberg, Northern Cape | | |

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

Environmental Impact Assessments and Environmental Management Programmes

| • | | |
|--|-----------------------|---------------------------|
| Project Name & Location | Client Name | Role |
| S&EIR authorisation for the SANRAL Zandkraal- | SANRAL SOC Ltd & SMEC | Project Manager, |
| Windburg N1 road upgrade, Windburg, Free State | Consulting Engineers | Environmental consultant, |
| Province | | Public Participation |
| Thabazimbi Local Municipality Integrated Waste | Thabazimbi Local | Environmental consultant, |
| Management Plan, Thabazimbi, Limpopo Province | Municipality & Anglo | Public Participation |
| | American Plc | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|----------------------------|-------------------------------|
| SANRAL Masekwaspoort N1 Road Upgrade BA, Louis | SANRAL SOC Ltd & Knight | Project Manager, |
| Trichardt, Limpopo Province | Piésold Consulting | Environmental consultant, |
| | | Public Participation |
| SANRAL Polokwane N1 Ring Road Upgrade Basic | SANRAL SOC Ltd & KBK | Environmental consultant |
| Assessment, Polokwane, Limpopo Province | Engineers | |
| Boshoek Loop Rail Upgrade BAR, Rustenburg, North- | Transnet SOC Ltd | Project Manager, |
| West Province | | Environmental consultant, |
| | | Wetland specialist, Public |
| | | Participation |
| Heysterkrand Loop Rail Upgrade BAR, Rustenburg, | Transnet SOC Ltd | Project Manager, |
| North-West Province | | Environmental consultant, |
| | | Public Participation |
| SANRAL Bierspruit R510 road upgrade Basic | SANRAL SOC Ltd & Royal | Project Manager, |
| Assessment, Thabazimbi, Limpopo Province | HaskoningDHV South Africa | Environmental consultant, |
| | | Ecological specialist, Public |
| | | Participation |
| Barberton IAPS Waste Water Treatment Works | Umjindi Local Municipality | Project Manager, |
| development BAR, Barberton, Mpumalanga | and Rhodes University | Environmental consultant, |
| Province | | Public Participation |
| SANRAL Caledon N2 Section 3 road upgrade project | JG Afrika Engineering | Project Manager, |
| Basic Assessment, Caledon, Western Cape Province | | Environmental consultant, |
| | | Ecological specialist, ECO |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|---|----------------------|----------------------------------|
| Construction Monitoring and DMR environmental | SANRAL SOC Ltd & Leo | Project Manager, |
| authorisation, Hendrina, Mpumalanga Province | consulting engineers | Environmental consultant, ECO |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|--|----------------------------|-------------------------------|
| Water use licence for the SANRAL Zandkraal- | SANRAL SOC Ltd & SMEC | Project Manager, |
| Windburg N1 road upgrade and quarrying, | Consulting Engineers | Environmental consultant, |
| Windburg, Free State Province | | Public Participation |
| SANRAL Masekwaspoort N1 road upgrade water use | SANRAL SOC Ltd & Knight | Project Manager, |
| licence application, Louis Trichardt, Limpopo | Piésold Consulting | Environmental consultant, |
| Province | | Public Participation |
| Boshoek Loop Rail Upgrade water use licence | Transnet SOC Ltd | Project Manager, |
| application, Rustenburg, North-West Province | | Environmental consultant, |
| | | Wetland specialist, Public |
| | | Participation |
| SANRAL Bierspruit R510 road water use licence, | SANRAL SOC Ltd & Royal | Project Manager, |
| Thabazimbi, Limpopo Province | HaskoningDHV South Africa | Environmental consultant, |
| | | Ecological specialist, Public |
| | | Participation |
| Barberton IAPS Waste Water Treatment Works water | Umjindi Local Municipality | Project Manager, |
| use licence and SASS 5 assessment, Barberton, | and Rhodes University | Environmental consultant, |
| Mpumalanga Province | | Aquatic specialist, Public |
| | | Participation |
| SANRAL Caledon N2 Section 3 road upgrade water | JG Afrika Engineering | Project Manager, |
| use licence and specialist reports, Caledon, Western | | Environmental consultant, |
| Cape Province | | Ecological specialist, Public |
| | | Participation |

HOUSING AND URBAN PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|---|---------------------|---------------------------|
| Scoping and EIR authorisation, Water Use Licence, | Frances Baard Local | Project Manager, |
| for the Ganspan tourism facility development, Jan | Municipality | Environmental consultant, |
| Kempdorp, Northern Cape | | Public Participation |

Basic Assessments

| Project Name & Location | Client Name | Role |
|--|--------------------------------|---------------------------|
| Basic Assessment for the office complex | South African National | Project Manager, |
| development within the Pretoria National Botanical | Biodiversity Institute (SANBI) | Environmental consultant, |
| Gardens, Pretoria, Gauteng | | Public Participation, ECO |
| Corner Berg and Drooge Street township | Ramotshere Moiloa Local | Project Manager, |
| development BAR, Zeerust, North-West Province | Municipality | Environmental consultant, |
| | | Public Participation |
| Corner Kort and Bree Street township development | Ramotshere Moiloa Local | Project Manager, |
| BAR, Zeerust, North-West Province | Municipality | Environmental consultant, |
| | | Public Participation |
| Hope Village township development BAR, | Door of Hope Charity | Project Manager, |
| Johannesburg, Gauteng | Organisation | Environmental consultant, |
| | | Public Participation |
| ACSA Jones Road Filling Station Basic Assessment, | Airports Company South | Project Manager, |
| Johannesburg, Gauteng | Africa SOC Ltd | Environmental consultant, |
| | | Public Participation |

Screening Studies

| Project Name & Location | Client Name | Role |
|--|-----------------------------|--------------------------|
| Kibler Park Church Development ecological | Riverside Community Church | Project Manager, |
| assessment, Johannesburg, Gauteng | | Ecological specialist |
| DEA Quoin Point dune specialist assessments, | Department of Environmental | Project Manager, |
| Gansbaai, Western Cape | Affairs (national) | Environmental consultant |

Environmental Compliance, Auditing and ECO

| Project Name & Location | Client Name | Role |
|--|--------------------------------|---------------------------|
| Transnet Depot and Siding compliance auditing | Transnet SOC Ltd | ECO |
| programme, Johannesburg, Gauteng & Rustenburg, | | |
| North-West Province | | |
| Environmental compliance monitoring for the office | South African National | Project Manager, |
| complex development within the Pretoria National | Biodiversity Institute (SANBI) | Environmental consultant, |
| Botanical Gardens, Pretoria, Gauteng | | Public Participation, ECO |

Environmental Permitting, \$53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|--------------------------------|---------------------------|
| Atmospheric Emissions Licence, Section 24G for the | ER Galvanizers Pty Ltd | Project Manager, |
| ER Galvanizing plant and operations, Johannesburg, | | Environmental consultant, |
| Gauteng | | Public Participation |
| City of Johannesburg nature reserve proclamation | City of Johannesburg SOC | Project Manager, |
| (Phase II), Johannesburg, Gauteng | Ltd | Environmental consultant, |
| | | Public Participation, |
| | | Botanical specialist |
| Hope Village township development water use | Door of Hope Charity | Project Manager, |
| licence, Johannesburg, Gauteng | Organisation | Environmental consultant, |
| | | Public Participation |
| Diamond Park Township Development Section 24G, | Sol Plaatje Local Municipality | Project Manager, |
| Kimberley, Northern Cape | | Environmental consultant, |
| | | Public Participation |
| Boschendal Wine Estate hydro-electric power station | Boschendal Wine Estate | Environmental consultant |
| Water Use Licence and \$24G application, | | |
| Stellenbosch, Western Cape | | |
| City of Johannesburg nature reserve proclamation | City of Johannesburg SOC | Environmental consultant |
| boundary verification (Phase I), Johannesburg, | Ltd | |
| Gauteng | | |
| PRDW Cape Town harbour breakwater rehabilitation | PRDW Engineering | Project Manager, |
| EMPr, Cape Town, Western Cape | | Environmental consultant |
| PRDW Bushman's Estuary dune encroachment | PRDW Engineering | Environmental consultant |
| project management, Kenton-on-sea, Eastern Cape | | |
| Corner Berg and Drooge Street township | Ramotshere Moiloa Local | Project Manager, |
| development water use licence application, | Municipality | Environmental consultant |
| Zeerust, North-West Province | | |
| Corner Kort and Bree Street township development | Ramotshere Moiloa Local | Project Manager, |
| water use licence, Zeerust, North-West Province | Municipality | Environmental consultant |
| Bloekombos (Kraaifontein) hospital water use | Western Cape Provincial | Project Manager, |
| licence application, Cape Town, Western Cape | Government (PGWC) | Environmental consultant, |
| | | Botanical specialist, |
| | | Wetland specialist |

SPECIALIST STUDIES

| Project Name & Location | Client Name | Role |
|--|----------------------------|-------------------------------|
| Boshoek Loop Rail Upgrade BAR and Water Use | Transnet SOC Ltd | Wetland specialist |
| Licence, Rustenburg, North-West Province | | |
| City of Johannesburg nature reserve proclamation | City of Johannesburg SOC | Botanical specialist |
| (Phase II), Johannesburg, Gauteng | Ltd | |
| SANRAL Bierspruit R510 road upgrade Water Use | SANRAL SOC Ltd & Royal | Ecological specialist |
| Licence, Basic Assessment, Thabazimbi, Limpopo | HaskoningDHV South Africa | |
| Province | | |
| Kibler Park Church Development Ecological | Riverside Community Church | Ecological specialist |
| Assessment, Johannesburg, Gauteng | | |
| Barberton IAPS Waste Water Treatment Works | Umjindi Local Municipality | Aquatic specialist |
| development BAR, water use licence and SASS 5 | and Rhodes University | |
| assessment, Barberton, Mpumalanga Province | | |
| Wijnberg Trust Dam 2 expansion Aquatic Impact | Wijnberg Trust | Aquatic specialist |
| Assessment | | |
| SANRAL Caledon N2 Section 3 road upgrade project | JG Afrika Engineering | Ecological specialist |
| Basic Assessment, Water Use Licence and Specialist | | |
| reports, Caledon, Western Cape Province | | |
| City of Johannesburg nature reserve proclamation | City of Johannesburg SOC | GIS specialist |
| boundary verification (Phase I), Johannesburg, | Ltd | |
| Gauteng | | |
| iGas integrated biodiversity screening, Saldanha, | Central Energy Fund - iGas | Faunal specialist (assistant) |
| Western Cape | (subsidiary) | |
| Bloekombos (Kraaifontein) botanical baseline and | Western Cape Provincial | Wetland specialist |
| impact assessment, Cape Town, Western Cape | Government (PGWC) | Botanical specialist |



Email: nicolene@savannahsa.com Tel: +27 (11) 656 3237

CURRICULUM VITAE OF NICOLENE VENTER

| Profession : | Public Participation and Social Consultant | |
|------------------|--|--|
| Specialisation: | Public participation process; stakeholder engagement; facilitation (workshops, focus group and public meetings; public open days; steering committees); monitoring and evaluation of public participation and stakeholder engagement processes | |
| Work Experience: | 21 years' experience as a Public Participation Practitioner and Stakeholder Consultant | |

VOCATIONAL EXPERIENCE

Over the past 21 years Nicolene established herself as an experienced and well recognised public participation practitioner, facilitator and strategic reviewer of public participation processes. She has experience in managing public participation projects and awareness creation programmes. Her experience includes designing and managing countrywide public participation and awareness creation projects, managing multi-project schedules, budgets and achieving project goals. She has successfully undertaken several public participation processes for EIA, BA and WULA projects. The EIA and BA process include linear projects such as the NMPP, Eskom Transmission and Distribution power lines as well as site specific developments such as renewable energy projects i.e. solar, photo voltaic and wind farms. She also successfully managed stakeholder engagement projects which were required to be in line with the Equator Principles.

SKILLS BASE AND CORE COMPETENCIES

- Project Management
- Public Participation, Stakeholder Engagement and Awareness Creation
- Public Speaking and Presentation Skills
- Facilitation (workshops, focus group meetings, public meetings, public open days, working groups and committees)
- Social Assessments (Stakeholder Analysis / Stakeholder Mapping)
- Monitoring and Evaluation of Public Participation and Stakeholder Engagement Processes
- Community Liaison
- IFC Performance Standards
- Equator Principles
- Minute taking, issues mapping, report writing and quality control

EDUCATION AND PROFESSIONAL STATUS

Degrees:

• Higher Secretarial Certificate, Pretoria Technicon (1970)

Short Courses:

- Techniques for Effective Public Participation, International Association for Public Participation, IAP2 (2008)
- Foundations of Public Participation (Planning and Communication for Effective Public Participation, IAP2 (2009)
- Certificate in Public Relations, Public Relation Institute of South Africa, Damelin Management School (1989)

Professional Society Affiliations:

• Board Member of International Association for Public Participation (IAP2): Southern Africa

EMPLOYMENT

| Date | Company | Roles and Responsibilities |
|---------------------|---------------------------------------|---|
| November 2018 – | Savannah Environmental (Pty) Ltd | Public Participation and Social Consultant |
| current | | T - 1 - 1 - 1 - 1 |
| | | <u>Tasks include:</u> |
| | | Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc. |
| | | Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved. |
| 2016 – October 2018 | Imaginative Africa (Pty) Ltd | Independent Consultant |
| | (company owned by Nicolene Venter) | Consulting to various Environmental Assessment Practitioners for Public Participation and Stakeholder Engagements: |
| | | <u>Tasks include:</u> |
| | | Tasks include: Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc. |
| | | Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project |

| | | affected areas, attend to the level of technical |
|-------------|----------------------------------|--|
| | | information communicated to and consultation |
| | | with all level of stakeholders involved |
| | | |
| | | <u>Clients</u> : |
| | | SiVEST Environmental, Savannah Environmental, |
| | | Baagi Environmental; Royal Haskoning DHV |
| | | |
| 0012 0017 | 7itheololo Course this st | (previously SSI) |
| 2013 - 2016 | Zitholele Consulting | Senior Public Participation Practitioner and |
| | | Project Manager |
| | Contact person: Dr Mathys Vosloo | |
| | Contact number: 011 207 2060 | Tasks included: |
| | | Project managed public participation process for |
| | | EIA/BA/WULA/EAL projects. Manages two Public |
| | | Participation Administrators. Public Participation |
| | | tasks as outlined as above and including financial |
| | | management of public participation processes. |
| 2011 - 2013 | Imaginative Africa (Pty) Ltd | Independent Consultant |
| | (company owned by Nicolene | Consulting to various Environmental Assessment |
| | Venter) | Practitioners for Public Participation and |
| | | Stakeholder Engagements |
| | | |
| | | Tasks included: |
| | | |
| | | Drafting of a Public Participation Plan with key |
| | | deliverable dates and methodology to be |
| | | followed, Background Information Document, |
| | | Letters to Stakeholders and Interested and/or |
| | | Affected Parties (I&APs) inclusive of key project |
| | | deliverables and responses to questions / |
| | | concerns raised; Stakeholder identification; |
| | | facilitating stakeholder workshops, focus group |
| | | and public meetings; conduct one-on-one |
| | | consultation with Community Leaders, Tribal |
| | | Chiefs, affected landowners, etc. |
| | | |
| | | Managing interaction between Stakeholders and |
| | | Team Members, liaising with National, Provincial |
| | | and Local Authorities, managing community |
| | | consultation and communications in project |
| | | affected areas, attend to the level of technical |
| | | information communicated to and consultation |
| | | with all level of stakeholders involved |
| | | |
| | | <u>Clients</u> : |
| | | Bohlweki Environmental, Bembani Sustainability |
| | | (Pty) Ltd; Naledzi Environmental |
| 2007 – 2011 | SiVEST SA (Pty) Ltd | Unit Manager: Public Participation Practitioner |
| | | |
| | Contact person: Andrea Gibb | Tasks included: |
| | Contact number: 011 798 0600 | Project managed public participation process for |
| | | EIA/BA projects. Manages two Junior Public |
| | | Participation Practitioners. Public Participation |
| | | ramelpanon nacimoneis. rublic ramelpation |

| | | tasks as outlined as above and including financial |
|-------------|---|--|
| | | management of public participation processes. |
| 2005 – 2006 | Imaginative Africa (Pty) Ltd (company owned by Nicolene Venter) | Independent Consultant Public Participation and Stakeholder Engagement Practitioner |
| | | <u>Tasks included:</u> Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, Tribal Chiefs, affected landowners, etc. |
| | | Managing interaction between Stakeholders and Team Members, liaising with National, Provincial and Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical information communicated to and consultation with all level of stakeholders involved. |
| | | <u>Clients</u> : Manyaka-Greyling-Meiring (previously Greyling Liaison and currently Golder Associates) |
| 1997 - 2004 | Imaginative Africa (Pty) Ltd (company owned by Nicolene Venter) | Independent Consultant: Public Participation Practitioner. |
| | | Tasks included: |
| | | Drafting of a Public Participation Plan with key deliverable dates and methodology to be followed, Background Information Document, Letters to Stakeholders and Interested and/or Affected Parties (I&APs) inclusive of key project deliverables and responses to questions / concerns raised; Stakeholder identification; facilitating stakeholder workshops, focus group and public meetings; conduct one-on-one consultation with Community Leaders, affected landowners, etc. |
| | | Managing interaction between Stakeholders and Team Members, liaising with National, Provincial Local Authorities, managing community consultation and communications in project affected areas, attend to the level of technical |

| | information communicated to and consultation with all level of stakeholders involved. | |
|--|--|--|
| | <u>Clients</u> : Greyling Liaison (currently Golder Associates); Bembani Sustainability (Pty) Ltd; Lidwala Environmental; Naledzi Environmental | |

PROJECT EXPERIENCE

RENEWABLE POWER GENERATION PROJECTS: PHOTOVOLTAIC SOLAR ENERGY FACILITIES

| Project Name & Location | Client Name | Role |
|--|------------------------------|----------------------------|
| Lichtenburg PVs (3 PVs) & Power Lines (grid | Atlantic Energy Partners | Project Manage the Public |
| connection), Lichtenburg, North West Province | EAP: Savannah Environmental | Participation Process |
| | | Facilitate all meetings |
| Allepad PVs 4 PVs) & Power Lines (grid | IL Energy | Consultation with |
| connection), Upington, Northern Cape Province | EAP: Savannah Environmental | Government Officials, Key |
| | | Stakeholders, Landowners & |
| Hyperion Solar PV Developments (4 PVs) and | Building Energy | Community Leaders |
| Associated Infrastructures, Kathu, Northern Cape | EAP: Savannah Environmental | |
| Province | | |
| Aggeneys Solar PV Developments (2 PVs) and | Atlantic Energy Partners and | 1 |
| Associated Infrastructures, Aggeneys, Northern | ABO Wind | |
| Cape Province | EAP: Savannah Environmental | |

| Project Name & Location | Client Name | Role |
|---|--------------------------|-------------------------|
| Tlisitseng PV, including Substations & Power Lines, | BioTherm Energy | Public Participation, |
| Lichtenburg, North West Province | EAP: SiVEST | Landowner and Community |
| Sendawo PVs, including Substations & Power Lines, | | Consultation |
| Vryburg, North West Province | | |
| Helena Solar 1, 2 and 3 PVs, Copperton, Northern | | |
| Cape Province | | |
| Farm Spes Bona 23552 Solar PV Plants, | Surya Power | Public Participation, |
| Bloemfontein, Free State Province | EAP: SiVEST | Landowner and Community |
| | | Consultation |
| De Aar Solar Energy Facility, De Aar, Northern | South Africa Mainstream | Public Participation, |
| Cape Province | Renewable Power | Landowner and Community |
| Droogfontein Solar Energy Facility, Kimberley, | Developments | Consultation |
| Northern Cape Province | EAP: SIVEST | |
| Kaalspruit Solar Energy Facility, Loeriesfontein, | | |
| Northern Cape Province | | |
| Platsjambok East PV, Prieska, Northern Cape | | |
| Province | | |
| Renosterburg PV, De Aar, Northern Cape Province | Renosterberg Wind Energy | Public Participation, |
| | Company | Landowner and Community |
| | EAP: SIVEST | Consultation |

| ſ | 19MW Solar Power Plant on Farm 198 (Slypklip), | Solar Reserve South Africa | Public Participation, |
|---|--|----------------------------|-------------------------|
| | Danielskuil, Northern Cape Province | EAP: SIVEST | Landowner and Community |
| | | | Consultation |

Basic Assessments and Environmental Management Programmes – Located within the Renewable Energy Development Zones (REDZ)

| Project Name & Location | Client Name | Role |
|--|---|---|
| Moeding Solar PV Solar Energy Facility, Vryburg, | Kabi Solar | Project Manage the Public |
| North West Province | EAP: Savannah Environmental | Participation Process Facilitate all meetings Consultation with |
| Sirius Solar PV Solar Energy Facility, Upington, Northern Cape Province | SOLA Future Energy EAP: Savannah Environmental | |
| Nonnen Cape Frovince | Government Officials, Key Stakeholders, Landowners & | |
| | | Community Leaders |

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|--|-------------------------|----------------------|
| Aletta Wind Farm, Copperton, Northern Cape | BioTherm Energy | Public Participation |
| Province | EAP: SIVEST | |
| Eureka Wind Farm, Copperton, Northern Cape | | |
| Province | | |
| Loeriesfontein Wind Farm, Loeriesfontein, Northern | South Africa Mainstream | Public Participation |
| Cape Province | Renewable Power | |
| Droogfontein Wind Farm, Loeriesfontein, Northern | Developments | |
| Cape Province | EAP: SIVEST | |
| Four Leeuwberg Wind Farms, Loeriesfontein, | | |
| Northern Cape Province | | |
| Noupoort Wind Farm, Noupoort, Northern Cape | | |
| Province | | |
| Mierdam PV & Wind Farm, Prieska, Northern Cape | | |
| Province | | |
| Platsjambok West Wind Farm & PV, Prieska, | | |
| Northern Cape Province | | |

Basic Assessments and Environmental Management Programmes – Located within the Renewable Energy Development Zones (REDZ)

| Project Name & Location | Client Name | Role |
|--|-----------------------------|---------------------------|
| Nama Wind Energy Facility, Northern Cape | Genesis ECO | Project Manage the Public |
| Province | EAP: Savannah Environmental | Participation Process |
| | | Facilitate all meetings |
| | | Consultation with |
| | | Government Officials, Key |
| Zonnequa Wind Energy Facility, Northern Cape | | Stakeholders, Landowners |
| Province | | & Community Leaders |

Environmental Authorisation Amendments

| Project Name & Location | Client Name | Role |
|-------------------------|-------------|------|

| Beaufort West 280MW Wind Farm into two 140MW | South Africa Mainstream | Public Participation |
|--|-------------------------|----------------------|
| Trakas and Beaufort West Wind Farms, Western | Renewable Power | |
| Саре | Developments | |
| | EAP: SIVEST | |

RENEWABLE POWER GENERATION PROJECTS: CONCENTRATED SOLAR FACILITIES (CSP)

Environmental Impact Assessments and Environmental Management Programmes

| • | U U | |
|---|-----------------------------|----------------------|
| Project Name & Location | Client Name | Role |
| Upington Concentrating Solar Plant and | Eskom Holdings | Public Participation |
| associated Infrastructures, Northern Cape | EAP: Bohlweki Environmental | |
| Provionce | | |

GRID INFRASTRUCTURE PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|---|----------------------------|-------------------------|
| Pluto-Mahikeng Main Transmission Substation and | Eskom Holdings | |
| 400kV Power Line (Carletonville to Mahikeng), | EAP: Baagi Environmental | |
| Gauteng and North West Provinces | | |
| Thyspunt Transmission Lines Integration Project, | Eskom Holdings | Public Participation, |
| Eastern Cape Province | EAP: SIVEST | Landowner and Community |
| | | Consultation |
| Westrand Strengthening Project, Gauteng Province | | |
| Mookodi Integration Project, North-West Province | | Public Participation, |
| Transnet Coallink, Mpumalanga and KwaZulu-Natal | | r oblic r dificipation, |
| Provinces | | |
| Delarey-Kopela-Phahameng Distribution power line | | |
| and newly proposed Substations, North-West | | Public Participation, |
| Province | | Landowner and Community |
| Invubu-Theta 400kV Eskom Transmission Power Line, | Eskom Holding | Consultation |
| KwaZulu-Natal Province | EAP: Bembani Environmental | |

Facilitation

| Project Name & Location | Client Name | Meeting Type |
|---|-----------------------------|------------------------|
| Bloemfontein Strengthening Project, Free State | Eskom Holdings | Public Meetings |
| Province | EAP: Baagi Environmental | |
| Mooidraai-Smitkloof 132kV Power Line and | Eskom Holdings | Focus Group Meetings |
| Substation, Northern Cape Province | EAP: SSI | |
| Aggeneis-Oranjemond 400kV Eskom Transmission | Eskom Holdings | Focus Group Meetings & |
| Power Line, Northern Cape Province | EAP: Savannah Environmental | Public Meetings |
| Ariadne-Eros 400kV/132kV Multi-Circuit Transmission | Eskom Holdings | Public Meetings |
| Power Line (Public Meetings) | EAP: ACER Africa | |
| Majuba-Venus 765kV Transmission Power Lines, | 1 | Public Meetings |
| Mpumlanaga Province | | |

Basic Assessments and Environmental Management Programmes Project Name & Location Client Name Role

| Melkhout-Kudu-Grassridge 132kV Power Line Project (project not submitted to DEA), Eastern Cape Province Tweespruit-Welroux-Driedorp-Wepener 132Kv | Eskom Holdings EAP: SiVEST | Public Participation, Landowner and Community Consultation Public Participation, |
|--|-------------------------------|---|
| Power Line, Free State Province | | Landowner and Community Consultation |
| Kuruman 132Kv Power Line Upgrade, Northern | Eskom Holdings | Public Participation, |
| Cape Province | EAP: Zitholele | Landowner and Community |
| | | Consultation |
| Vaalbank 132Kv Power Line, Free State Province | | Public Participation, |
| | | Landowner and Community |
| | | Consultation |
| Pongola-Candover-Golela 132kV Power Line | | Public Participation, |
| (Impact Phase), KwaZulu-Natal Province | | Landowner and Community |
| | | Consultation |
| Ndumo-Geziza 132kV Power Line, KwaZulu-Natal | 1 | Public Participation, |
| Province | | Landowner and Community |
| | | Consultation |

Screening Studies

| Project Name & Location | Client Name | Role |
|---|--------------------|-------------------|
| Potential Power Line Alternatives from Humansdorp | Nelson Mandela Bay | Social Assessment |
| to Port Elizabeth, Eastern Cape Province | Municipality | |
| | EAP: SIVEST | |

CONVENTIONAL POWER GENERATION PROJECTS (COAL, GAS AND ASSOCIATED INFRASTRUCTURE)

Stakeholder Engagement

| Project Name & Location | Client Name | Role |
|---|-------------------------|----------------------|
| Determination, Review and Implementation of the | Department of Water and | Secretarial Services |
| Reserve in the Olifants/Letaba System | Sanitation | |
| Orange River Bulk Water Supply System | Golder Associates | |
| Levuvu-Letaba Resources Quality Objectives | | |

Facilitation

| Project Name & Location | Client Name | Meeting Type |
|--|-----------------------------|-----------------------|
| Thabametsi IPP Power Station, Limpopo Province | Thabametsi Power Company | Focus Group Meeting & |
| | EAP: Savannah Environmental | Public Meeting |

| Project Name & Location | Client Name | Role |
|--|-----------------------------|-------------------------|
| Richards Bay Combined Cycle Power Plant, | Eskom Holdings | Public Participation |
| Richards Bay, Kwa-Zulu Natal Province (Impact | EAP: Savannah Environmental | |
| Phase) | | |
| Medupi Flue Gas Desulphurisation Project (up to | Eskom Holdings SOC Ltd | Public Participation, |
| completion of Scoping Phase), Limpopo Province | EAP: Zitholele Consulting | Landowner and Community |
| Kendal 30-year Ash Disposal Facility, Mpumalanga | | Consultation |
| Province | | |
| Kusile 60-year Ash Disposal Facility, Mpumalanga | | |
| Province | | |

| Camden Power Station Ash Disposal Facility, | | |
|---|----------------------------|-------------------------|
| Mpumalanga Province | | |
| Tutuka Fabric Filter Retrofit and Dust Handling Plant | Eskom Holdings SOC Ltd | Public Participation, |
| Projects, Mpumalanga Province | EAP: Lidwala Environmental | Landowner and Community |
| | | Consultation |
| Eskom's Majuba and Tutuka Ash Dump Expansion, |] | Public Participation, |
| Mpumalanga Province | | Landowner and Community |
| | | Consultation |
| Hendrina Ash Dam Expansion, Mpumalanga |] | Public Participation, |
| Province | | Landowner and Community |
| | | Consultation |

INFRASTRUCTURE DEVELOPMENT PROJECTS (BRIDGES, PIPELINES, RAILWAY LINES, ROADS, WATER RESOURCES, STORAGE FACILITIES, ETC)

Facilitation

| Project Name & Location | Client Name | Meeting Type |
|---|-----------------------------|----------------------|
| Determination, Review and Implementation of the | Department of Water and | Secretarial Services |
| Reserve in the Olifants/Letaba System | Sanitation | |
| | Golder Associates | |
| Orange River Bulk Water Supply System | Department of Water and | Secretarial Services |
| | Sanitation | |
| | Golder Associates | |
| Levuvu-Letaba Resources Quality Objectives | Department of Water and | Secretarial Services |
| | Sanitation | |
| | Golder Associates | |
| SmancorCR Chemical Plant (Public Meeting), | Samancor Chrome (Pty) Ltd | Public Meeting |
| Gauteng Province | EAP: Environment al Science | |
| | Associates | |
| SANRAL N4 Toll Highway Project (2 nd Phase), | Department of Transport | Public Meetings |
| Gauteng & North West Provinces | EAP: | |

Environmental Impact Assessments and Environmental Management Programmes

| Project Name & Location | Client Name | Role |
|---|-----------------------------|----------------------|
| Transnet's New Multi-Products Pipeline traversing | Transnet | Public Participation |
| Kwa-Zulu Natal, Free State and Gauteng Provinces | EAP: Bohlweki Environmental | |

Basic Assessments

| Project Name & Location | Client Name | Role |
|--|------------------------------|----------------------|
| Realignment of the Bulshoek Dam Weir near Klawer | Dept of Water and Sanitation | Public Participation |
| and the Doring River Weir near Clanwilliam, | EAP: Zitholele | |
| Western Cape Province | | |

MINING SECTOR

| Project Name & Location | Client Name | Role |
|---|-----------------------------|----------------------|
| Zero Waste Recovery Plant at highveld Steel, | Anglo African Metals | Public Participation |
| Mpumalanga Province | EAP: Savannah Environmental | |
| Koffiefontein Slimes Dam, Free State Province | Petra Diamond Mines | Public Participation |
| | EAP: Zitholele | |

| Baobab Project: Ethenol Plant, Chimbanje, Middle | Applicant: Green Fuel | Public Participation & |
|--|-----------------------|------------------------|
| Sabie, Zimbabwe | EAP: SIVEST | Community Consultation |
| BHP Billiton Energy Coal SA's Middelburg Water | BHP Billiton Group | Public Participation |
| Treatment Plant, Mpumalanga | EAP: Jones & Wagener | |



Email: hermien@savannahsa.com Tel: +27 (11) 656 3237

CURRICULUM VITAE OF HERMIEN SLABBERT

Profession : Environmental Consultant

Specialisation:Environmental Permitting, Project Management, Environmental Impact Assessments,
Geographical Information Systems (GIS), Project administrationWork Experience:2 years of experience in renewable energy

VOCATIONAL EXPERIENCE

Hermien Slabbert has two years of experience in the renewable energy sector, specifically relating to Solar Photovoltaic projects. She has experience in project management as well as environmental permitting.

SKILLS BASE AND CORE COMPETENCIES

- Project management
- Environmental Permitting
- Administrative tasks
- GIS Mapping

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Sc. (Hons) Environmental Management (2014), North-West University, Potchefstroom
- B.Sc. Degree, Geography and Geology (2013), North-West University, Potchefstroom

Courses:

- Environmental Law (2017), Centre for Environmental Management, Johannesburg
- Occupational Health and Safety law (2018), Centre for Environmental Management, Johannesburg

EMPLOYMENT

| Date | Company | Roles and Responsibilities |
|--------------------------------|----------------------------------|--|
| January 2019 – current | Savannah Environmental (Pty) Ltd | Trainee Environmental Consultant Tasks include: Environmental Impact Assessment Reports, Basic Assessments and Environmental management programmes; Specialist management and the Process of EIA Applications. |
| | | GIS (utilising ArcGIS) Tasks include: Analysis and manipulation of data and compilation of maps. |
| January 2017 – October 2017 | FedGroup Holdings (Pty) Ltd | Project coordinator Tasks include: Project coordination, project finance, financial modelling, project proposals |
| August 2015- December 2016 | Subsolar Energy (Pty) Ltd | Project Assistant Tasks include: Environmental Permitting, Specialist management, Project management, Site selection |

PROJECT EXPERIENCE

RENEWABLE POWER GENERATION PROJECTS: WIND ENERGY FACILITIES

Part 1 Amendment Applications

| Project Name & Location | Client Name | Role |
|---|------------------|------|
| Rheboksfontein WEF, Western Cape Province | Moyeng Energy | EAP |
| Dorper WEF, Eastern Cape Province | Dorper Wind Farm | EAP |
| West Coast One WEF, Western Cape Province | Aurora Wind | EAP |

Part 2 Amendment Applications

| Project Name & Location | Client Name | Role |
|--|----------------------|------|
| Great Karoo WEF, Northern Cape Province | African Clean Energy | EAP |
| | Developments | |
| Gunstfontein WEF, Northern Cape Province | African Clean Energy | EAP |
| | Developments | |

RENEWABLE POWER GENERATION PROJECTS: SOLAR ENERGY FACILITIES

Project Management

| Project Name & Location | Client Name | Role |
|---|-------------|-----------------|
| Gamma SEF, North West Province | Subsolar | Project Manager |
| Khubu SEF, North West Province | Subsolar | Project Manager |
| Boitshoko SEF, Northern Cape Province | Subsolar | Project Manager |
| Camel Thorn SEF, Northern Cape Province | Subsolar | Project Manager |
| Beta SEF, Free state Province | Subsolar | Project Manager |

| Oryx SEF, Free state Province | Subsolar | Project Manager |
|--------------------------------|----------|-----------------|
| Kappa SEF, North West Province | Subsolar | Project Manager |
| Delta SEF, North West Province | Subsolar | Project Manager |

Geographical Information Systems (GIS)

| Project Name & Location | Client Name | Role |
|---|--------------------------|----------------|
| Steynsrus PV 1, Free state Province | Cronimet Power Solutions | GIS Consultant |
| Steynsrus PV 2, Free state Province | Cronimet Power Solutions | GIS Consultant |
| Heuningspruit PV 1, Free state Province | Cronimet Power Solutions | GIS Consultant |
| Aggeneys PV 1, Northern Cape Province | ABO Wind | GIS Consultant |
| Aggeneys PV 2, Northern Cape Province | ABO Wind | GIS Consultant |
| Sirius PV3, Northern Cape Province | Sola future | GIS Consultant |
| Sirius PV4, Northern Cape Province | Sola future | GIS Consultant |

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

| Project Name & Location | Client Name | Role |
|---|-------------|-----------------|
| Gamma SEF, North West Province | Subsolar | Project Manager |
| Camel Thorn SEF, Northern Cape Province | Subsolar | Project Manager |
| Boitshoko SEF, Northern Cape Province | Subsolar | Project Manager |
| Khubu SEF, North West Province | Subsolar | Project Manager |

GAS PROJECTS

Geographical Information Systems (GIS)

| Project Name & Location | Client Name | Role |
|--|-------------|----------------|
| Richards Bay Combined Cycle Power Plant (CCPP) | Eskom | GIS Consultant |
| power plant, KwaZulu-Natal (EIA phase) | | |

TRANSPORT SECTOR PROJECTS

Basic Assessment

| Project Name & Location | Client Name | Role |
|--|----------------------|------|
| Dwarsrug Access Road, Northern Cape Province | Mainstream Renewable | EAP |
| | Energy Developments | |

Geographical Information Systems (GIS)

| Project Name & Location | Client Name | | Role |
|--|---------------------|-----------|----------------|
| Dwarsrug Access Road, Northern Cape Province | Mainstream | Renewable | GIS Consultant |
| | Energy Developments | | |

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

Basic Assessments

| Project Name & Location | Client Name | Role |
|---|--------------|------|
| Nigel gas transmission pipeline, Gauteng Province | Energy Group | EAP |

Geographical Information Systems (GIS)

| Project Name & Location | Client Name | Role |
|---|--------------|----------------|
| Nigel Gas Transmission Pipeline, Gauteng Province | Energy Group | GIS Consultant |

| | | - |
|---------------------|-------------------|----------------|
| Wilmar Oil Pipeline | Wilmar Processing | GIS Consultant |

GRID NFRASTRUCTURE PROJECTS

Geographical Information Systems (GIS)

| Project Name & Location | Client Name | Role |
|--|-------------|----------------|
| Bloemhoek 1 Power Line, Northern Cape Province | ABO Wind | GIS Consultant |
| Bloemhoek 2 Power Line, Northern Cape Province | ABO Wind | GIS Consultant |