



Appendix 1: Title Deeds / SG Diagrams

Walker, Malherbe, Godley & Field



16448



VERKOPPE
MORTGAGE
10-11-1958
CANCELLED
28-09-1971

Handwritten text in Afrikaans, partially obscured by a watermark. It appears to be a legal declaration or description of the property being mortgaged.

ARTENANTOOR, 13-7-1971
KAAPSTAD.
DEEDS REGISTRY,
CAPE TOWN, REGISTREUR VAN AKTES

16448

Transportakte

Kragtens 'n Prokurasie

D. P. DE KLERK & VAN GEND
Prokureurs, Notarisse, Aktesorgers
en Parlementêre Agente.
Volkas-gebou.
Adderleystraat
KAAPSTAD

Opgestel deur

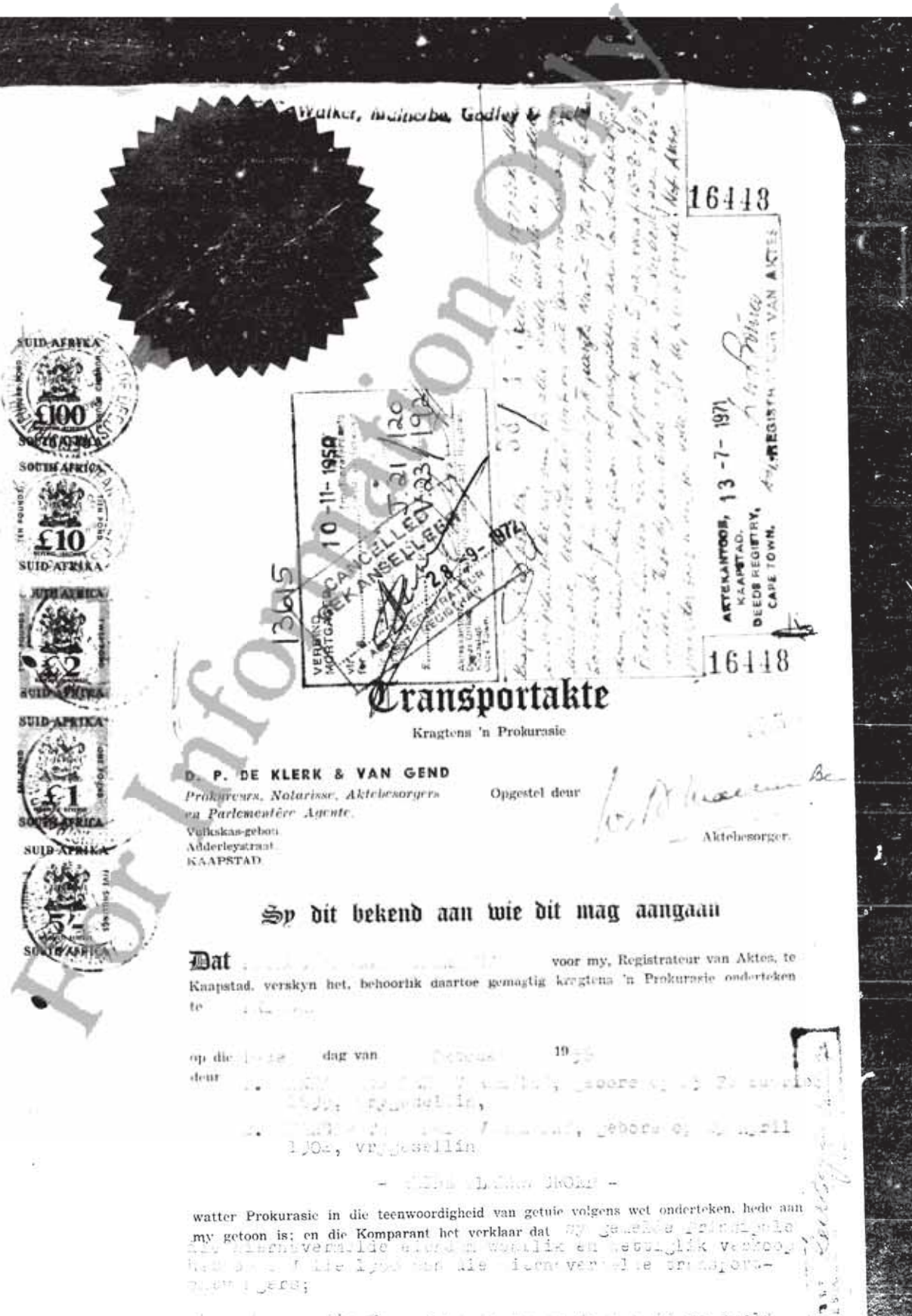
Handwritten signature of the notary.
Aktesorger.

So dit bekend aan wie dit mag aangaan

Dat *[Name]* voor my, Registrateur van Aktes, te Kaapstad, verskyn het, behoorlik daartoe gemagtig kragtens 'n Prokurasie onderteken te *[Name]*

op die *[Date]* dag van *[Month]* 19*[Year]*
deur *[Name]*, seun van *[Name]*, seors o, *[Address]*
[Address],
[Address], seors o, *[Address]*, seors o, *[Address]*,
gebore o, *[Date]*,
1902, vrygewillin.

watter Prokurasie in die teenwoordigheid van getuie volgens wet onderteken, hede aan my getoon is; en die Komparant het verklaar dat sy jenseks Prinsipiële die aangevarende eiendom wettig en wettiglik verkoop het op die 1ste van die teenverrele transportakte van 1902;



3

Weshalwe die Komparant afstand gedoen het van alle eiendoms- en ander regte wat die gesegde **TRANSPORTGEEFSTERS** tot op hede op gemelde vaste eiendom gehad het en gevolglik ook erken het dat hul daarvan heettemaal onteien is, en geen eiendoms- en ander regte daarop besit nie; en dat, **kragtens hierdie Akte, die gesegde TRANSPORTIONEVANGERS**

hul **Erfgename, Eksekuteure, Administrateurs of Gemagtigdes** tans is en voortaan op die volle eiendomsregte daarop geregtig sal wees, ooreenkomstig plaaslike gebruik; onder voorbehoud nogtans van die Regte van die Regering; en eindelijk erken het dat die hele koopskat die som van **VYFTIENDUISEND FOND (215,000.0.0.)** bedra.

Ten Getuie waarvan ek, die gesegde Registrateur van Aktes, tesame met die Komparant, q.q., hierdie Akte onderteken en met die Ampse!! laat bekragtig het.

Aldus verrig ten kantore van die Registrateur van Aktes, te Kaapstad, Kaap die Goeie Hoop, op die **15de** dag van die Maand **1958**, in die jaar Neentienhonderd-**58** **en VYFTIEN** (1958).

[Handwritten signature]

q.q. sy Prinsipaal/ale
In my teenwoordigheid

[Handwritten signature]
Registrateur van Aktes

Geregistreer in die register van *New Phas*

Prosha

Bock

88 A' (1)
Folio 10

For Information Only

BLAASDRAPE € 5
W/ ENDORSEMENT ON T16448 / 1958
EENDOM/PROPERTY Geed. 3 (m geed.
van ged. 1) van die plaas
Drieling Pan Nr. 101.

Aandeel C. J. de Jager, + Borgverband.
3 32050 11276 1. of Aandeel van
MRE. A. De Jager. W/
BC 38250/85 VERBOD MORTGAGED 29-12-1976
GEKANSELLEER 75000.00 (reel. erfhand.)
CANCELLED
REGISTRAR
1985-11-28

Borgverband Aandeel. A de Jager.
76. MRE

~~VERBOD MORTGAGED
75000.00
7500.00
FOR FURTHER ENDORSEMENTS SEE
VIR VERDERE ENDOSEMENTE SIE~~

17. 12. 76

Vir verdere endosementen sien
Vir further endorsements see

66

T16403/58

Die aanspranklike hiervan
verskyh op die aktebank af-
skrif

ENDORSEMENT IN TERMS OF SECTION 31 (B) OF ACT 47 OF 1957
(AS AMENDED)

ENDORSEMENT KRAGTENS ARTIKEL 31 (B) VAN WET 47 VAN 1957
(SOOS GEWYSIG)

1 Gedeele van groot ± 26 01 Ha
1 Die eiendom hierin vermeld
has been expropriated by Spoorwegadministrasie
is ontstaan deur die
in terms of § (1) van wet 37 van 1955
Vide Notice of expropriation No. 346/73 16.3.1973
Vide ontvoeringskantsgewing No.
filed as exprop. caveat EX 346/73 plans filed in
gelaas as ontvoerings caveat plans in tweevoud
duplicate
gelaas

29/03/1973 C.C. Smit
DEEDS OFFICE REGISTRAR OF DEEDS
AKTEKANTOOR REGISTRATEUR VAN AKTES
CAPE TOWN/KAAPSTAD

EN DOPPELMEEN? i.e.v. § (1)(v) van wet 47/57

KRAGTEN § (1)(v) VAN WET
47/1957 IS EX 346/73 (SPEV
HIERBO) NOU GEROEER
AANSOET GELIATPEER

B4 BC 023615/2002
2012-04-23

[Signature]
REGISTRATEUR

FOR INFORMATION



DIE GROOTTE VAN BINNENGEWELDE EENKONING
THE EXTENT OF THE WITHIN-MENTIONED PROPRIETARY
OMSKYPT IN METRIEKE MATE IS

CONVERTED TO METRIC MEASURES IS
1041.2782.6332 HECTARES (METERS)
2564.1712.9590 HECTARES (METERS)

13-7-11 *L. van der Merwe*
REGISTRATEUR VAN AKTES
Y. REGISTRAR OF DEEDS.
CAPE TOWN.

No 101.
1-Geleëheid (Marais) van die P. van der Merwe
No 101.

DIE OORLOEGE HOEDER...
THE LAND...
REGISTRATEUR VAN AKTES
Y. REGISTRAR OF DEEDS.
CAPE TOWN.

Handwritten notes and signatures in Dutch and Afrikaans, including names like 'J. van der Merwe' and 'J. van der Merwe'.

22268

22268

AKTEKANTOOR,
KAAPSTAD,
CAPE TOWN.
13-7-1914 *L. van der Merwe*
REGISTRATEUR VAN AKTES

BRP/Aler.

TRANSPORTAKTE

1914

Opgestel deur my
Handwritten signature
Transportbesorger

(UIT KRAG VAN 'N PROKURASIE)

Hierby word bekend gemaak

Dat EDGAR DRYDEN TUDHOPE (Transportbesorger) voor my, Registrateur van Aktes, Kaapstad, verskyn het, hy die genoemde Komparant synde behoorlik daartoe gemagtig deur 'n volmag, geteken te

van Augustus 1914 en aan hom verleen deur op die 28ste dag

- CORNELIUS FRANS VERMEULEN, in sy hoedanigheid as die Eksekuteur Testamentêr in die boedel van wyle CORNELIUS FRANS VERMEULEN, en
- ANNA JUSTINA VERMEULEN, voorheen Vermeulen, gebore Marais op 15 September 1896, 'n weduwee, in haar persoonlike hoedanigheid, wie binne gemeenskap van goedere getroud was met die genoemde oorledene gedurende sy leeftyd,

(Alwei BlankeGroep),

Handwritten note at the bottom right corner.

2015

testament gedateer 10 Augustus 1956 van die gesegde nou wyle Cornelius Frans Vermeulen en sy nagelate eggenote Anna Justine Vermeulen, voorheen Vermeulen, gebore Marais, wie binne gemeenskap van goedere getroud was, hulle die hiernagemelde eiendomme spesiaal bemaak het aan hul dogter, die hiernagemelde transportnemer, onderhewig aan die voorwaarde dat sy maandeliks 'n bedrag van R50-00 aan die langsliewende van die testateurs sal betaal, betaling waarvan behoorlik verseker is, en verder onderhewig aan die voorkeepsreg soos hierna meer volledig uiteengesit;

SO IS DIT dat hy, die gesegde Komparant, in sy voornoemde hoedanigheid, hiermee in volkome en vrye eiendom sodeer en transporteer aan en ten gunste van

ALETTA DE JAGER,
gebore Vermeulen op 11 Januarie 1932,
getroud buite gemeenskap van goedere
met Cornelius Jansen de Jager,

(Blanka Groep),

Haar Erfgename, Eksekuteurs, Administrateurs of Regverkrygendes;

1. DIE RESTANT van seker stuk vrygekoopte erfpagplaas
DRIELINGS PAN,
geleë in die Afdeling van PRIESKA;

GROOT aan restant vierduisend vierhonderd drie-en-twintig desimaal twee twee vier vier (4423.2244) morges;

UITSTREKKENDE soos die Akte van Toekenning (Victoria West Erfpakte Boekdeel 9 No.10) met 'n kaart daaraangeheg gemaak ten gunste van B.Rens op 24 Oktober 1882, en daaropvolgende Transportaktes die laaste waarvan gedateer 11 November 1938, No.11735, gemaak ten gunste van gesegde oorledene, meer volledig sal aantoon;

ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte No.11735/1938;

ONDERHEWIG VERDER, soos genoem in die voormelde gesamentlike testament gedateer 10 Augustus 1956 van gesegde nou wyle Cornelius Frans Vermeulen en sy nagelate eggenote Anna Justine Vermeulen, voorheen Vermeulen, gebore Marais, aan die voorwaarde dat die transportnemer hierbo vermeld nie hierdie eiendom aan 'n derde persoon sal verkoop of vervreem nie alvorens sy dit eers aangebied het aan haar broer Cornelius Frans Vermeulen, teen dieselfde vergoeding as wat sy van 'n huidige derde persoon kan ontvang nie.

2. SEKER stuk vrygekoopte erfpagplaas genoem

MERINO, gedeelte van die plaas
DRIELINGS PAN,

geleë in die Afdeling van PRIESKA;

GROOT tweeduisend en twee desimaal een nul sewe drie (2002.1073) morges;

UITSTREKKENDE soos die Transportakte met 'n kaart daaraangeheg gemaak ten gunste van C.M. Vermeulen, Crygesellin, en 'n ander, en daaropvolgende twee Transportaktes albei gemaak ten gunste van die gesegde oorledene, die

2016

ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte gedateer 11 November 1938, No.11734;

ONDERHEWIG VENDER, soos genoem in die voormelde gesamentlike testament gedateer 10 Augustus 1956 van die gesegde nou wyle Cornelius Frans Vermeulen en sy nagelate eggenote Anna Justina Vermeulen, voorheen Vermeulen, gebore Marais, aan die voorwaarde dat die transportnemer hierbo vermeld nie haar eiendom aan 'n derde persoon sal verkoop of vervreem nie alvorens sy dit eers aangebied het aan haar broer, Cornelius Frans Vermeulen, teen dieselfde vergoeding, as wat sy van sodanige derde persoon kan ontvang nie.

For Information Only

187/1972

[Handwritten Signature]
REGISTRARUS V. N. S. A. S.

27-3-1972

WESHALWE.....

BY. 27-3-1972

For Information Only

332,
ere

Regverkrygendes;
rygekoopte erfpag-

vierhonderd drie-
(423.2244) morge;

an Toekenning
met 'n kaart
op 24 Oktober
: laaste waarvan
k ten gunste van
ion;

is waarna verwys

in die voormalde
is 1956 van gesegde
agelate egeente
; gebore Harald,
hierbo vermeld nie
erkoop of Vervreem
naar broer Cornelius
was wat sy van

plaas gencew

: plaas

imaal een nul sewe

ortakte met 'n
; Vermeulen,
in twee transport-
egde ooriedere, die
ander op 20
d aantoon;

187/1972

REGISTRATEUR V.A. ...

27-3-1972

WESFALWE

KANTOOR,
APSTAD,
REGISTRARY,
ETOWN.

2016

ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte gedatseer 11 November 1938, No.11734;

ONDERHEWIG VENDER, soos genoem in die voormelde gesamentlike testament gedatseer 10 Augustus 1956 van die geseigde nou wyle Cornelius Frans Vermeulen en sy nagelate eggenote Anna Justina Vermeulen, voorheen Vermeulen, gebore Marais, aan die voorwaarde dat die transportnemer hierbo vermeld nie haar eiendom aan 'n derde persoon sal verkoop of vervreem nie alvorens sy dit eers aangebied het aan haar broer, Cornelius Frans Vermeulen, teen dieselfde vergoeding, as wat sy van sodanige derde persoon kan ontvang nie.

For Information Only

187/1972

[Handwritten Signature]
REGISTRATEUR, V.L., A.A.

27-3-1972

WESRALWE.....

BY. 27-3-1972

2017

ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte gedateer 11 November 1958, No.11734;

ONDERHEWIG VERDER, soos genoem in die voormelde gesamentlike testament gedateer 10 Augustus 1956 van die gesegde nou wyle Cornelius Frans Vermeulen en sy nagelate eggenote Anna Justina Vermeulen, voorheen Vermeulen, gebore Marais, aan die voorwaarde dat die transportnemer hierbo vermeld nie haar eiendom aan 'n derde persoon sal verkoop of vervreem nie alvorens sy dit eers aangebied het aan haar broer, Cornelius Frans Vermeulen, teen dieselfde vergoeding as wat sy van sodanige derde persoon kan ontvang n'.

For Information Only

187/1972

[Handwritten Signature]
REGISTRARUS V.A.

27-3-1972

WESKALWE.....

TOOR,
SAC,
BETHRY,
JWIN.

Weshalwe die Komparant afstand doen van al die regte en titel wat die gesegde
GESAMENTLIKE BOEDEL VAN DIE GESEGDE NOU WYLE CORNELIUS FRANS
VERMEULEN EN SY NAGELATE EGGENOTE ANNA JUSTINA VERMEULEN,
voorheen Vermeulen, gebore Marais, voorheen

op genoemde eiendom gehad het en gevolglik ook erken dat dit
geheel en al van die besit daarvan onthef en nie meer daartoe geregtig is nie, en dat,
krachtens hierdie Akte bogenoemde

ALETTA DE JAGER,
gebore Vermeulen, getroud soos voormeld,

Haar Erfgename, Eksekuteurs, Administrateurs of oegverkrygendes;

tans en voortaan daartoe geregtig is, ooreenkomstig plaaslike gebruik, behoudens die regte
van die Staat, en ten slotte erken hy dat die eiendom waardeer is vir
boedelbelasting doeleindes teen

-SES-EN-DERTIGDUISEND-DRIËHONDERD-EN-DERTIG-RAND
(R36,330-00)

SES-EN-SESTIGDUISEND-SESHONDERD-VYF-EN-SEWENTIG-RAND
(R66,675-00)

Ten Bewyse waarvan ek, die genoemde Registrateur van Aktes, tesame met die
Komparant, q.q., hierdie Akte onderteken en met die Ampsël bekragtig het.

ALDUS GEDOEN en geteken op die Kantoer van die Registrateur van Aktes in
Kaapstad, Provinsie van die Kaap die Goeie Hoop, op die

Neg-en-tweintigste (29^e) Dag
Oktober

van die maand
in die jaar van onse Heer Eenduisend Negchonderd
(19 64).

vier-en-sestig

E. L. ...

(Transportbesorger)
q.q. sy Prinsipaal/ale.

In my teenwoordigheid,

[Signature]
AGENT Registrateur van Aktes.

Geregistreeer in die Register van Nuwe plaas. Prieska Bcek Folio 01-jaar 1.

101^B-P. 2

Klerk.

2019

5

T 22268 / 1964

Restant van
die plaas Drieling Pan No. 101
et seq.

Borgverband

32050 .76

29-12-1970

BC8250/65

75000,00

en/of

GEKANSELLEER
CANCELLED

7500,00

1985-11-28

EXPLOITATION DE BIEN	EXPROPRIATION BY
Republiek van Suid-Afrika en die Suid-Afrikaanse Republiek	
Van die Comitee tot bestudie van die Plaas Drieling kom no. 101	
GRUOT GEGEVEN MEASURING APPROXIMATELY	
Exp 375/1973	
30/03/1973	Registrar
	REGISTRATEUR VAN AKTES

Emansipement koopers Petrus 31/7/1971 wet 27/67

Koopers Oukel 31/7/1971 wet 27/67 en koopers
lede binnestreek en inder hiermee geroep.

Chiesch getuises onder BC 023280/2002

Rechtspraak
Kantoor

Chiesch
Kantoor van Aktes

171
VAN WYK GAUM FOUCHÉE INC
Permgebou, Rindstraat 345, PAARL, 7620
Posbus 362, PAARL, 7620
Tel 02211-611050
Fax 02211-24165

Opgestel deur my
TRANSPORTBESORGER
VAN WYK W J

29/1/94
190-39

T 27285-44

TRANSPORTAKTE
Hierby word bekendgemaak:

DAT

ANNECKE LOUW

voor my, Registrateur van Aktes,
verskyn het te KAAPSTAD
hy, die genoemde Komparant synde behoorlik daartoe gemagtig deur 'n volmag
uitgevoer te PAARL.

op die 15de dag van Maart 1994 deur

DIE TRUSTEES INDETYD VAN DIE M.C.VIVIERS TRUST

8

En die Komparant het verklaar dat sy voorsegde Prinsipaal werklik en wettiglik verkoop het op 7 Februarie 1994 en dat hy, in sy voornoemde hoedanigheid hierby in volkome en vrye eiendom sedeer en transporteer aan en ten gunste van

SANDA DE JAGER

Identiteitsnommer 600303 0106 007

Ongetroud

Haar Erfgename, Eksekuteure, Administrateurs of Genagtiges

DIE RESTANT VAN die plaas UITZIGT NR 69 in die Afdeling van PRIESKA;

GROOT : 3252,8119 (DRIEDUISEND TWEEHONDERD TWEE EN VYFTIG
komma ACHT EEN EN NEGE) Hektaar;

AANVANKLIK GEREГИSTREER kragtens Grondbrief (Prieska Erfpate Boekdeel 1
Nr. 24) met Kaart wat daarop betrekking het en gehou kragtens Transportakte Nr. T
5115/1985.

- A. ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte Nr.
T 8190/1901;
- B. ONDERHEWIG VERDER aan die volgende endossement bede gedateer op
Transportaktes Nr. T 10556/12954 en Nr. T 4393/1959, welke endossement as
volg lui:

"Kragtens Notariële Akte van serwituut Nr. 100/1973, gedateer 23 November
1971 is die eiendom hieronder gehou onderworpe aan 'n uitsluitlike reg van weg
om water, gas erts of ander versendbare stowwe deur middel van 'n pyplyn te
versend oor 'n strook grond 10 meter breed die roete waarvan bepaal word deur
die lyn B.C.D.E. G.H.J.K.L.M.N.O.P.Q.R.S.T. wat die Noord-Westelike grens van
die serwituutstreek op serwituut kaart 4G. 10149/70 daaraan geheg
verteenwoordig ten gunste van Prieska Copper Mines (Pty) Ltd. onderworpe aan
voorwaardes en met bykomstige regte soos meer ten volle sal bly uit die
genoemde Notariële Akte."

- C. ONDERHEWIG VERDER aan die endossement gedateer 7 Mei 1974
aangebring op Transportakte Nr. T 8741/1973, welke endossement soos volg lui:

"Edossement kragtens Artikel 11 (1) (b) van Wet 37 van 1956.

Die eiendom hierin vermeld - groot +- 18,62 Ha.
is deur spoorwegadministrasie onteien kragtens Artikel 3 (1) van Wet 37 van 1955.
Vide Onteieningskennisgewing Nr. 1 566/74 Ex Aansoek op 28.8.73 planne
geliasseer hiermee."

~ b

WESHALWE die Komparant afstand doen van al die regte en titel wat bogenoemde Transportgewer Trust voorheen op genoemde eiendom gehad het, en gevolglik ook erken dat bogenoemde Transportgewer Trust geheel en al van die besit daarvan onthef en nie meer daarop geregtig is nie en dat, kragtens hierdie akte, bogenoemde Transportnemer, Haar Erfgename, Eksekuteurs, Administrateurs of Regverkrygendes tans en voortaan daartoe geregtig is, oor enkomstig plaaslike gebruik, behoudens die Regte van die Staat; en ten slotte erken hy dat die hele Koopsom ten bedrae R325 281,19 (DRIEHONDERD VYF EN TWINTIGDUISEND TWEEHONDERD EEN EN TAGTIG RAND EN NEGENTIEN SEN I) beoorlik betaal of verseker is.

TEN BEWYSE waarvan ek, die genoemde Registrateur, tesame met die Komparant, hierdie Akte onderteken en dit met die Ampseël bekragtig het.

ALDUS GEDOEN en verly op die Kantoor van die Registrateur van Aktes, te KAAPSTAD op hede die 25^{de} dag van

April

in die jaar van ons Heer, Eenduisend Negenhonderd Vier en Negentig (1994)

In my teenwoordigheid


Registrateur van Aktes



q.q.

VIR ENDOSSEMENTE KYK ELADSY
FOR ENDORSEMENTS SEE PAGE

41137

Transportakte

Kragens 'n Prokurasie

D. P. DE KLERK & VAN GEND

Prokureurs, Notarisse, Aktebewerers

Volkswaer-gelinn.

Adderleystraat,

KAAPSTAD.

MP

Opgestel deur



Aktebewerger

Op dit bekend aan wie dit mag aangaan

Dat **WILLEM PETRUS MALHERBE** voor my, Registrateur van Aktes, te Kaapstad, verskyn het, behoorlik daartoe gemagtig kragens 'n Prokurasie onderteken te **PRIESKA**

op die 30ste dag van September 1976
deur

HENDRIK GIDEON HUMAN
(gebore 1 Mei 1938)

- BLANKE GROEP -

watter Prokurasie in die teenwoordigheid van getuie volgens wet onderteken, hede aan my getoon is; en die Komparant het verklaar dat sy prinsipaal werklik en

- 2 -

wettiglik verkoop het op 22 April 1976 en dat hy die komparant in sy voornoemde hoedanigheid hiermee in volle en vrye eiendom sodeer en transporteer aan en ten gunste van:-

CORNELIUS JANSEN DE JAGER
(gebore 6 Junie 1928)

- BLANKE GROEP -

sy erfgename, eksekuteurs, administrateurs of gemagtigdes:-

SEKERE vrygekoopte erfpaggrond, geleë in die Afdeling van Prieska, synde die Restant van Gedeelte 1 (GROOT PAN) van die plaas FRIELINGS PAN NO. 101;

GROOT as sulks: 2948,1389 (Twee-duisend Nege-honderd Ag en Veertig komma Een Drie Ag Nege) hektaar;

UITSTREKKENDE soos Verdelingstransportakte Nr. 3571 gedateer 8 Mei 1935, met 'n kaart Nr. A 1795/28 Jaarby aangeheg, gemaak ten gunste van J.H.Vermeulen en daaropvolgende aktes die laaste waarvan transportakte Nr. 16498 gedateer 24 Junie 1971, gemaak ten gunste van die komparant se prinsipaal, vollediger sal aandui;

ONDERHEWIG aan die voorwaardes waarna verwys word in Verdelingstransportakte Nr. 3571 gedateer 8 Mei 1935.

Weslike die Komparant afstand gedoen het van alle eiendoms- en ander regte wat die gesegde transportnemer tot op hede op gemelde vaste eiendom gehad het en gevolglik ook erken het dat hy daarvan heeltemal ontsien is, en geen eiendoms- en ander regte daarop besit het, en dat, kragtens hierdie Akte, die gesegde transportnemer sy Erfgename, Ekskuteurs, Administrateurs of Gemagtigdes tans is en voortaan op die volle eiendomsregte daarop geregtig sal wees, ooreenkomstig planêre gebruik, onder voorbehoud notans van die Regie van die Staat en eindelik erken het dat die koopprijs die som van R93000,00 (Drie en Neewntig-duisend Rand) bedra.

Ten Getuie waarvan ek, die gesegde Registrateur van Aktes, tesame met die Komparant, q.q. hierdie Akte onderteken en met die Ampsaal laat bekragtig het.

Weslike verrig ten kantore van die Registrateur van Aktes, te Kaapstad, Kaap die Goede Hoop, op die 29^{de} dag van die Maand Desember in die jaar Neewntienhonderd-Ses en Sewentig (1976).

M. A. de Vries
q.q. Prinsipaal/ale

In my teenwoordigheid

REAS ✓
Geregistreer in die register van

PRIESKA ✓

Registrateur van Aktes

M.B.T.

Boek

Folio

101/8/2 ✓

BLADEY
ENCLOSURE OR
ENDORSEMENT ON 41137 / 1976

ERENDOM PROPERTY Restant van
Ged. I (Groot Pan) van die
plaas Drieling Pan Nr. 101.

32950 76 MRE

Bl. 38250/85

GEKANSLEER CANCELLED	75,000.00
7500.00	

1983

REGISTRAR

VERDIND	MORTGAGED
VIR	FOR R 150,000.00
18271 94	
B	
1994-02-10	REGISTRAR



Appendix 2: Expertise of the EAP and Project Team

Your reference:

Our reference: 13169 - Aletta

Date: 28 June 2016

AFFIRMATION BY ENVIRONMENTAL ASSESSMENT PRACTITIONER IN TERMS OF APPENDIX 2 AND 3 OF THE EIA REGULATIONS, 2014

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility near Copperton, Northern Cape Province

Environmental Assessment Practitioner (EAP):	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

I, _____ Andrea Gibb _____, the appointed EAP confirm through this affirmation (as required in terms of Appendix 2 subsection (2) (j) and (k) and Appendix 3 subsection (3) (s) of GN982) that –

- i) To the best of my knowledge the information provided in this report is factually correct;
- ii) All comments and inputs received from stakeholders / interested and affected parties, prior to submission of the report, have been included as part of the report, and addressed where necessary;
- iii) All relevant inputs and recommendations from the specialist reports have been included in the report;
- iv) To the best of my knowledge all relevant project information which has been provided to stakeholders and interested and affected parties is correct, and is included in the report;
- v) All responses provided to comments received from stakeholders and interested and affected parties are the unbiased opinion of the EAP and are based on factually correct information;
- vi) The level of agreement between the EAP and the interested and affected parties on the plan of study for the undertaking of the environmental impact assessment has been agreed upon.



Signature of the environmental assessment practitioner:

SiVEST SA (Pty) Ltd

Name of company:

28 June 2016

Date:

ABRIDGED CV – A.W.D. JONGENS

Adrian Jongens (M.Sc. Electrical Engineering) provides a consulting service, backed by more than 40 years of experience, to government departments; defence institutions; local authorities; local and international industries; public and private bodies throughout Africa in all aspects relating to building & architectural acoustics, noise & vibration control, community noise, environmental and transportation noise, noise management policy formulation and environmental noise impact assessment.

MSc (Electrical Engineering) University of Cape Town (1993);

University of Cape Town, Electrical Engineering Department, (1971 - 2011) Senior Lecturer, retired;

Part time professor Department of Architecture, University of the Orange Free State (1998 – 1999);

Acoustical advisor to the City of Cape Town Engineer's Department, on environmental & community noise and formulation of Municipal Noise By-Laws (1973 – 1985);

Member South African Bureau of Standards (SABS) Steering Committee for Acoustics & Noise Abatement (1988 – 1993);

Member SABS technical committee for Acoustics & Noise Abatement (1993 – present);

Member Council for Scientific & Industrial Research (CSIR) National Calibration Service Special Technical Committee on Acoustics (1988 – 1992);

Acoustical advisor to Stanway Edwards Ngomane Associates (Pty) Ltd., Pretoria (1991-2000);

Member International Standards Organisation, ISO TC43 Working Group 38 (1993 – 2010);

Member specialist advisory team to Cape Town Olympic Bid Committee (1996 – 1997);

Member DEADP specialist advisory team: revision of Western Cape Noise Control Regulations (2005);

Author and co-author of more than 45 research publications;

Membership:

Engineering Council of South Africa, Reg. Nr 805412;

South African Institute of Electrical Engineers;

Southern African Acoustics Institute;

Nederlands Akoestisch Genootschap.

Personal Details

Surname : Broughton
 Names : Elena
 Date of Birth : 11 September 1980
 Nationality : Russian
 Residency : RSA Permanent Resident
 Profession : Senior Development Economist



Key Qualifications

Elena Broughton completed her BCom (Hon) in Economics in Russia, at Nizhny Novgorod State University in 2002 specialising in regional economics. At the same time, she completed an additional degree as Translator/Interpreter in Professional Orientated Communication. After completion of her Honours degree in Economics, Elena has moved to the USA and stayed there for 1.5 years. During her stay in the USA, she completed a number of Accounting and Business courses at Parkland College, Illinois. In 2007, she obtained her BSc (Hon) in Technology Management (Cum Laude) at the University of Pretoria and later received her MSC in Technology Management (2011) from the same university.

Elena Broughton is a senior professional at Urban-Econ and has an extensive knowledge in various fields of economic development, including impact assessments, investment strategy formulation, strategic decision analysis, and monitoring and evaluation. She is experienced in developing input-output and SAM-based models, as well as development and application of other econometric techniques. Elena has a special interest in project evaluation and decision-making framework, with the later being the focus of her Master's dissertation. Over the past few years, she was able to extend her experience in these fields working on projects for both government and the private sector.

Academic Qualifications

Institution (Date from – Date to)	Degree(s) or Diploma(s) obtained:
2008-2011	MSc in Technology Management
2006 - 2007	BSc (Hon) in Technology Management
2004, Parkland College, USA	Computer Integrated Accounting
2004, Parkland College, USA	Independent Business
2003, Parkland College, USA	Intermediate Accounting
2003, Parkland College, USA	Records Management
2003, Parklands College, USA	Financial Accounting
2003, Parklands College, USA	Managerial Accounting
2002, Nizhny Novgorod University, Russia	BCom (Hon) in Economics

Language Proficiency

	Reading	Writing	Speaking
Russian	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

Employment Record

2004: Urban-Econ: Development Economist

Projects Undertaken

- **Go to Market Strategy for a PV Panel Manufacturer:** Urban-Econ Development Economists together with EScience Associates and Tracy Stewart Consulting was appointed by the CEF to undertake a Go-to-Market Strategy for a PV panel manufacturing facility. The project comprised of two major parts. The first components included the analysis of the market and opportunities presented in the market, as well as identification of the needs, affordability levels, and requirements by all groups of stakeholders comprising the industry's value chain. The second part of the study included the formulation of the strategic plan that outlined various target markets to be pursued, value proposition to be offered, market channels to be considered for entering the market, and activities to be implemented during the product pre-launch, launch and post-launch phases.
- **SunCorp Socio-Economic and Enterprise Development Plan formulation:** Urban-Econ Development Economists was appointed by SunCorp to develop a Socio-Economic Development and Enterprise Development Plans for a solar PV project in the Free State. The plans were devised in line with the DOE requirements outlined for the bidding phase.
- **Savanna Cookware Manufacturing Facility Pre-Feasibility Study:** Urban-Econ Development Economists undertook a pre-feasibility study for a manufacturing facility planned to produce luxurious stainless steel cookware in South Africa. The pre-feasibility study focused on determining the need and desirability for the proposed manufacturing facility considering the defined primary and secondary markets; the key prerequisites for the viability of the proposed venture and the most optimal location for the proposed manufacturing facility.
- **An opportunity cost assessment for the proposed Labonte 5 mining project:** The purpose of the study was to investigate the opportunity cost of the proposed sand mining project to determine the implications on the local economy dynamics and the impact on the major infrastructure projects implemented in the Lephalale area if the proposed project is not approved.
- **Saldanha Bay Separation Plant Economic Impact Assessment:** The project involved undertaking an economic impact assessment study for the proposed construction and operation of a Rare Earth Elements (REE) Separation Plant on Portion 6 of the Farm Langeberg 188 in Saldanha, in the Western Cape Province. The study formed part of the Environmental Impact Assessment process as prescribed in the National Environmental Management Act (NEMA) of 1998 and its subsequent amendments.
- **Zandkopsdrift Rare Earth Elements (REE) Project Economic Impact Assessment:** The project involved undertaking an socio-economic impact assessment study for the proposed the Zandkopsdrift Rare Earth Elements (REEs) Project near Garies in the Northern Cape Province of South Africa. The study formed part of the Environmental Impact Assessment process as

prescribed in the National Environmental Management Act (NEMA) of 1998 and its subsequent amendments.

- **Balmoral EIA:** The study involved undertaking a socio-economic impact assessment as an input into a Basic Impact Assessment Study for the proposed Balmoral X5 Township Development in the Ekurhuleni Metropolitan Municipality (EMM).
- **Green Building Market Entry Study:** The Embassy of the Kingdom of the Netherlands in Pretoria appointed Urban-Econ Development Economists to undertake a market entry study for the Green Building industry of South Africa. The document was compiled for the purpose of guiding the existing or prospective Dutch companies in expanding or involving themselves in the South African Green Building industry. The report contained information on the policy and regulatory environment that drives the development of this sector in the country and the broad overview of the status of the construction industry with the focus on the green building industry. The document also encompassed information on the state of development and industry maturity of selected green building sub-sectors that are aligned with the expertise of the Dutch companies. Information on doing business in South Africa as far as procurement and tendering practices, business funding and other support offered by South Africa and Netherlands was also provided.
- **Royal Bafokeng Mining Procurement Study:** The study business opportunities that can be established in the area leading to the localisation of mining inputs. It was based on a comprehensive assessment of the selected mine's contract-based procurement practices.
- **Ventersburg Business Development Concept:** The study focused on the identification of business development opportunities that could be pursued in the town of Ventersburg based on the traffic derived in the area from the N1 highway and other regional roads. The study involved a comprehensive assessment of the target markets induced by traffic, economic base of the area, current business offerings and derived opportunities. It concluded with a presentation of business development concept scenarios and associated socio-economic benefits.
- **Northern Cape Renewable Energy Strategy:** Urban-Econ Development Economists with a support from EScience Associates and Centre for Renewable and Sustainable Energy Studies (CRSES) was appointed to develop a renewable energy strategy for the Northern Cape. The objective of the study was to undertake a situational assessment of the Northern Cape economy to identify the opportunities and constraints with respect to renewable energy development, and accordingly to formulate a plan to unlock the existing potential of the province to harness renewable energy to the benefit of its communities and economy and to position the province to attract a maximum share of investment under the IRP2010 Renewable Energy Target and beyond.
- **The localisation potential of Photovoltaics and a strategy to support large scale roll-out in South Africa:** A consortium comprising of EScience Associates, Urban-Econ Development Economists and Chris Ahlfeldt (the project team was appointed to undertake the study on the localisation potential of solar PV. The specific objectives of the study included profiling of the industry, analysis of the PV industry value chain, and development of the strategy for the future roll-out of the industry in the country.
- **Feasibility study into establishing CSP component manufacturing facilities in South Africa:** The Industrial Development Corporation (the IDC) has commissioned Urban-Econ Development Economists supported by EScience Associates to undertake a feasibility study to determine the viability of the establishment of a manufacturing facility of CSP modules and components in South Africa.
- **Eskom CSP Macro-Economic Impact Assessment:** Eskom CSP (Solar 1) Macroeconomic Impact Assessment: The study involved the identification of potential localisation opportunities for various components of the project and modelling of the socio-economic impacts.

- **Proposed Exxaro IPP Coal-Powered Power Station near Lephalale, Limpopo Scoping Inputs:** Urban-Econ Development Economists was appointed to undertake a Socio-Economic Scoping Study and Land Use Impact Study for the proposed Exxaro coal-powered power station near the town of Lephalale, in the Limpopo province.
- **Mafube Nooitgedacht and Wildfontein EIA/EMP Sustainable Development Investigation Study:** Urban-Econ Development Economist was appointed to undertake an investigation into sustainable development options associated with the proposed project. The results of this study aimed at informing the decision makers of socio-economic trade-offs related to each option analysed and the most preferred alternative.
- **Thaba Metsi Sustainable Development Investigation Study:** The objective of the Thabametsi Project is to mine coal via opencast and underground mining methods for supply to the Independent Power Producer (IPP) coal-fired power station, to be developed by Exxaro north of the proposed Thabametsi project. Urban-Econ Development Economists provided a specialist input into the sustainable development Investigation that aimed to quantify and assess various options associated with the development and post-mining land uses that formed part of an input into the EIA report.
- **Eskom Sere Wind (WEF1) Macro-Economic Impact Assessment:** The project entailed the strategic assessment of the proposed facility on the macroeconomic situation with respect to the impact on the balance of payments, supply of energy, demand for water, and achievement of strategic government objectives. It also entailed the assessment of the proposed project on the regional and local economies.
- **Socio-Economic and Economic Impact Assessment Studies for Renewable Energy Projects** conducted as part of the Environmental Impact Assessment Processes
 - Arriesfontein Solar Energy Park near Danielskuil in the Northern Cape (100 MW CSP-Tower facility and 225 MW PV solar facility)
 - Humansrus Solar Energy Facility near Postmasburg in the Northern Cape (100 MW CSP-Tower facility)
 - Rooipunt Solar Energy Park near Upington in the Northern Cape (100 MW CSP-Tower facility and 215 MW PV solar facility)
 - Farm 198 PV Solar Energy Facility north of Kimberley in the Northern Cape (210 MW PV solar facility)
 - Wag'nbiekiespan PV Solar Energy Facility near Boshof, the Free State Province (75 MW PV solar facility)
- **Energy-Related Proposals Evaluation for the Department of Science and Technology:** Urban-Econ Development Economists was appointed to undertake an evaluation of six energy-related proposals submitted to the DST SBS. The objective of the evaluation is to advise the Department on whether the projects described in the proposals should be funded or not. The assessment takes into account operational and financial feasibility of projects, alignment thereof with government objectives, economic benefits derived from the project, ability of the organisations to implement the projects successfully and a risk assessment. The project also involves the development of a decision framework on the basis of a Multi-Criteria Decision Method that will be used to compare proposals and determine the one that are not only suitable for funding but those that should be prioritised above others.
- **Independent evaluation of the Wireless Mesh Network in Government Broadband:** Urban-Econ Development Economists was appointed to undertake an independent evaluation of the Community Wireless Mesh Networks in the Government Broadband project. Urban-Econ's responsibility is to evaluate the progress of the project to this date and provide recommendations that can be implemented to improve its design and execution.
- **Department of Science and Technology Economic Analysis Model:** Urban-Econ was appointed by the Department of Science and Technology (DST) to assist them in developing a

decision-making framework that would allow them to evaluate various proposals from an economic perspective and identify the ones that would create the largest economic benefits.

- **Eskom Ariadne-Eros Power Lines Economic and Agricultural Impact Assessment:** Urban-Econ was appointed to undertake an Agricultural Potential and Economic Impact Assessments for the proposed Ariadne-Eros transmission power line, and expansion and upgrade of the related substations in KwaZulu-Natal.
 - **Eskom Ingula Pumped Storage Scheme Regional Economic Impact Assessment:** The purpose of the study was to present an assessment of socio-economic impact of the Ingula Pumped Storage Scheme on the national and regional economies.
 - **Gauteng Infrastructure Renewal and Investment Plan (GIRIP):** the study involved the formulation of an infrastructure and renewal plan up until 2025 that would transform Gauteng into a competitive Global City-Region. As part of the study a regional model with necessary demographic and economic projects was developed that assisted in identifying future infrastructural needs in the Province.
 - **De Hoop Dam Economic Impacts Monitoring Framework:** Urban-Econ was approached to develop and set up an integrated and coherent monitoring and evaluation reporting system which will primarily be based on a regional impact assessment model framework to monitor and evaluate the regional socio-economic impacts due to the development of the De Hoop dam
 - **North West Cluster Performance Analyses:** Urban-Econ was appointed by the North West Office of the Premier to undertake the analyses of statistics tables for six clusters (Human Resource Development, Physical Assets, Resource Base, Governance and Protection, Economic, and Social), identify areas that require interventions, and proposes possible solutions to address the key challenges.
 - **Mopani Investment Strategy:** Urban-Econ Development Economists was appointed by the Mopani District Municipality to formulate an investment strategy for the region with a focus of promoting integrated and sustainable development in the local economy.
 - **Socio-Economic Impact Assessment Of The Proposed Route Operator Business In Mpumalanga:** The project entailed assisting with the preparation of the response to the Request for Applications in respect of Limited Payout Machine Licences in the Mpumalanga Province. The assistance requested encompassed a macro-level socio-economic analysis of the proposed route operator business in Mpumalanga with a focus on: (a) benefits to the economy in terms of gross geographical product ("GGP"), employment creation, increased household income, skills development, and small, medium, micro enterprise ("SMME") development and (b) potential social impact of gaming in the Province.
 - **N3 Highway Economic Impact Assessment:** Urban-Econ was appointed to determine the Socio-Economic Impact of the proposed re-routing of the N3 highway around Harrismith and the current link with the N5 Route towards Lesotho and Mangaung.
 - **The Mandela Bay Precinct Economic Impact Assessment:** The study entailed conducting an economic impact assessment of the proposed Mandela Bay Precinct Development in Port Elizabeth. The proposed project was a mixed use development with the main component being a Regional Shopping Centre that will be surrounded by high density residential property, filling stations, light industrial space, a hospital, a hotel, and office space.
-

-
- **The City of Windhoek Draft SME Policy:** Urban-Econ was appointed by the City of Windhoek (COW) Local Authority to develop a Draft SME Development Policy Directive to guide future SME promotion and development in the City of Windhoek
 - **Harrismith Logistics Hub Impact Assessment:** Urban-Econ Development Economists was appointed to undertake a rapid economic impact assessment study of the proposed Harrismith Freight Logistics Hub (“HLH”). The aim of the study was to determine potential benefits that could be created by the HLH in terms of unlocking the latent development of the area. This technical memorandum presents the results of the study.
 - **Megamall Economic Impact Assessment:** Urban-Econ was requested to undertake an economic impact study for the Megamall project to be developed in the Mogale City Local Municipality. The aim of the study was to determine the potential economic impacts emanating from the proposed development. This study involved assessment of socio-economic impacts the proposed project could have on the local economy which could be used in application for funding from commercial banks and government.
 - **Coega Ridge Economic and Social Impact Assessments:** Urban-Econ was appointed to undertake economic and social impact assessment of the proposed Coega Ridge development. The aim of the development was to create a unique and sustainable residential enclave encompassing a “live, work, play, and shop” environment and comprising such components as affordable housing, shopping centre, office park, industrial park, community and social facilities, bulk service infrastructure, and public open space.
 - **Amanzi Economic and Social Impact Assessments:** Urban-Econ was requested to undertake an economic and social impact studies for the proposed Amanzi Estate that included the original homestead of Sir Percy Fitzpatrick, author of Jock of the Bushveld
 - **Limpopo Industrial Parks Resuscitation Assessment:** Urban-Econ was appointed to assess the feasibility of resuscitation of the selected industrial parks in the Limpopo Province. Study included analysis of the economic potential of the selected areas, development of scenarios and formulation of recommendations. Managed the team of sub-consultants.
 - **North West PGDS Monitor 2007:** the study encompasses a comprehensive analysis and projections of the achievement of the PGDS targets, reviewing the performance of the Working Groups, and providing recommendations regarding actions needed to be taken to address the shortfalls.
 - **Sedibelo Economic Impact Assessment:** The study involved conducting a economic impact assessment of the proposed development utilising an Input/Output model.
 - **Mooifontein Coal Mine Comparative Analysis, Mpumalanga:** Urban-Econ Development Economists were appointed to undertake a sustainable development investigation exercise that includes a comparative economic analysis between the status quo, i.e. farming, and an alternative land use, i.e. mining. The study made use of the economic modelling techniques to estimate the contribution of the current activities towards the country's economy and the expected contribution of the proposed scenario. The impacts were calculated for a period of 100 years and compared to identify the most beneficial scenario from an economic perspective.
 - **Hanglip Sustainability Model:** Urban-Econ was appointed to develop a model that would have assisted the decision makers in identifying the most preferred alternative/s for the Hanglip Development. The model was based on the multi-criteria decision-making process.
-

-
- **Emalahleni Investment Incentive Package:** Urban-Econ was appointed by the Emalahleni Local Municipality to update the Investment Incentive Package for the Emalahleni Local Municipality.
 - **Eastern Cape Industrial Sector Study:** Urban-Econ EC was appointed by the Eastern Cape Socio-Economic Consultative Council (ECSECC) to undertake an industrial sector study for the Eastern Cape Province. The study is envisioned to provide inputs to the Provincial Industrial Strategy that is currently being prepared. The focus of the strategy is on provision of support to the sectors with the potential for job creation in the Province. In this context, this study aims at identifying the sectors that have the highest potential for uplifting the second economy in the Province and highlighting their growth barriers.
 - **Socio-Economic Impact Assessment of the Proposed New Eskom Power Stations in the Witbank Geographical Area and Northern Free State:** The study involved conducting a socio-economic impact assessment of the proposed developments utilising an Input/Output model.
 - **Sedibeng Investment Incentive Package:** The study encompasses a formulation of an incentive package that would enhance development and investment in the area, as well as promote economic growth. A comprehensive socio-economic analysis of the Sedibeng DM and its Local Municipalities, including growth potential was performed.
 - **North West Sustainable Development Indicators Pilot Project:** After completing the North West Sustainable Development Indicators, Urban-Econ was appointed to execute of the pilot project of population the framework.
 - **North West Sustainable Development Indicators:** Urban-Econ Development Economists have been appointed by the North West Province's Office of the Premier to formulate a Sustainable Development Indicator Framework for the North West Provincial Administration. The purpose of the framework is to assist the provincial government authority in the monitoring and evaluation of their progress towards achieving sustainable growth and development.
 - **Polokwane Trade Hub:** Urban-Econ Development Economists, assisted by Nyeleti Consulting Engineering, were appointed by Polokwane Municipality to undertake a Polokwane Trade Hub feasibility study. The feasibility study included investigation of the potential of Polokwane to develop into a regional trade, implications associated with its development, and the initiatives, including programmes and projects, that need to be implemented to realise the vision of Polokwane as a regional trade hub.
 - **Mpumalanga Job Creation Budget:** The project involved an assessment of the provincial budget with respect to its impact on job creation and identification of opportunities to enhance sustainable job creation in the Province.
 - **Joburg BPO Zone:** Urban-Econ was appointed to provide an urban-economic rationale and motivation for the selection of a BPO Precinct in the Joburg Inner City.
 - **The North West Barometer 2006: Economic Module Update.** Urban-Econ Development Economists have been appointed by the North West Province's Office of the Premier to formulate a Sustainable Development Indicator Framework for the North West Provincial Administration. This report details the project roll-out plan and project progress to date.
 - **Bekkersdal Skills and Entrepreneurship Development Strategy.** The Bekkersdal Skills and Entrepreneurship Development Strategy provides the reader with thorough data on the existing pool of enterprises and entrepreneurs, services and products; and existing skills in
-

Bekkersdal, which can be utilized by public and private entities. The document includes Skills Audit and Business Audit Databases in Access format.

- **Baralink economic and market study.** Urban-Econ: Development Economists have been appointed by Urban Dynamics to undertake an economic and market study of four areas, namely, Baralink, JP's Town, Orange Farm, and Kwadzudza; and provide the feedback on potential economic activates that can be introduced to the area in regard to promotion of sustainable livelihoods. This study forms a part of a more comprehensive analysis of the abovementioned areas, the purpose of which is to compile a strategy for sustainable housing development, according to the new housing policy, in different regions of Johannesburg Metropolitan area.
 - **Business Improvement District Strategy for Bekkersdal.** Due to the low levels of consumer and business confidence in the Bekkersdal CBD, this project required the formulation of a strategy for the establishment and implementation of a BID for the CBD area of Bekkersdal.
 - **Expansion of Holcim Cement Plant: Economic Impact Assessment.** Urban-Econ has been appointed to assess economic impact of the expansion of Holcim Cement plant in Roodepoort.
 - **Madiba Bay Leisure Park Regional Mall Market Study.** Urban-Econ: Development Economists were commissioned by East Cape Showcase (Ltd.) to conduct empirical market research and compile a specialist market study for the proposed regional retail mall within the North Gate precinct of the Madiba Bay Leisure Park project.
 - **Social and Labour Plan for Brandbach Mine, Cullinan.** Mining industry is a cornerstone of the South African economy. So far it has experienced rises and downfalls. In order to insure sustainable development of the industry in the future along with the implementation of national visions on skills development, poverty alleviation, BEE and employment creation, the government has introduced a Skills and Labour Plan, preparation of which became a prerequisite for every mine in the country. Urban-Econ's suster company, Econo-Mine, has been appointed to develop such plan for the Brandbach Mine in Cullinan.
 - **NIPS for POPS Economic Impact:** Urban-Econ has been appointed as part of a specialist team to undertake the economic impact assessment of Infrastructure related to Persistent Organic Pollutants (POPS) in South Africa. The focus of the assessment is to formulate clear strategic guidelines related to the impacts of POPS and or their removal/eradication for the Development of National Implementation Plans (NIPS) of the Stockholm Convention on POPS.
-

Name	Veronique Mary Evans
Profession	Environmentalist
Name of Firm	SiVEST SA (Pty) Ltd
Present Appointment	Graduate Environmental Consultant
Years with Firm	Joined August 2012
Date of Birth	9 November 1990
ID Number	9011091040087
Nationality	South African



Education

St Peters College, Sunninghill, Johannesburg, South Africa Matriculated 2008

Professional Qualifications

MSc - Environmental Science in Conservation and Ecology, University of the Witwatersrand (Current)
 BSc (Hons) - Environmental Science in Conservation and Ecology, University of the Witwatersrand,
 (Completion date: November 2013).

Research Proposal: Selective herbivore use of post-fire grass ash in a Highveld grassland.

BSc - Environmental Conservation and Ecology, Zoology and Geography, University of the
 Witwatersrand, (Completion date: November 2012)

Academic Awards

National Research Foundation Honours: Innovation Scholarship - 2013

Employment Record

Aug 2012 - date	SiVEST SA (Pty) Ltd - Graduate Environmental Consultant
June 2011 - Aug 2012	Arcus GIBB – Junior Environmental Scientist, Internship

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Fluent	Fluent	Fluent
Afrikaans	Fair	Good	Fair

Key Experience

Veronique joined SiVEST in August 2012 as is based in the Johannesburg office in the capacity of a Graduate Environmental Consultant.

Veronique has been involved extensively in the public participation aspect on numerous projects including environmental impact assessments, water use license applications and amendment impact assessments. She has been involved in the compilation of Environmental Impact Assessment (EIA) and Basic Assessments (BA) and Environmental Management Plans primarily related to energy generation and electrical distribution projects. She also assists and undertakes visual impact assessments, by making use of ArcGIS technology and undertaking field surveys.

Previously worked for Arcus GIBB (Pty) Ltd and assisted with the compilation of Basic Assessments (BA) and Environmental Impact Assessments (EIA). She also performed Environmental Control officer work and assisted in Public Participation meetings and the overall public participation process.

She is proficient in Microsoft Office, Microsoft Excel, Microsoft PowerPoint, ArcGIS, Maximiser and Adobe.

Through her time at SIVEST, Veronique has acquired the following skills:

- Strong proposal and report writing skills;
- Report compilation skills for Environmental Impact Assessments and Basic Assessments;
- Report compilation skills for Environmental Management Plans/Programmes;
- Strong public participation skills and the use of Maximiser; and
- Compilation and conducting Visual Impact Assessments.

Key experience includes:

- Environmental Impact Assessment (EIA) of small, medium and large-scale infrastructure projects,
- Basic Assessment (BA), of small, medium and large-scale infrastructure projects,
- Environmental Management Plans (EMPr), of small, medium and large-scale infrastructure projects,
- Public Participation Process,
- Proposal and tender compilation,
- Various site inspections, and
- Visual Impact Assessments.

Project Experience

SIVEST GRADUATE ENVIRONMENTAL CONSULTANT AUG 2012 TO DATE

ENVIRONMENTAL MANAGEMENT AND IMPACT ASSESSMENT

Responsible for task management to ensure that the EIA/BA process was implemented correctly, on schedule, the EIA/BA process includes applications, baseline assessments, EIA/BA reports and Environmental Management Plans (EMPr).

- Basic Assessment (BA) and Environmental management Plan (EMPr) for the proposed construction of a 132kv Power Line, Substation and the extension of Homestead Substation associated with the Concentrating Photovoltaic (CPV) / Photovoltaic (Pv) Plant (PV 3) on the Farm Droogfontein in Kimberley, Northern Cape Province (2012/2013);
- Basic Assessment (BA) and Environmental Management Programme (EMPr) for the Proposed Mookodi Integration Phase 2 132kv Power Lines and Ganyesa Substation Near Vryburg, North West Province (2012);
- Basic Assessment (BA) for the upgrade of the Silver Lakes outfall sewer pipeline (2012);
- Basic Assessment (BA) and Environmental Management Programme (EMPr) for the Proposed construction of the Sheepmoor traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, Mpumalanga Province (2013);
- Basic Assessment (BA) and Environmental Management Programme (EMPr) for the Proposed rebuild of the 88kV power line from Uitkoms substation to Antra T-off, Mpumalanga Province (2013);
- EIA for the proposed 25 MW Community Wind Farm in St Helena Bay, Western Cape Province. The EIA includes the scoping process and detailed environmental impact assessment. The project includes detailed specialist studies such as social, visual and biophysical as well as a full public participation process. Junior Environmental Scientist. Just Energy, 2011 -2012, closed.
- EIA for the proposed 300 MW Caledon Wind Farm, Western Cape Province. The EIA includes the scoping process and detailed environmental impact assessment. The project includes

- detailed specialist studies such as social, visual and biophysical as well as a full public participation process. Junior Environmental Scientist, GIBB. Caledon Wind, 2011 – 2012, closed.
- EIA and EMP for the proposed South African Nuclear Energy Corporation (Necsa) Dedicated Isotope Production Reactor (DIPR) at the Pelindaba Site near Hartebeespoort in the North West Province. The EIA includes the scoping process and detailed environmental impact assessment. The project includes detailed specialist studies such as social, visual and air quality as well as a full public participation process. Junior Environmental Scientist, GIBB. Necsa, 2011 -current.
 - BA for the proposed 25 MW Community Wind Farm in St Helena Bay, Western Cape Province. The BA includes the scoping process and detailed environmental impact assessments. The project includes detailed specialist studies such as social, visual and biophysical as well as a full public participation process. Junior Environmental Scientist, GIBB. Just Energy, 2012 - current.

PUBLIC PARTICIPATION

Responsible for task co-ordination of the Public Participation Process, involving the compilation of Public Participation documentation and reports, Comment and Response Reports, arranging and coordinating public meetings, management of Interested and Affected Party (I&AP) database's and day-to-day solicitation of comments and responses to and from I&APs. Projects included:

- Public Participation Process for the Proposed construction of the Sheepmoor traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, Mpumalanga Province (2013/2014);
- Public Participation Process for the Proposed rebuild of the 88kV power line from Uitkoms substation to Antra T-off, Mpumalanga Province (2013/2014);
- Public Participation Process for the proposed construction of two solar photovoltaic (PV) plants on portion 6 (portion of portion 5) of the farm Spes Bona 2355 district in Bloemfontein, Free State (2013/2014);
- Public Participation Process for the proposed Construction of an 88kv power line from Klevebank Substation (Diepsloot) to Dalkeith Substation (Cosmo City), Gauteng Province (2013);
- Public Participation Process for the EIA and EMP for the proposed Eastside Junction mixed use development near Delmas, Mpumalanga Province (2013/2014);
- Public Participation Process for the Water use licence application for the proposed construction of an 11kv underground power cable at Ga-rankuwa Substation, Gauteng Province (2013/2014);
- Public Participation Process for the proposed Mookodi Integration Project Environmental Impact Assessment (2012/2013);
- Public Participation Process for the proposed for the Proposed Mookodi Integration Phase 2 132kv Power Lines and Ganyesa Substation Near Vryburg, North West Province(2011/2012)
- Public Participation Process for the proposed Environmental Impact Assessment of a wind farm near Noupoot, Northern Province (2012/2013);
- Public Participation Process for the proposed Renosterberg Wind Farm and PV Plant near De Aar, Northern Cape Province (2012);
- Public Participation Process for the proposed installation of a 500m³ Bulk Storage Fuel Oil Tank at Grootvlei Power Station, Mpumalanga Province (2011/2012);
- Public Participation Process for the proposed development of a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province (2012);
- Proposed development of a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province (2012);
- Proposed development of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province (2012);
- Public Participation Process for the proposed Frankfort Strengthening Project: 88kV power line from Heilbron (via Frankfort) to Villiers, Free State Province (2013),
- Public Participation Process for the proposed Construction of a 132KV Power Line Associated with the Redstone Solar Thermal Energy Plant in the Northern Cape Province. (2012);
- Public Participation Process for the proposed for the Proposed Development of a Solar Photovoltaic (PV) Power Plant and Wind Farm near De Aar, Northern Cape Province.

- Public Participation Process for the proposed construction of a 132kv Power Line Associated with the Concentrating Photovoltaic (CPV) / Photovoltaic (PV) Solar Infrastructure (PV 2) from the Farm Droogfontein to Eskom's Existing Macfarlane Substation north of Kimberley, Northern Cape Province (2012);
- Public Participation Process for the proposed Moloto Development Corridor (MDC) Project Located between the City of Tshwane Local Municipality in Gauteng Province and Groblersdal, Limpopo Province, Traversing Mpumalanga Province (2013)
- Environmental Impact Assessment (EIA) for the Proposed Eastside Junction Mixed Use Development near Delmas, Mpumalanga Province (2013)
- Public Participation Process for the proposed Construction of a 19mw Photovoltaic (PV) Power Plant on the remainder of Farm 267 near Arriesfontein, Northern Cape Province (2011/2012);
- Public Participation Process for the proposed Construction of a 7km 132kv Power Line and Substation near Postmasburg Northern Cape Province (2011/2012);
- Public Participation Process for the proposed Westrand Strengthening Project – 400kv Double Circuit Power Line from Westgate Substation to Hera Substation and Westgate Substation Extension, Gauteng (2012);
- Public Participation Process for the proposed for the development of a Wind Farm and Solar Photovoltaic Power Plant near Loeriesfontein, Northern Cape Province (2012);
- Public Participation Process for the proposed Construction of a Wind Farm near Noupoort, Northern Cape Province (2012)
- Public Participation Process for the proposed Construction of Solar Photovoltaic Facilities near Prieska, Northern Cape Province (2012)
- Public Participation Process for the proposed construction of a 132kv Power Line, Substation and the extension of Homestead Substation associated with the Concentrating Photovoltaic (CPV) / Photovoltaic (Pv) Plant (PV 3) on the Farm Droogfontein in Kimberley, Northern Cape Province (2012/2013)
- Public Participation Process for the proposed Water Use License for the Frankfort Strengthening Project: 88kV power line from Heilbron (via Frankfort) to Villiers, Free State Province (2013);
- Public Participation Process for the proposed Water Use License for an 88kV power line from Klevebank Substation to Dalkeith Substation, Gauteng Province (2013);
- Public Participation Process for the proposed Water Use License for an 11kV power line from Zola Substation to Civic Substation, Gauteng Province (2013).
- Public Participation Process for the proposed 25 MW Community Wind Farm in St Helena Bay, Western Cape Province. Junior Environmental Scientist, GIBB (2011);
- Public Participation Process for the proposed 300 MW Caledon Wind Farm, Western Cape Province. Junior Environmental Scientist, GIBB (2011);
- Public Participation Process for the proposed Dedicated Isotope Production Reactor (DIPR) for the South African Nuclear Energy Corporation (NECSA) at Pelindaba, North West Province. Junior Environmental Scientist, GIBB (2011).

WETLAND IMPACT ASSESSMENT

Field assistant for wetland impact assessments, wetland and riparian delineations:

- Construction of an 88kV Power Line at Lochvaal Kudu in the Emfuleni Municipality, Gauteng Province, South Africa: Surface Water Impact Assessment and Rehabilitation Plan (2013);
- Construction of the Sheepmoor traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, Mpumalanga Province (2013)
- Rebuild of the 88kV power line from Uitkoms substation to Antra T-off, Mpumalanga Province (2013)

VISUAL IMPACT ASSESSMENT

- Visual Impact Assessment for the Proposed Development of a Solar Photovoltaic (PV) Power Plant and Wind Farm near De Aar, Northern Cape Province.

- Visual Impact Assessment for the Proposed construction of the Sheepmoor traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, Mpumalanga Province
- Visual Impact Assessment for the Proposed rebuild of the 88kV power line from Uitkoms substation to Antra T-off, Mpumalanga Province

ENVIRONMENTAL CONTROL OFFICER

- Environmental Control officer Services for the Orange Farm road upgrade project, Gauteng Province. ECO Junior Environmental Scientist, GIBB (2012).

CURRICULUM VITAE

Name : Callie Fouche
Date : 15 July 2016

Contact Details

Office Address :

Private Bag x13
Lynn East
Pretoria
0039

Contact N^o: 012 6617899 (H)
012 8081730 (W)
082 5559551 (Cell)

Email Address: callie@itc-services.com

Employer Detail

Employer : ITC Services
Plot 44
Nieshout Street
Kameeldrift-East
Position : Technical Director

Profile

I was born on the 3rd of January 1964 in Coligny, matriculated in 1981 from Hoërskool Dirkie Uys in Durban. I have completed National Service during 1982 and 1983 at 2 Special Service Battalion in Zeerust. Completed National Diploma T1 and T2 at Pretoria Technicon during 1984. I joined Armscor Quality engineering in 1985 and completed T3 and T4 in the period 1986 – 1987. In my term at Armscor, I worked in the EMC division from 1986 to 1989 under the supervision of Sarel van der Merwe. I have joined PMP Electronics R&D division beginning of 1989 and ITC Services as EMC Test Technician later that same year. I was promoted to Senior Test Engineer in 1994 and was appointed as Technical Director (current position) in 1997.

Education

Qualification	Topic	Education Institute	Duration
National Higher Diploma Electrical Engineering	Electronics and electrical engineering.	Pretoria Technicon	1984 - 1987
Electrician	Electrical	Services sector education and training authority	30/07/2012

Short Course Attendance

Some courses attended that are considered relevant in this context, include:

Continuing Engineering Education and Short Courses	Presented by	Date
Quality A	Armscor	1985
Practical EMI Fixes	Violette Engineering	1989
RF Metrology	Technicon Pretoria	1992
EMC Management and Design for a Project	ICT	1994
EMC Testing	ERA	1995
EMC In Telecommunications	Parker EMC engineering and ITC Services	1996
Electrical Earth Design and Earth Measurements	Exoweld	1997
Lightning Protection and Earthing of Electronic Systems	Wits University	1998
EMC and Cosmic Radiation	SAAB Avionics (Sweden)	2002
Technical Assessor Course	SANAS	2014

Professional Status

Professional Body	Nature of Involvement	Duration
IEC Technical Committee for EMC	Member of the IEC TC73	1992 – present.
EMC Specialist Technical Committee	Member SANAS STC	2002 – present.
IEC Technical Committee TC106	Mirror committee chairman	2010 - present
SANAS	Technical Assessor	2014 - present

Work Experience

Position held and Department	Duration	Primary Responsibilities	Major Achievements
Armcor Quality Engineering Technician in Training – Electrical Division.	Jan 1984 to Dec 1985	Testing of various military equipment against electrical and environmental specifications	<ul style="list-style-type: none"> • Successful completed T1 and T2
Armcor Quality Engineering Test Technician - EMC Division	Jan 1986 to Jun 1989	My duties included EMC testing of military equipment and interpretation of results under the supervision of Sarel van der Merwe	<ul style="list-style-type: none"> • Successful completed T3 and T4
PMP Electronics R&D division Technician	June 1989 to Aug 1989	I was involved in development of the intelligent ammunition project	<ul style="list-style-type: none"> •
ITC Services Test Technician	Sept 1989 to Nov 1994	My duties included building up of the EMC test laboratory and to perform EMC testing of military and commercial equipment, interpretation of results and consult clients on corrective actions under the supervision of Sarel van der Merwe	<ul style="list-style-type: none"> • Successful completion of several projects.
ITC Services Senior Test Engineer	Dec 1994 to Nov 1997	EMC Field Testing, Interference problem investigations. Consulting and Theoretical EMC analysis of equipment and facility performance.	<ul style="list-style-type: none"> • Investigations into plant interference and problem solving for Ashanti Goldfields in Ghana • Designed the power line filters used by SAAF in the SAAF HQ • Integrated COMSEC automated Tests system for SACSA
ITC Services Technical Director	Dec 1997 to present.	EMC Field Testing, Interference problem investigations. Consulting and Theoretical EMC analysis of equipment and facility performance. Design and compilation of EMC Control plans. Power quality investigations Shielded enclosure design	<ul style="list-style-type: none"> • Design quality plan and achieve ISO/IEC 17025 for the laboratory • Power analysis and implementation of corrective actions for Siemens and Vodacom in African countries • Power filter design and manage manufacturing for UAV program. • Responsible for EMC management for the Euro fighter helmet tracker system. (EMC Control Plan, EMC Design Reviews, EMC Test Plan) • Successful completion of Nuclear hardening of the Euro fighter helmet tracker

system in Germany

- Designed magnetic shielding for export military vehicle project. Manage the shielding manufacturing
- C-band satellite earth station interference evaluations
- EMC Consultant for multinational vehicle project
- Shielded enclosure design - SKA trailers
- EMC Design guidance for periscope development.
- Manage KAPB shielded room installation and perform SE Tests
- Consultation on renewable energy projects and their impact on SKA
- Perform path loss tests for windfarm projects in the Northern Cape
- Perform maintenance activities on the shielded enclosures at the KAPB.
- Presented a paper at the IEEE Conference 2014

Ruan Fourie

Date of Birth: 16 June 1990
 Designation: Innovation & Sustainable Development - Economist
 Profession: Development Economist
 Specialisation: Economics & Research
 Years within Firm: 1 Year
 Nationality: RSA
 Years of Experience: 1 Year
 HDI Status: White Male



Education:

University of Pretoria - 2012	BCom(Economics)
University of South Africa - 2015	BComHons(Economics)

Professional Membership:

SAPOA (Urban-Econ Development Economists (Pty) Ltd)

Language Proficiency:	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Work Experience:

2015- current	Urban-Econ Development Economists (Pty) Ltd
---------------	---

Key Qualification:

Ruan Fourie has wide-ranging knowledge and experience in economic development analyses. His special field of interest relates to the development of the economy through innovation and new technologies to ensure a sustainable growth. This has included work in sustainable energy and industry development in sustainable and environmentally friendly means. He has been involved in various economic development studies, which incorporated liaison with communities to ensure local involvement. His skills have been applied in numerous socio-economic impact assessment, economic development, feasibility, infrastructure-related and database development studies. Ruan has been involved in interviews with various stakeholders from private farm owners to various institutions, such as the dti, South African Post Office, DBSA, GIZ, SALGA, Department of Energy, Department of Science and Technology, SAPOA, SANEDI, Department of Environmental Affairs, etc. Correspondence with these institutions has developed his networking and communicative skills and ensured that his knowledge is accumulated in new industries outside his educational background.

Experience Record

Project: Year: Location: Client: Project Features: Position held: Activities Performed:	SANEDI EE Policy Review and Alignment 2015 South Africa Department of Energy and SANEDI Policy review and alignment of energy efficiency in the building sector Developmental Economist Conducting primary and secondary research. Analysis of said research as well as stakeholder engagement for better understanding of the subject matter. Report writing after completion of analysis.
Project: Year: Location: Client: Project Features:	City of Johannesburg Load-shedding Impact Assessment Study 2015 South Africa, City of Johannesburg City of Johannesburg Municipality Investigating and report on how load-shedding affects different economic sectors.

Position held:	Developmental Economist
Activities Performed:	Conducting primary and secondary research which include the categorisation of various business entities into their various industrial sectors according to StatsSA. Creating database in excel for use in data analysis for final report writing. Final report writing.
Project:	Nkangala Fly-ash Industry Feasibility and Development
Year:	2015
Location:	Nkangala District, Mpumalanga, South Africa
Client:	Nkangala District Municipality
Project Features:	Feasibility study
Position held:	Developmental Economist
Activities Performed:	Primary and secondary research collection as well as various stakeholder and specialists engagement for better understanding of the subject matter. Analysing information for final report writing and finally reporting on findings to relevant client.

Other Projects:

- Doornhoek Fluorpar Mine Socio-Economic Impact Assessment Study
- Philco Wind Energy Facility Socio-Economic Impact Assessment Study
- Kalkaar Power Lines Socio-Economic Impact Assessment Study
- Tshivhaso Coal-Fired Power Station Socio-Economic Impact Assessment Study
- Eureka and Aletta solar PV facilitates Socio-Economic Impact Assessment Studies
- Sibanya Gold Economic Impact Assessment Study
- IDC Energy Efficiency Project: The project encompassed profiling the various energy efficiency technologies available locally and abroad in an attempt to better understand the current and future market. This would allow the client to make informed decisions on funding and potential backing.
- Dti Technology Commercialisation Project: The project encompassed studying the complete process of technology commercialisation from the idea phase, through development and finally unto the end market. Information gathered could then be used to highlight current gaps and make recommendations that would address said gaps.

Countries of Work Experience:

- South Africa

References:

- Judex Oberholzer Email: judex@urban-econ.com Cell Phone: +27 (0) 82 770 8770
- Elena Broughton Email: elena@urban-econ.com Cell Phone: +27 (0) 82 463 2325

Contact Details:

- Ruan Fourie Email: fourie@urban-econ.com Cell Phone: +27 (0) 82 387 5735

Wouter Fourie
Professional Heritage Specialist and Director PGS Heritage

Summary of Experience

Specialised expertise in Cultural Resource Management and Heritage Impact Assessment Management, Archaeology, Anthropology, Applicable survey methods, Fieldwork and project management, Geographic Information Systems, including *inter alia*:

Involvement with various Heritage Impact Assessments, within South Africa, including:

- Archaeological Walkdowns for various projects
- Phase 2 Heritage Impact Assessments and EMPs for various projects
- Heritage Impact Assessments for various projects

Iron Age Mitigation Work for various projects, including archaeological excavations and monitoring

Involvement with various Heritage Impact Assessments, outside South Africa, including:

- Heritage Impact Assessments in Democratic Republic of Congo
- Heritage Impact Assessments in Mozambique, Botswana and DRC
- Grave Relocation projects in DRC

Involvement in various grave relocation projects (some of which relocated up to 1000 graves) and grave "rescue" excavations in the various provinces of South Africa

Key Qualifications

BA [Hons] (Cum laude): Archaeology and Geography

BA: Archaeology, Geography and Anthropology

Professional Archaeologist - Association of Southern African Professional Archaeologists (ASAPA) - Professional Member

Accredited Professional Heritage Specialist – Association of Professional Heritage Practitioners (APHP)

CRM Accreditation (ASAPA):

- Principal Investigator - Grave Relocations
- Field Director – Iron Age
- Field Supervisor – Colonial Period and Stone Age

Accredited with Amafa KZN and Eastern Cape PHRA

Key Work Experience

2008- current: Director –Professional Grave Solutions (Pty) Ltd t/a PGS Heritage

2007 – 2008: Project Manager – Matakoma-ARM, Heritage Contracts Unit, University of the Witwatersrand

2005-2007: Director - Professional Grave Solutions (Pty) Ltd

2000-2004: CEO– Matakoma Consultants

1998-2000: Environmental Coordinator – Randfontein Estates Limited. Randfontein, Gauteng

1997-1998: Environmental Officer – Department of Minerals and Energy. Johannesburg, Gauteng

CURRICULUM VITAE

Andrea Gibb

Name Andrea Gibb

Profession Environmental Practitioner

Name of Firm SiVEST SA (Pty) Ltd

Present Appointment Environmental Practitioner and Visual Specialist:
Environmental Division

Years with Firm 6 Years

Date of Birth 29 January 1985

ID Number 8501290020089

Nationality South African



Education

Matriculated 2003, Full Academic Colours, Northcliff High School, Johannesburg, South Africa

Professional Qualifications

BSc (Hons) Environmental Management (University of South Africa 2008-2010)

Coursework: Project Management, Environmental Risk Assessment and Management, Ecological and Social Impact Assessment, Fundamentals of Environmental Science, Impact Mitigation and Management, Integrated Environmental Management Systems & Auditing, Integrated Environmental Management, Research Methodology.

Research Proposal: Golf Courses and the Environment

BSc Landscape Architecture (with distinction) (University of Pretoria 2004-2007)

Coursework: Core modules focused on; design, construction, environmental science, applied sustainability, shifts in world paradigms and ideologies, soil and plant science, environmental history, business law and project management.

Awards: Cave Klapwijk prize for highest average in all modules in the Landscape Architecture programme, ILASA book prize for the best Landscape Architecture student in third year design, Johan Barnard planting design prize for the highest distinction average in any module of plant science.

ArcGIS Desktop 1 (ESRI South Africa December 2010)

Environmental Impact Assessment (EIA) 2014 Legal Regime Workshop (Imbewu 2015)

Employment Record

Aug 2010 – to date SiVEST SA (Pty) Ltd: Environmental Practitioner

Jan 2008 – July 2010 Cave Klapwijk and Associates: Environmental Assistant and Landscape Architectural Technologist

Feb 2006 – Dec 2006 Cave Klapwijk and Associates: Part time student

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Fluent	Fluent	Fluent

Key Experience

Specialising in the field of Environmental Management and Visual Assessment.

Andrea joined SiVEST in August 2010 and holds the position of Environmental Practitioner in the Johannesburg Office. She has 8.5 years' work experience and specialises in managing large scale multifaceted EIAs and Basic Assessment (BAs), primarily related to renewable energy generation and electrical distribution. She also specialises in undertaking visual impact and landscape assessments. She has extensive experience in overseeing public participation and stakeholder engagement processes and has been involved in environmental baseline assessments, fatal flaw / feasibility assessments and environmental negative mapping / sensitivity analyses. From a business and administrative side, Andrea is actively involved in maintaining good client relationships, mentoring junior staff and maintaining the financial performance of the projects she leads.

Skills include:

- Project Management (MS Project)
- Environmental Impact Assessment (EIA)
- Basic Assessment (BA)
- Public Participation Management
- Visual Impact Assessment (VIA)
- Landscape Assessment
- Strategic Environmental Planning
- Documentation / Quality Control
- Project Level Financial Management

Projects Experience

Aug 2010 – to date

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) / BASIC ASSESSMENT (BA)

- EIA for the proposed development of the Tlisitseng 1 and 2 75MW Solar Photovoltaic (PV) Energy Facilities near Lichtenburg, North West Province.
- EIAs for the proposed development of the Sendawo 1, 2, and 3 75MW Solar PV Energy Facilities near Vryburg, North West Province.
- EIA for the proposed construction of the Sendawo Common Collector Substation and power line near Vryburg, North West Province.
- EIA for the proposed construction of the Aletta 140MW Wind Energy Facility near Copperton, Northern Cape Province.
- Application for an Amendment of the Environmental Authorisation (EA) for the proposed construction of the 100MW Limestone Solar Thermal Power Project near Danielskuil, Northern Cape Province.
- Applications for the Amendment of the EAs for the proposed construction of three 75MW solar PV facilities near Prieska, Northern Cape Province.
- Applications for the Amendment of the EAs for the proposed construction of the 75MW Arriesfontein and Wilger Solar Power Plants near Danielskuil, Northern Cape Province.
- Completion and submission of the final EIA report for the proposed Rooipunt PV Solar Power Park Phase 1 and proposed Rooipunt PV Solar Power Park Phase 2 near Upington, Northern Cape Province.
- EIAs for the proposed construction of the Helena 1, 2 and 3 75MW Solar PV Energy Facilities near Copperton, Northern Cape Province.
- EIA for the proposed construction of the Nokukhanya 75MW Solar PV Power Plant near Dennilton, Limpopo Province.
- EIA for the proposed development of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province.

- BA for the proposed construction of two 132kV power lines and associated infrastructure from the Redstone Solar Thermal Power Project site to the Olien MTS near Lime Acres, Northern Cape Province.
- BA for the proposed construction of two 132kV power lines and associated infrastructure from Silverstreams DS to the Olien MTS near Lime Acres, Northern Cape Province.
- BA for the proposed Construction of the SSS1 5MW Solar PV Plant on the Western Part of Portion 6 (Portion of Portion 5) of Farm Spes Bona 2355 near Bloemfontein, Free State Province.
- BA for the proposed Construction of the SSS2 5MW Solar PV Plant on the Eastern Part of Portion 6 (Portion of Portion 5) of Farm Spes Bona 2355 near Bloemfontein, Free State Province.
- BA for the proposed Mookodi Integration Phase 2: Proposed Construction of a 132kV power line from the proposed Bophirima Substation to the existing Schweizer-Reneke Substation, North West Province.
- BA for the proposed Mookodi Integration Phase 2: Proposed Construction of a 132kV power line from the Mookodi Substation to the existing Magopela Substation, North West Province.
- BA for the proposed Mookodi Integration Phase 2: Proposed Construction of the Mookodi - Ganyesa 132kV power line, proposed Ganyesa Substation and Havelock LILO, North West Province.
- Amendment of the Final Environmental Impact Report for the Proposed Mookodi 1 Integration Project near Vryburg, North West Province.
- BA for the proposed 132kV power line and associated infrastructure for the proposed Redstone Solar Thermal Energy Plant near Lime Acres, Northern Cape Province.
- BA for the proposed construction of a 132kV power line and substation associated with the 75MW PV Plant on the Farm Droogfontein (PV 3) in Kimberley, Northern Cape Province.
- BA for the proposed establishment of a Learning and Development Retreat and an Executive Staff and Client Lodge at Mogale's Gate, Gauteng Province.
- Application for an Amendment of the EA to increase the output of the proposed 40MW PV Facility on the farm Mierdam to 75MW, Northern Cape Province.
- BA for the proposed construction of a power line and substation near Postmasburg, Northern Cape Province.
- BA for the proposed West Rand Strengthening Project – 400kV double circuit power line and substation extension in the West Rand, Gauteng.
- EIA for the proposed construction of a wind farm and PV plant near Prieska, Northern Cape Province.
- Public Participation assistance as part of the EIA for the proposed Thyspunt Transmission Lines Integration Project – EIA for the proposed construction of 5 x 400kV transmission power lines between Thyspunt to Port Elizabeth, Eastern Cape Province.
- EIA assistance for the proposed construction of three Solar Power Plants in the Northern Cape Province.
- Public Participation as part of the EIA for the proposed Delareyville Kopela Power Line and Substation, North West Province.
- Public Participation as part of the EIA for the Middelburg Water Reclamation Project, Mpumalanga Province.

VISUAL IMPACT ASSESSMENT (VIA)

- VIA (Scoping Phase) for the proposed construction of a 3000MW Wind Farm and associated infrastructure near Richmond, Northern Cape Province.
- VIA for the proposed construction of a power line and associated infrastructure for the proposed Kalkaar Solar Thermal Power Plant near Kimberley, Free State and Northern Cape Provinces.
- VIA for the proposed construction of a power line and associated infrastructure for the proposed Rooipunt Solar Thermal Power Plant near Upington, Northern Cape Province.
- VIAs (Impact Phase) for the proposed construction of the Sendawo 1, 2 and 3 solar PV energy facilities near Vryburg, North West Province.

-
- VIA (Impact Phase) for the proposed construction of the Sendawo substation and associated power line near Vryburg, North West Province.
 - VIAs (Impact Phase) for the proposed construction of the Tlisitseng 1 and 2 solar PV energy facilities near Lichtenburg, North West Province.
 - VIA for the proposed construction of the Tlisitseng substation and associated 132kV power line near Lichtenburg, North West Province.
 - VIA (Scoping Phase) for the proposed construction of the Sendawo substation and associated power line near Vryburg, North West Province.
 - VIA (Scoping Phase) for the proposed construction of the Sendawo 1, 2 and 3 solar PV energy facilities near Vryburg, North West Province.
 - VIA (Scoping Phase) for the proposed construction of the Tlisitseng 1 and 2 solar PV energy facilities near Lichtenburg, North West Province.
 - Visual recommendations for Phase 1 of the proposed Renishaw Estate Mixed Use Development, KwaZulu-Natal Province.
 - VIA for the proposed Tinley Manor South Banks Development, KwaZulu-Natal Province.
 - VIAs (Impact Phase) for the proposed construction of the Helena 1, 2 and 3 75MW Solar PV Energy Facilities near Copperton, Northern Cape Province.
 - VIA (Scoping Phase) for the proposed construction of the Helena 1, 2 and 3 75MW Solar PV Energy Facilities near Copperton, Northern Cape Province.
 - Visual Due Diligence Report for the possible rapid rail extensions to the Gauteng network, Gauteng Province.
 - Visual Status Quo and Constraints Report for the possible rapid rail extensions to the Gauteng network, Gauteng Province.
 - VIA for the proposed agricultural components of the Integrated Sugar Project in Nsoko, Swaziland.
 - VIA for the proposed Tweespruit to Welroux power lines and substation, Free State Province.
 - VIA for the proposed construction of the Nokukhanya 75MW Solar PV Power Plant near Dennilton, Limpopo Province.
 - VIA (Impact Phase) for the proposed development of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province.
 - VIA for the proposed amendment to the authorised power line route from Hera Substation to Westgate Substation, Gauteng Province.
 - VIA (Impact Phase) for the Eastside Junction Mixed Use Development near Delmas, Mpumalanga Province.
 - VIA for the proposed construction of two 132kV power lines and associated infrastructure from the Redstone Solar Thermal Power Project site to the Olien MTS near Lime Acres, Northern Cape Province.
 - VIA for the proposed construction of two 132kV power lines and associated infrastructure from Silverstreams DS to the Olien MTS near Lime Acres, Northern Cape Province.
 - VIA (Scoping Phase) for the proposed development of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province.
 - VIA for the proposed Rorqual Estate Development near Park Rynie on the South Coast of KwaZulu Natal.
 - VIA (Scoping Phase) for the proposed construction of a Coal-fired Power Station, Coal Mine and Associated Infrastructure near Colenso, KwaZulu-Natal Province.
 - VIA for the proposed Mookodi Integration Phase 2: Proposed Construction of the Mookodi - Ganyesa 132kV power line, proposed Ganyesa Substation and Havelock LILO, North West Province.
 - VIA for the proposed construction of the Duma transmission substation and associated Eskom power lines, KwaZulu-Natal Province.
 - VIA for the proposed construction of the Madlanzini transmission substation and associated Eskom power lines, Mpumalanga Province.
 - VIA for the proposed rebuild of the 88kV power line from Normandie substation to Hlungwane substation, Mpumalanga and KwaZulu-Natal Provinces.
 - VIA for the proposed construction of the Nzalo transmission substation and associated Eskom power lines, KwaZulu-Natal Province.

- VIA for the proposed construction of the Sheepmoor traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, Mpumalanga Province.
- VIA for the proposed rebuild of the 88kV power line from Uitkoms substation to Antra T-off, Mpumalanga Province.
- VIA for the proposed rebuild of the 88kV power line from Umfolozi substation to Eqwasha traction substation including an 88kV turn-in power line to Dabula traction substation, Kwazulu-Natal Province.
- VIA for the proposed construction of the new 88/25kV Vryheid traction substation with two 20MVA transformer bays and a new associated 88kV turn-in power line, KwaZulu-Natal Province.
- VIA for the proposed construction of a 132kV power line and substation associated with the 75MW PV Plant on the Farm Droogfontein (PV 3) in Kimberley, Northern Cape Province.
- VIA (Impact Phase) for the proposed Construction of a Solar PV Power Plant near De Aar, Northern Cape Province.
- VIA for the (Impact Phase) proposed Construction of the Renosterberg Wind Farm near De Aar, Northern Cape Province.
- VIA for the (Impact Phase) proposed Construction of the Renosterberg Solar PV Power Plant near De Aar, Northern Cape Province.
- VIA for the proposed construction of a 132kV power line for the Redstone Thermal Energy Plant near Lime Acres, Northern Cape Province.
- VIA for the proposed Mookodi Integration phase 2 132kV power lines and Ganyesa substation near Vryburg, North West Province.
- VIA for the proposed 132kV power lines associated with the PV Plants on Droogfontein Farm near Kimberley, Northern Cape Province.
- VIA (Scoping phase) for the Eastside Junction Mixed Use Development near Delmas, Mpumalanga Province.
- VIA for the proposed development of a learning and development retreat and an executive and staff lodge at Mogale's Gate, Gauteng Province.
- VIA for the proposed construction of a substation and 88kV power line between Heilbron (via Frankfort) and Villiers, Free State Province.
- Visual Status Quo Assessment for the Moloto Development Corridor Feasibility Study in the Gauteng Province, Limpopo Province and Mpumalanga Province.
- VIA the West Rand Strengthening Project – 400kV double circuit power line and substation extension in the West Rand, Gauteng.
- VIA for the proposed construction of a wind farm and solar photovoltaic plant near Loeriesfontein, Northern Cape Province.
- Visual sensitivity mapping exercise for the proposed Mogale's Gate Expansion, Gauteng.
- VIA (Scoping Phase) for the proposed Renosterberg Solar PV Power Plant and Wind Farm near De Aar, Northern Cape Province.
- Scoping level VIAs for the proposed construction of three Solar Power Plants in the Northern Cape Province.
- VIAs for the Spoornet Coalink Powerline Projects in KZN and Mpumalanga.
- Visual Constraints Analysis for the proposed establishment of four Wind Farms in the Eastern and Northern Cape Province.
- VIA (Scoping Phase) for the proposed development of a solar energy facility in De Aar, Northern Cape.
- VIA (Scoping Phase) for the proposed development of a solar energy facility in Kimberley, Northern Cape.

STRATEGIC ENVIRONMENTAL PLANNING

- Assistance with the Draft Environmental Management Framework for the Mogale City Local Municipality, Gauteng Province.
- Sensitivity Negative Mapping Analysis for the proposed Mogale's Gate Development, Gauteng Province.

OTHER**Jan 2008 – July 2010**

Environmental management, research, report writing, and landscape design for several development projects:

- Report writing, coordination and public participation for several BAs.
- Planting design (including rehabilitation) in accordance with natural ecological processes, endemic species and appropriate techniques.
- Graphic presentations and mapping for several VIAs and landscape architectural designs, including three-dimensional imagery.

Feb 2006 – Dec 2006

Landscape Architectural drafting, rendering and planting design for a variety of projects including the Oprah Winfrey Academy for girls and the New UNISA Student Entrance Building.

CURRICULUM VITAE

Dr. David Barry Hoare

B.Sc. (Hons), M.Sc., Ph.D., Pr.Nat.Sci. (Ecology, Botany), SAIE&ES (Professional member: Botany, Ecology), IAVS

Contact details

Postnet Suite #116
Private Bag X025, Lynnwood Ridge, 0040
Tel.: (012) 804 2281
Fax: 086 550 2053
Cell: 083 284 5111
E-mail: dhoare@lantic.net / dbhoare@iburst.co.za

Personal information

Date of birth: 04 November 1966, Grahamstown, South Africa
Citizenship: Republic of South Africa
ID no.: 661104 5024 088

Education

Matric - Graeme College, Grahamstown, 1984
B.Sc (majors: Botany, Zoology) - Rhodes University, 1991-1993
B.Sc (Hons) (Botany) - Rhodes University, 1994 with distinction
M.Sc (Botany) - University of Pretoria, 1995-1997 with distinction
PhD (Botany) - Nelson Mandela Metropolitan University, Port Elizabeth

Main areas of specialisation

- Vegetation ecology, primarily in grasslands, thicket, coastal systems, wetlands
- Plant biodiversity and threatened species specialist
- Remote sensing, analysis and mapping of vegetation
- Specialist consultant for environmental management projects

Membership

Professional Natural Scientist, South African Council for Natural Scientific Professions, 16 August 2005 – present. Reg. no. 400221/05 (Ecology, Botany)
Professional member: South African Institute of Ecologists and Environmental Scientists, 10 July 2001 – present. Categories: Botany, Ecology
Member, International Association of Vegetation Scientists

Employment history

1 February 1998 – 30 November 2004, Researcher, Agricultural Research Council, Range and Forage Institute, Private Bag X05, Lynn East, 0039. Duties: project management, general vegetation ecology, remote sensing image processing.
1 December 2004 – present, Member, David Hoare Consulting cc no. 2001/034446/23. Consultant, specialist consultant contracted to a number of existing companies and organisations.
1 January 2009 – 30 June 2009, Lecturer, University of Pretoria, Botany Dept.

Experience as consultant

Ecological consultant since 1995. Author of over 320 specialist ecological consulting reports. Wide experience in ecological studies within grassland, savanna and fynbos, as well as riparian, coastal and wetland vegetation.

Publication record:

Refereed scientific articles (in chronological order):

Journal articles:

HOARE, D.B. & BREDEKAMP, G.J. 1999. Grassland communities of the Amatola / Winterberg mountain region of the Eastern Cape, South Africa. *South African Journal of Botany* 64: 44-61.

- HOARE, D.B.**, VICTOR, J.E., LUBKE, R.A. & MUCINA, L., 2000. Vegetation of the coastal fynbos and rocky headlands south of George, South Africa. *Bothalia* 30: 87-96.
- VICTOR, J.E., **HOARE, D.B.** & LUBKE, R.A., 2000. Checklist of plant species of the coastal fynbos and rocky headlands south of George, South Africa. *Bothalia* 30: 97-101.
- MUCINA, L, BREDEKAMP, G.J., **HOARE, D.B** & MCDONALD, D.J. 2000. A National Vegetation Database for South Africa *South African Journal of Science* 96: 1-2.
- HOARE, D.B.** & BREDEKAMP, G.J. 2001. Syntaxonomy and environmental gradients of the grasslands of the Stormberg / Drakensberg mountain region of the Eastern Cape, South Africa.. *South African Journal of Botany* 67: 595 – 608.
- LUBKE, R.A., **HOARE, D.B.**, VICTOR, J.E. & KETELAAR, R. 2003. The vegetation of the habitat of the Brenton blue butterfly, *Orachrysops niobe* (Trimen), in the Western Cape, South Africa. *South African Journal of Science* 99: 201–206.
- HOARE, D.B** & FROST, P. 2004. Phenological classification of natural vegetation in southern Africa using AVHRR vegetation index data. *Applied Vegetation Science* 7: 19-28.
- FOX, S.C., HOFFMANN, M.T. and HOARE, D. 2005. The phenological pattern of vegetation in Namaqualand, South Africa and its climatic correlates using NOAA-AVHRR NDVI data. *South African Geographic Journal*, 87: 85–94.

Book chapters and conference proceedings:

- HOARE, D.B.** 2002. Biodiversity and performance of grassland ecosystems in communal and commercial farming systems in South Africa. Proceedings of the FAO's Biodiversity and Ecosystem Approach in Agriculture, Forestry and Fisheries Event: 12–13 October, 2002. Food and Agriculture Organisation of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. pp. 10 - 27.
- STEENKAMP, Y., VAN WYK, A.E., VICTOR, J.E., **HOARE, D.B.**, DOLD, A.P., SMITH, G.F. & COWLING, R.M. 2005. Maputaland-Pondoland-Albany Hotspot. In: Mittermeier, R.A., Gil, P.R., Hoffmann, M., Pilgrim, J., Brooks, T., Mittermeier, C.G., Lamoreux, J. & Fonseca, G.A.B. da (eds.) *Hotspots revisited*. CEMEX, pp.218–229. ISBN 968-6397-77-9
- STEENKAMP, Y., VAN WYK, A.E., VICTOR, J.E., **HOARE, D.B.**, DOLD, A.P., SMITH, G.F. & COWLING, R.M. 2005. Maputaland-Pondoland-Albany Hotspot. <http://www.biodiversityhotspots.org/xp/hotspots/maputaland/>.
- HOARE, D.B.**, MUCINA, L., RUTHERFORD, M.C., VLOK, J., EUSTON-BROWN, D., PALMER, A.R., POWRIE, L.W., LECHMERE-OERTEL, R.G., PROCHES, S.M., DOLD, T. and WARD, R.A. *Albany Thickets*. in Mucina, L. and Rutherford, M.C. (eds.) 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19, South African National Biodiversity Institute, Pretoria.
- MUCINA, L., **HOARE, D.B.**, LÖTTER, M.C., DU PREEZ, P.J., RUTHERFORD, M.C., SCOTT-SHAW, C.R., BREDEKAMP, G.J., POWRIE, L.W., SCOTT, L., CAMP, K.G.T., CILLIERS, S.S., BEZUIDENHOUT, H., MOSTERT, T.H., SIEBERT, S.J., WINTER, P.J.D., BURROWS, J.E., DOBSON, L., WARD, R.A., STALMANS, M., OLIVER, E.G.H., SIEBERT, F., SCHMIDT, E., KOBISI, K., KOSE, L. 2006. *Grassland Biome*. In: Mucina, L. & Rutherford, M.C. (eds.) The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.
- RUTHERFORD, M.C., MUCINA, L., LÖTTER, M.C., BREDEKAMP, G.J., SMIT, J.H.L., SCOTT-SHAW, C.R., **HOARE, D.B.**, GOODMAN, P.S., BEZUIDENHOUT, H., SCOTT, L. & ELLIS, F., POWRIE, L.W., SIEBERT, F., MOSTERT, T.H., HENNING, B.J., VENTER, C.E., CAMP, K.G.T., SIEBERT, S.J., MATTHEWS, W.S., BURROWS, J.E., DOBSON, L., VAN ROOYEN, N., SCHMIDT, E., WINTER, P.J.D., DU PREEZ, P.J., WARD, R.A., WILLIAMSON, S. and HURTER, P.J.H. 2006. *Savanna Biome*. In: Mucina, L. & Rutherford, M.C. (eds.) The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.
- MUCINA, L., RUTHERFORD, M.C., PALMER, A.R., MILTON, S.J., SCOTT, L., VAN DER MERWE, B., **HOARE, D.B.**, BEZUIDENHOUT, H., VLOK, J.H.J., EUSTON-BROWN, D.I.W., POWRIE, L.W. & DOLD, A.P. 2006. *Nama-Karoo Biome*. In: Mucina, L. & Rutherford, M.C. (eds.) The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.
- MUCINA, L., SCOTT-SHAW, C.R., RUTHERFORD, M.C., CAMP, K.G.T., MATTHEWS, W.S., POWRIE, L.W. and **HOARE, D.B.** 2006. *Indian Ocean Coastal Belt*. In: Mucina, L. & Rutherford, M.C. (eds.) The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.

Conference Presentations:

- HOARE, D.B. & LUBKE, R.A. *Management effects on diversity at Goukamma Nature Reserve, Southern Cape*; Paper presentation, Fynbos Forum, Bienne Donne, July 1994
- HOARE, D.B., VICTOR, J.E. & LUBKE, R.A. *Description of the coastal fynbos south of George, southern Cape*; Paper presentation, Fynbos Forum, Bienne Donne, July 1994
- HOARE, D.B. & LUBKE, R.A. *Management effects on fynbos diversity at Goukamma Nature Reserve, Southern Cape*; Paper presentation, South African Association of Botanists Annual Congress, Bloemfontein, January 1995
- HOARE, D.B. & BOTHA, C.E.J. *Anatomy and ecophysiology of the dunegrass Ehrharta villosa var. maxima*; Poster presentation, South African Association of Botanists Annual Congress, Bloemfontein, January 1995
- HOARE, D.B., PALMER, A.R. & BREDENKAMP, G.J. 1996. *Modelling grassland community distributions in the Eastern Cape using annual rainfall and elevation*; Poster presentation, South African Association of Botanists Annual Congress, Stellenbosch, January 1996
- HOARE, D.B. *Modelling vegetation on a past climate as a test for palaeontological hypotheses on vegetation distributions*; Paper presentation, Randse Afrikaanse Universiteit postgraduate symposium, 1997
- HOARE, D.B., VICTOR, J.E. & BREDENKAMP, G.J. *Historical and ecological links between grassy fynbos and afro-montane fynbos in the Eastern Cape*; Paper presentation, South African Association of Botanists Annual Congress, Cape Town, January 1998
- LUBKE, R.A., HOARE, D.B., VICTOR, J.E. & KETELAAR, R. *The habitat of the Brenton Blue Butterfly*. Paper presentation, South African Association of Botanists Annual Congress, Cape Town, January 1998
- HOARE, D.B. & PANAGOS, M.D. *Satellite stratification of vegetation – structure or floristic composition?* Poster presentation at the 34th Annual Congress of the Grassland Society of South Africa, Warmbaths, 1-4 February 1999.
- HOARE, D.B. & WESSELS, K. *Conservation status and threats to grasslands of the northern regions of South Africa*, Poster presentation at the South African Association of Botanists Annual Congress, Potchefstroom, January 2000.
- HOARE, D.B. *Phenological dynamics of Eastern Cape vegetation*. Oral paper presentation at the South African Association of Botanists Annual Congress, Grahamstown, January 2002.
- HOARE, D.B., MUCINA, L., VAN DER MERWE, J.P.H. & PALMER, A.R. *Classification and digital mapping of grasslands of the Eastern Cape* Poster presentation at the South African Association of Botanists Annual Congress, Grahamstown, January 2002.
- HOARE, D.B. *Deriving phenological variables for Eastern Cape vegetation using satellite data* Poster presentation at the South African Association of Botanists Annual Congress, Grahamstown, January 2002.
- MUCINA, L., RUTHERFORD, M.C., HOARE, D.B. & POWRIE, L.W. 2003. *VegMap: The new vegetation map of South Africa, Lesotho and Swaziland*. In: Pedrotti, F. (ed.) *Abstracts: Water Resources and Vegetation, 46th Symposium of the International Association for Vegetation Science*, June 8 to 14 – Napoli, Italy.
- HOARE, D.B. 2003. *Species diversity patterns in moist temperate grasslands of South Africa*. Proceedings of the VIIth International Rangeland Congress, 26 July – 1 August 2003, Durban South Africa. *African Journal of Range and Forage Science*. 20: 84.

Unpublished technical reports:

- PALMER, A.R., HOARE, D.B. & HINTSA, M.D., 1999. *Using satellite imagery to map veld condition in Mpumalanga: A preliminary report*. Report to the National Department of Agriculture (Directorate Resource Conservation). ARC Range and Forage Institute, Grahamstown.
- HOARE, D.B. 1999. *The classification and mapping of the savanna biome of South Africa: methodology for mapping the vegetation communities of the South African savanna at a scale of 1:250 000*. Report to the National Department of Agriculture (Directorate Resource Conservation). ARC Range and Forage Institute, Pretoria.
- HOARE, D.B. 1999. *The classification and mapping of the savanna biome of South Africa: size and coverage of field data that exists on the database of vegetation data for South African savanna*. Report to the National Department of Agriculture (Directorate Resource Conservation). ARC Range and Forage Institute, Pretoria.
- THOMPSON, M.W., VAN DEN BERG, H.M., NEWBY, T.S. & HOARE, D.B. 2001. *Guideline procedures for national land-cover mapping and change monitoring*. Report no. ENV/P/C 2001-006 produced for Department of Water Affairs and Forestry, National Department of Agriculture and

- Department of Environment Affairs and Tourism. Copyright: Council for Scientific and Industrial Research (CSIR) and Agricultural Research Council (ARC).
- HOARE, D.B. 2003. Natural resource survey of node O R Tambo, using remote sensing techniques, Unpublished report and database of field data for ARC Institute for Soil, Climate & Water, ARC Range and Forage Institute, Grahamstown.
- HOARE, D.B. 2003. Short-term changes in vegetation of Suikerbosrand Nature Reserve, South Africa, on the basis of resampled vegetation sites. Gauteng Department of Agriculture, Conservation, Environment and Land Affairs, Conservation Division.
- BRITTON, D., SILBERBAUER, L., ROBERTSON, H., LUBKE, R., HOARE, D., VICTOR, J., EDGE, D. & BALL, J. 1997. The Life-history, ecology and conservation of the Brenton Blue Butterfly (*Orachrysops niobe*) (Trimen)(*Lycaenidea*) at Brenton-on-Sea. Unpublished report for the Endangered Wildlife Trust of Southern Africa, Johannesburg. 38pp.
- HOARE, D.B., VICTOR, J.E. & MARNEWIC, G. 2005. Vegetation and flora of the wetlands of Nylsvley River catchment as component of a project to develop a framework for the sustainable management of wetlands in Limpopo Province.

Consulting reports:

Total of over 320 specialist consulting reports for various environmental projects from 1995 – 2010.

Workshops / symposia attended:

- Workshop on remote sensing of rangelands presented by Paul Tueller, University of Nevada Reno, USA, VIIth International Rangeland Congress, 26 July – 1 August 2003, Durban South Africa.
- VIIth International Rangeland Congress, 26 July – 1 August 2003, Durban South Africa.
- BioMap workshop, Stellenbosch, March 2002 to develop strategies for studying vegetation dynamics of Namaqualand using remote sensing techniques
- South African Association of Botanists Annual Congress, Grahamstown, January 2002.
- 28th International Symposium on Remote Sensing of Environment, Somerset West, 27-31 March 2000.
- Workshop on Vegetation Structural Characterisation: Tree Cover, Height and Biomass, 28th International Symposium on Remote Sensing of Environment, Strand, 26 March 2000.
- South African Association of Botanists Annual Congress, Potchefstroom, January 2000
- National Botanical Institute Vegmap Workshop, Kirstenbosch, Cape Town, 30 September-1 October 1999.
- Sustainable Land Management – Guidelines for Impact Monitoring, Orientation Workshop: Sharing Impact Monitoring Experience, Zithabiseni, 27-29 September 1999.
- WWF Macro Economic Reforms and Sustainable Development in Southern Africa, Environmental Economic Training Workshop, development Bank, Midrand, 13-14 September 1999.
- 34th Annual Congress of the Grassland Society of South Africa, Warmbaths, 1-4 February 1999
- Expert Workshop on National Indicators of Environmental Sustainable Development, Dept. of Environmental Affairs and Tourism, Roodevallei Country Lodge, Roodeplaat Dam, Pretoria, 20-21 October 1998.
- South African Association of Botanists Annual Congress, Cape Town, January 1998
- Randse Afrikaanse Universiteit postgraduate symposium, 1997.
- South African Association of Botanists Annual Congress, Bloemfontein, January 1995.

Referees:

- Michele Pfab, Scientific Co-ordinator: Scientific Authority, Applied Biodiversity Research, South African National Biodiversity Institute, (012) 843 5025, **E-mail:** M.Pfab@sanbi.org.za
- Prof. Roy Lubke, Botany Department, Rhodes University, Grahamstown 6140 Tel: 0461-318 592. E-mail: r.lubke@ru.ac.za
- Prof. Richard Cowling, Botany Department, Nelson Mandela Metropolitan University, Tel (042) 298 0259 E-mail: rmc@kingsley.co.za

Name	Stephan Hendrik Jacobs
Profession	Environmentalist
Name of Firm	SiVEST SA (Pty) Ltd
Present Appointment	Graduate Environmental Consultant
Years with Firm	Joined May 2015
Date of Birth	28 May 1991
ID Number	9105285065080
Nationality	South African



Education

Pretoria Boys High, Pretoria, South Africa, Matriculated 2009.

Professional Qualification

- BSc Hons Environmental Management and Analysis, (Post Graduate) University Of Pretoria Honours (2014).
- BSc Environmental Sciences (Undergraduate) University Of Pretoria (2012-2013)

Employment Record

May 2015 – current	SiVEST SA (Pty) Ltd – Graduate Environmental Consultant
Nov 2014 – Feb 2015	Sodwana Bay Fishing Charters – Assistant Manager
Oct 2014 – Mar 2015	Ufudu Turtle Tours – Tour Guide

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good

Key Experience

Stephan joined SiVEST in May 2015 and holds the position of Graduate Environmental Consultant in the Johannesburg office.

Stephan specialises in the field of Environmental Management and has been involved in the compilation of Environmental Impact Assessments (EIAs) and Basic Assessments (BAs). Stephan has also assisted extensively in the undertaking of field work and the compilation of reports for specialist studies such as surface water and visual impact assessments. Stephan also has experience in Environmental Compliance and Auditing and has acted as an Environmental Control Officer (ECO) for several infrastructure projects.

Stephan has been educated and achieved his degrees (BSc and BSc Hons) at the University of Pretoria in Environmental Sciences (Environmental Management & Analysis).

Throughout his time at SiVEST, Stephan has acquired the following skills:

- Strong computer skills (Work, excel, powerpoint etc);
- Strong Proposal and report writing skills;
- Report compilation skills for Environmental Impact Assessments (EIAs) and Basic Assessments (BAs);

- Report compilation skills for Environmental Management Plans/Programmes (EMPr);
- Compilation and conducting Visual Impact Assessments;
- Assisting in Surface Water / Wetland Delineations and Assessments.

Key experience includes:

- Environmental Impact Assessment (EIA) of small, medium and large-scale infrastructure projects,
- Basic Assessment (BA), of small, medium and large-scale infrastructure projects,
- Environmental Management Plans (EMPr), of small, medium and large-scale infrastructure projects,
- Proposal and tender compilation,
- Environmental Compliance and Auditing (ECO);
- Various site inspections, and
- Visual Impact Assessments (Field work and report compilation).

Projects Experience

Stephan is responsible for the following activities: report writing, proposal writing, assisting in specialist surface water delineation and functional assessments, assisting in visual impact assessments and environmental compliance and auditing procedures. Current and completed projects / activities are outlined in detail below:

- Environmental Control Officer (ECO) for the Polokwane Integrated Rapid Public Transport System (IRPTS), Limpopo Province.
- Basic Assessment (BA) for the construction of a Non-Motorised Transport (NMT) Training and Recreational Park adjacent to the Peter Mokaba Stadium in Polokwane, Limpopo Province.
- Basic Assessment (BA) for the Proposed Expansion of the Tissue Manufacturing Capacity at the Twinsaver Kliprivier Operations Base, Gauteng Province.
- Environmental Control Officer (ECO) for Phase 1 and Phase 2 of the Newmarket Retail Development, Gauteng Province.
- Environmental Review of the Xakwa Coal Operations, adjacent to the proposed Eastside Junction Development.
- Environmental Due Diligence for the Woodlands and Harrowdene Office Parks in Woodmead, Gauteng Province.
- Visual Impact Assessment for the Helena Solar PV Plant, Northern Cape Province.
- Visual Impact Assessment for the Nsoko Msele Integrated Sugar Project, Swaziland.
- Visual Impact Assessments for the proposed construction of the Sendawo Solar 1, Sendawo Solar 2 and Sendawo Solar 3 Photovoltaic (PV) Energy Facilities near Vryburg, North West Province.
- Visual Impact Assessments for the proposed construction of the Sendawo Substation and Associated 400kV Power Line near Vryburg, North West Province.
- Visual Impact Assessments for the proposed construction of the Tlisitseng Solar 1 and Tlisitseng Solar 2 Photovoltaic (PV) Energy Facilities near Lichtenburg, North West Province.
- Visual Impact Assessment for the proposed construction of the 3000MW PhilCo Green Energy Wind Farm and Associated Infrastructure near Richmond, Northern Cape Province.

- Visual Impact Assessment for the proposed construction of the Aletta 140MW Wind Energy Facility near Copperton, Northern Cape Province.
- Visual Impact Assessment for the proposed construction of the Eureka 140MW Wind Energy Facility and associated Infrastructure near Copperton, Northern Cape Province.
- Visual Impact Assessment for the proposed construction of the Eureka 400kV Substation and 400kV Power Line near Copperton, Northern Cape Province.
- Basic Visual Impact Assessments for the proposed construction of the Tlisitseng 1 and Tlisitseng 2 Substations and Associated 132kV Power Lines near Lichtenburg, North West Province.
- Basic Visual Impact Assessment for the proposed construction of up to a 132kV Power Line and Associated Infrastructure for the Rooipunt Solar Thermal Power Plant near Upington, Northern Cape Province.
- Basic Visual Impact Assessment for the proposed construction of up to a 132kV Power Line and Associated Infrastructure for the proposed Kalkaar Solar Thermal Power Plant near Kimberly, Free State and Northern Cape Provinces.
- Surface Water Assessment for the Steve Thswete Local Municipality, Mpumalanga Province.
- Surface Water Delineation and Assessment for the proposed coal Railway Siding at the Welgedacht Marshalling Yard and associated Milner Road Upgrade near Springs, Ekurhuleni Metropolitan Municipality.

Memory Madondo

Date of Birth: 17 August 1986
 Profession: Development Economist
 Specialisation: Innovation and Sustainable Development
 Years within Firm: 4 Years
 Nationality: RSA
 Years of Experience: 4 Years
 HDI Status: Black Female



Education:

2011 – 2013, University of South Africa	BSc: Mathematical Statistics
2009, University of Pretoria	BSc: Mathematical Statistics (<i>not completed</i>)
2006-2008, University of Pretoria	BCom: Statistics

Professional Membership:

Development of Society of Southern Africa
South African Planning Institute

Language Proficiency:	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Zulu	Average	Average	Poor
Shona	Poor	Poor	Average

Key Qualification

Memory Madondo completed a BSc degree in Mathematical Statistics from the University of South Africa in 2013, her majors being Mathematics and Statistics. She also holds a BCom in Statistics from the University of Pretoria. She is fully computer literate including computerised statistics (which is referred to as SAS – Statistical Analysis System), Structured Query Language (SQL) and MS Access Database Management. Her interests lie in statistical analysis and any numerical challenges.

Memory joined Urban-Econ in 2011 as a Technical Assistant working on the company’s electronic database system and gradually started assisting with some projects. She has gained experience in several economic arenas such as collation and analytic processing of economic data, trend analysis, forecasting and economic development amongst others. She has also carried out a number of socio-economic impact assessments of varying magnitude and has in turn gained good skill in report writing and presentation. She continues to gain further knowledge as well as expertise in the economic field.

Experience Record

Project:	Waterval East Filling Station Study
Year:	2012
Location:	Rustenburg
Client:	Private
Project Features:	<ul style="list-style-type: none"> ✓ Provide an understanding of local market area ✓ Analysis of the local market’s potential to absorb the proposed development
Position held:	Researcher
Activities Performed:	Feasibility study
Project:	NC Renewable Energy
Year:	2012
Location:	Northern Cape
Client:	Northern Cape Department of Economic Development and Tourism
Project Features:	<ul style="list-style-type: none"> ✓ Description of the status and potential of the local renewable energy sector ✓ Investigation of the potential to establish clean and green sustainable development projects in the Province in line with the optimal mix identified.

Position held:	Researcher
Activities Performed:	Strategy and implementation plan formulation
Project:	Lesedi and Letsatsi Community Needs Analysis
Year:	2013/2014
Location:	Northern Cape and Free State
Client:	Lesedi Power Company and Letsatsi Power Company (Solar Reserve)
Project Features:	<ul style="list-style-type: none"> ✓ Description of the status and potential of the local renewable energy sector ✓ Investigation of the potential to establish clean and green sustainable development projects in the Province in line with the optimal mix identified.
Position held:	Researcher
Activities Performed:	Strategy and implementation plan formulation
Project:	NC Renewable Energy
Year:	2015
Location:	Northern Cape
Client:	Northern Cape Department of Economic Development and Tourism
Project Features:	<ul style="list-style-type: none"> ✓ Description of the status and potential of the local renewable energy sector ✓ Investigation of the potential to establish clean and green sustainable development projects in the Province in line with the optimal mix identified.
Position held:	Researcher
Activities Performed:	Strategy and implementation plan formulation

Other Projects:

- Merafong Economic Summit Spin-Off: Urban-Econ: Development Economics was appointed response by the Merafong Local Municipality to assist in developing an Economic summit discussion document with possible action plan. The objectives of the assistance to be provided by Urban-Econ are among others; to identify local business needs and fatal flaws, to package a discussion document that will serve as a guideline for the session while providing direction to the participants and to provide directional guidelines to address the summit outcomes in a pro-active manner.
- Zonnebloem Comparative Analysis: Urban-Econ Development Economists was appointed by Golder Associates to undertake an economic impact assessment study for the proposed Zonnebloem Coal Mine situated near Middelburg in the Mpumalanga Province. The included providing a baseline profile of the study area - analysis of parameters such as population size, household numbers, income levels, structure and growth of the economy, labour force and employment situation.
- Nelson Mandela Scoping: Urban-Econ Development Economists was appointed to undertake a specialist market analysis as part of planning for provision of infrastructure to the Nelson Mandela Bay Metropolitan Municipality. The primary objective of this study was to identify the growth rates and anticipated number of households per demand zone within the Nelson Mandela Bay Metropolitan Municipality to gain insight on the Metro's infrastructural needs.
- Savanna Cookware Prefeasibility Study: Urban-Econ Development Economists was appointed by Savanna Collection and Runitrax Investments to undertake a pre-feasibility study of establishing a stainless steel cookware manufacturing facility in South Africa. The key aspects that were set to be determined during the pre-feasibility study included, inter alia; the need and desirability for the proposed manufacturing facility, the key prerequisites for the viability of the proposed venture and the most optimal location for the proposed manufacturing facility.
- Exarro Power Station SEIA: Urban-Econ Development Economists was requested by Savannah Environmental (Pty) Ltd. (Savannah Environmental) to undertake a Socio-Economic Impact Study for the proposed Exxaro coal-powered power station near the town of Lephalale, the Limpopo province. This study presented the analysis of socio-economic impacts that are expected to ensure from the proposed project during various stages of the project's life cycle and considering both positive and negative effects.
- Lesedi and Letsatsi Community Needs Analysis: Urban-Econ Development Economists was requested by Lesedi/Letsatsi Power Company to design Economic Development and Enterprise development programmes that speaks to the scope of Lesedi/Letsatsi's compliance commitments with regard to the identification of the implementable socio-economic development and enterprise development initiatives that can be considered for implementation once the power plant is operational. The scope of work involved development of comprehensive profiles of the selected communities, identification of their needs, assessment of business opportunities and provision of recommendations with regard to the initiatives that could be implemented to address the gaps.
- Zonnebloem Comparative Analysis: Urban-Econ Development Economists was appointed by Golder Associates to undertake an economic impact assessment study for the proposed Zonnebloem Coal Mine situated near Middelburg in the Mpumalanga

Province. The included providing a baseline profile of the study area - analysis of parameters such as population size, household numbers, income levels, structure and growth of the economy, labour force and employment situation.

- Nelson Mandela Scoping: Urban-Econ Development Economists was appointed to undertake a specialist market analysis as part of planning for provision of infrastructure to the Nelson Mandela Bay Metropolitan Municipality. The primary objective of this study was to identify the growth rates and anticipated number of households per demand zone within the Nelson Mandela Bay Metropolitan Municipality to gain insight on the Metro's infrastructural needs.
- Land Claims Re-opening: Urban-Econ Development Economists was appointed to undertake a Socio-Economic Impact Assessment study as part of the Regulatory Impact Assessment on the feasibility of the reopening of lodgement of claims and provisions to the 19 June cut-off date to accommodate the descendants of the Khoi and San and claims on heritage sites and historical landmarks.
- Suncorp Solar PV EIA: The study presented the socio-economic development (SED) and enterprise development (ED) plans for the proposed Hertzogville Solar Photovoltaic (PV) energy facility. These plans form part of the requirements of the bidding processes for new power generation facilities under the Renewable Energy Independent Power Producer Procurement (IPPP) Programme.
- RBN Mining Procurement Assessment: The objective of the study was to determine the first set of business opportunities that can be established in the Royal Bafokeng area considering the current procurement practices of the selected mines.
- Saldanha REE Separation Plant EIA: Urban-Econ Development Economists was appointed by AGES (Pty) Ltd to undertake an economic impact assessment study for the proposed construction and operation of a Rare Earth Elements (REE) separation plant in Saldanha Bay. This study presented the analysis of economic impacts that are expected to ensue from the proposed project during various stages of the project's life cycle and considering both positive and negative effects.
- Socio-Economic and Economic Impact Assessment Studies conducted as part of the Environmental Impact Assessment Processes
 - Pamish Magnetite Mine EIA - Digby Wells Environmental
 - Helena Solar PV EIA – SiVest Environmental
 - West Rand Tailings Retreatment Project EIA – Digby Wells Environmental
 - Strategic Environmental Assessment for Molemole LM
- WRC Attracting CSRI in Water R&D: Urban-Econ was appointed by the Water Research Commission (WRC) to examine the possibility of forming corporate-WRC partnerships for the roll-out of water and sanitation solutions developed by the WRC into communities.
- A Study of the Economic Impact of load shedding on the City of Johannesburg with or without Kelvin Power Station: A consortium comprising of Ernst and Young and Urban-Econ Development Economists was appointed by City Power to model the potential economic impact on the City with and without Kelvin Power Station in the short term, and the economic impact of outages on the wider economy of the CoJ over the medium term. The specific objectives of the study included demonstrating, quantifying, and interpreting the effect of outages on the City of Johannesburg (CoJ) economy and its growth potential encompassing both of the City Power and Eskom areas of supply, and the effect of the Kelvin Power Station on mitigating the total economic impact of outages on the CoJ.

Countries of Work Experience:

- South Africa

References:

Dr. JL Oberholzer Email: judex@urban-econ.com Cell Phone: +27 (0) 82 770 8770

Elena Broughton Email: elena@urban-econ.com Cell Phone: +27 (0) 82 463 2325

Contact Details:

Memory Madondo Email: memory@urban-econ.com Cell Phone: +27 (0) 73 936 2660

Werner C. Marais

Summary of qualifications

Late 2009
Started PhD (Biodiversity and Conservation) – Still in progress *University of Johannesburg*

2008
MSc (Biodiversity and Conservation) *University of Johannesburg*

2006
Hons (Biodiversity and Conservation) *University of Johannesburg*

2005
BSc (Zoology and Botany) *University of Johannesburg*

Education

PhD (Biodiversity and Conservation)

- In-depth study of the subterranean and epiphoreal ecosystems of caves and their surrounding environments in the Gauteng province, and more specifically the Carletonville Dolomite Grassland vegetation unit.
- Special reference is paid to cave dwelling bats and their specific conservation needs inside as well as outside caves, where foraging takes place.
- A thorough understanding of grassland ecology as well as mammalian biology/behavior is essential for the study.
- The impacts of urbanisation on cave bat colonies are an essential focus of the research.
- Strong ecological focus.

MSc (Biodiversity and Conservation)

- The potential of using insectivorous bats (Microchiroptera) as a means of insect pest control in agricultural areas – Passed with distinction
- Involved a large scale in-depth survey of the bat diversity in the Tzaneen and Waterpoort areas, Limpopo.
- Understanding and observing the biology and behavior of local bat species.

- Designing and experimenting with artificial bat roosts.

Hons Biodiversity and Conservation

- Research project: Preliminary study of the terrestrial Arthropoda associated with caves of the Cradle of Humankind World Heritage Site – Passed with distinction
- Introduction to Environmental Management
- Herpetology
- Terrestrial and conservation ecology
- Resource management (incl. forestry, fire ecology, animal behavior)
- Practical fieldwork methodology (4X4, boat training and mapping)
- Mammology
- Population genetics and biosystematics
- Philosophy and research methodology: Zoology Nature conservation
- Parasitology
- Molecular evolution

BSc Zoology and Botany

- One-year course in animal diversity and identification
- Six month course in basic and marine ecology
- Limnology and terrestrial ecology
- Coastal diversity excursion (Marine ecology)
- Introduction to SASS Freshwater pollution monitoring methodology
- Applied freshwater ecotoxicology
- Waterborne diseases
- Integrated animal physiology and processes
- General parasitology
- Cytology
- Six-month course in the identification and diversity of South African flora
- Ethno and economical plants
- Biotechnology
- Plant physiology
- Plant pathology
- Cellular and molecular biology
- Introduction to organic and physical chemistry
- General chemistry
- Mineralogy and earth dynamics

Additional:

- ***Experienced report writing skills, sufficient computer skills.***
- ***Proficient in GIS, bioacoustics analysis.***
- ***Snake Identification and Handling Course – Presented by MHB Enviro Developments.***
- ***Multiple training courses in bat related topics - Gauteng and Northern Regions Bat Interest Group (GNoRBIG; 2005-2009).***
- ***Soil Classification and Wetland Delineation Course – Presented by Terrasoil.***
- ***Fall Arrest Level 2 qualification (for working at heights).***
- ***Advanced driving course in 4x4 off-road driving.***

Affiliations to professional bodies and societies

- Pr.Sci.Nat.– SACNASP (Zoological Science; registration number 400169/10)
- Steering committee member of the SABAA (South African Bat Assessment Association).
- Bat Conservation International (BCI)
- Serving on the research committee of the Gauteng and Northern Regions Bat Interest Group (GNoRBIG).
- Serving on the steering committee of the Zoological Society of the University of Johannesburg.

Experience

- i. 2008 – Current Founder of Animalia Zoological & Ecological Consultation CC. Animalia has completed more than **300 specialist reports and numerous large scale projects** under the supervision and lead of Werner Marais:
- ii. 2008 University of Johannesburg Gauteng
 - Sensitivity and biodiversity surveys of five caves in the Cradle of Humankind World Heritage Site (COHWHS) and Pretoria areas.
 - Preliminary survey to investigate the correlation between insectivorous bats and prey insects in the Krugersdorp Game Reserve.
- iii. 2007, 2008 Limpopo
 1. Bertie van Zyl (Pty) Ltd.(ZZ2 Tomato Farms)
 2. University of Johannesburg Gauteng

Two year project to research the biological pest control method of utilizing insectivorous bats in agriculture. Required to conduct an in-depth study of bat (Microchiroptera) behavior and ecologically important factors.
- iv. 2006 University of Johannesburg Gauteng

Six month survey of cave dwelling arthropods in the Cradle of Humankind World Heritage Site.

Additional:

Invited by the EWT (Endangered Wildlife Trust) to deliver a presentation on current ecological issues regarding bats and wind energy.

Invited to present on current ecological issues regarding bats and wind energy for ESSA (Exploration Society of Southern Africa).

Contributing editor for the: “South African Good Practice Guidelines for Surveying Bats at Wind Energy Facility Developments – Pre-construction; 3rd Edition February 2014”

As a co-author, received the Dow Greeff price for best annual scientific publication: "Die karst-ekologie van die Bakwenagrot (Gauteng)" published in the Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie, Vol. 31(1), 2012.

Public and educational presentations related to bats, and presented a part of a Bat Training Course at Nylsvley Nature Reserve.

Presented the following papers at conferences:

- **The potential of using insectivorous bats (*Microchiroptera*) as a means of insect pest control in agricultural areas. The Zoological Society of Southern Africa's 50th Anniversary Conference. July 2009.**
- **Inseketende vlermuise (*Microchiroptera*) en vlermuishuise in landbougebiede. Suid Afrikaanse Akademie vir Wetenskap en Kuns se 100 jaar Eufees kongres. October 2009.**

Interviewed for two popular magazine articles on ecological aspects of biological pest control utilising bats; published in two consecutive issues of Farmers Weekly.

Languages Afrikaans / English – Full professional proficiency in both.

References ***Dr Francois Durand – Karst ecologist and paleontologist. Pr.Sci.Nat. (Zoology and Earth Sciences).***

083 235 7855
(011) 559 2456
Fax: (011) 559 2286
francois_offcampus1@yahoo.com

University of Johannesburg (Auckland Park Kingsway Campus),
Auckland Park,
Department of Zoology,
PO Box 524.

Dr Wanda Markotter – Senior Lecturer, Virologist

(012) 420 4602
(012) 420 3266
wanda.markotter@up.ac.za
Website: <http://web.up.ac.za/default.asp?ipkCategoryID=3557&sub=1&parentid=1436&subid=1489&ipklookid=11>

University of Pretoria,
Department of Microbiology and Plant Pathology,
Faculty of Natural and Agricultural Sciences,
New Agricultural Building, Room 9-2
Pretoria
0001

Dr David Hoare (Pr.Sci.Nat.) – David Hoare Consulting CC

083 284 5111
(012) 804 2281
dbhoare@iburst.co.za

***Stephan du Toit (MSc; Pr.Sci.Nat.) – Specialist: Environmental Protection;
Mogale City Municipality***

083 306 3441
stephant@mogalecity.gov.za

Julio Balona – Chairman of the GNoRBIG

082 359 1295
Julio.Balona@lurgi.com

Thank You

Miss Monika Ilka Moir

Date of Birth: 1989 – 03 - 16

Current Address: Farrarmere, Benoni

Cell phone number: +2776 77 88 201

Email Address: monikamoir@gmail.com or monika@animalia-consult.co.za

EDUCATION

University of Johannesburg, Auckland Park, SA

MSc Biodiversity and Conservation (Full dissertation)

2012-2014

Title: Habitat use, temporal distribution and preferred weather conditions of *Tadarida aegyptiaca* and *Neoromicia capensis*, and its application to wind farm development in South Africa.

University of Johannesburg, Auckland Park, SA

BSc Honours in General Zoology (Cum laude)

2011

Areas of Concentration: Nature Conservation, Mammology, Population Genetics, Ecophysiology, Terrestrial Ecology, Indices for the health of aquatic ecosystems, Fish as a Test Organism, Aquatic Parasitology, Philosophy and Research Methodology

Honours' Thesis title: Environmental Conditions Affecting Hibernating Natal Long-fingered Bats (*Miniopterus natalensis*) in Bakwena Cave, Irene

University of Johannesburg, Auckland Park, SA

BSC Zoology and Human Physiology (Cum laude)

2008-2010

Afrikaanse Hoerskool Germiston, Germiston, SA

Matriculated with 6 distinctions

2007

SHORT COURSES

Acoustic techniques and Analoow workshop

2013

Instructors: Chris Corben and Kim Livengood

NQF US229995 and US229998 Fall Arrest and Basic Rescue (Work at height)
Gravity Training CC

2014

The Management of Bats Injured by Wind Turbines

2014

Instructor: E.J. Richardson (Richardson and Peplow Environmental)

Bats and Wind Energy Annual Meeting/Workshop

2014

NQF US229994 and US229998 Fall Protection Planner
Gravity Training CC

2014

AWARDS

- Top Zoology Honours Achiever
(Awarded by Department of Zoology, UJ) **2011**
- Human Physiology Top Achiever for modules HPH2A, 2B, 3A, 3B
(Awarded by Department of Zoology, UJ) **2009-2010**
- Zoology Top Achiever for modules ZOO1A, 1B, 2A, 3A, 3B
(Awarded by Department of Zoology, UJ) **2008 - 2010**
- Mathematics Top Achiever for module 1C
(Awarded by Department of Mathematics, UJ) **2008**
- UJ First Year Top Achiever **2008**
- Ekhurleni West Top Achiever for Matric Accountancy **2007**
- Afrikaanse Hoërskool Germiston Dux Scholar **2007**

REPORTS OF ACADEMIC RESEARCH AND CONFERENCE PROCEEDINGS

- Environmental Conditions Affecting Hibernating Natal Long-fingered Bats (*Miniopterus natalensis*) in Bakwena Cave, Irene - Presented at the Department of Zoology Colloquium and Akademie vir Wetenskap Conference, 2011

EMPLOYMENT HISTORY

- **Senior Environmental Specialist Consultant** **2011 to present**
Animalia Zoological and Ecological Consultation
Contact person: Werner Marais
Contact number: +2778 190 3316
Email: werner@animalia-consult.co.za
- **Environmental Characterisation for Eskom power line maintenance** **June – Aug 2012**
Envirolution Consulting (Pty) Ltd
Contact person: Gesan Govender
Contact number: +27834198905
Email: gesan@envirolution.co.za
- **Practical demonstrator** **Jan – Nov 2011**
University of Johannesburg
Department of Zoology
Contact number: +27 (0)11 559 2441

- **Product promoter** **June 2010 – Dec 2011**
 Splurgenetwork
 Contact person: Jolene Holder
 Contact number: +27741421655
- **Private mathematics tutor** **May 2010 – Nov 2010**
 My Academics SA
 Contact person: Travis Beyer
 Contact number: +2782 378 3651
- **The Lion Park (Lanseria) Volunteer** **Sep – Nov 2010**
 Contact number: +27 (0)11 691 9905
- **Temporary receptionist, office worker and data capturer** **2005 – 2009**
 Iveco SA
 Waterfall Park, Howick Close, Bekker Street, Midrand
 Contact person: Ilka Grund
 Contact number: +2772 954 1924
- **Volunteer Game Counter** **Oct 2006**
 Jabutas Cheetah Reserve
 Rhenosterkloof, Polokwane

PROFICIENCY IN THE FOLLOWING COMPUTER PROGRAMS

- Microsoft Office Excel
- Microsoft Office Powerpoint
- Microsoft Office Word
- Microsoft Office Outlook
- IBM SPSS Statistics
- MapSource
- DNRGarmin
- Google Earth
- GPS Utility
- GPS Babel
- BatSound
- Analook

PROFICIENCY IN THE FOLLOWING LANGUAGES

- English – native language
- Afrikaans – speak and read/write

MEMBERSHIPS

- University of Johannesburg Golden Key Society **2009 to present**
- University of Johannesburg Alumni Society **2010 to present**
- Zoological Society of Southern Africa **2012 - 2013**

Name Lynsey Rimbault

Profession Environmentalist

Name of Firm SiVEST SA (Pty) Ltd

Present Appointment Environmental Consultant:
SiVEST Environmental Division

Years with Firm since August 2014

Date of Birth 10 April 1989

ID Number 8904100104087

Nationality South African



Education

Matriculated 2007 (with distinction), Full Academic Colours, Hyde Park High School, Johannesburg, South Africa

Professional Qualifications

MSc Biodiversity, Conservation and Management (University of Oxford 2012-2013)
BSc (Hons) Geography (University of the Witwatersrand 2011)
BA Geography and English (University of the Witwatersrand 2008-2010)

Employment Record

Aug 2014 – to date SiVEST Environmental Division: Trainee Environmental Consultant
Feb 2014 – July 2014 Kulima Integrated Development Solutions
Jan 2012 – June 2012 Rayten Engineering Solutions

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Fluent	Fluent	Fluent

Key Experience

Specialising in the field of Environmental Management.

Lynsey joined SiVEST in August 2014 and holds the position of Environmental Consultant in the Johannesburg Office. She has 1 year of work experience and is specialising in the management and compilation of Environmental Impact Assessments (EIAs) and Basic Assessment (BAs) primarily related to energy generation and electrical distribution projects.

Lynsey has worked previously for Kulima Integrated Development Solutions conducting research for a NEPAD project on Agricultural Adaptations to Climate Change. This involved four different farming sectors in four different provinces of South Africa. Prior to this Lynsey worked at Rayten Engineering Solutions in the field of air quality consulting, primarily in the mining sector.

Her academic achievements include; full academic colours in high school, elected prefect, Grade 11 dux scholar and four distinctions in matric. She is a member of the Golden Key International Honour Society for academic achievement. In her undergraduate degree she was top student in first and second year. During her Honours year she was awarded a post graduate merit award for excellence in academic performance. Lynsey was the recipient of the Allan and Nesta Ferguson Trust Scholarship for tuition at the University of Oxford.

Computer Literacy

Proficient in Microsoft Office,
ArcGIS,
IDRISI,
QGIS.

Projects Experience

Aug 2014 – to date

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) / BASIC ASSESSMENT (BA)

- Basic Assessment for the Ermelo-Richards Bay Coal Line Upgrade Project: Proposed development of the Madlanzini Main Transmission Station and Associated 88kV and 400kV turn in power lines, Mpumalanga Province.
- Environmental Impact Assessment for the proposed development of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province.
- Basic Assessment for the proposed Construction of the Mookodi Integration Phase 2 132kV Power Line from the Mookodi MTS to the new proposed Ganyesa Substation, North West Province.
- Environmental Impact Assessment for the proposed construction of the Nokukhanya Solar Photovoltaic Power Plant near Dennilton, Limpopo Province.

OTHER

- Environmental Scoping and Appraisal, as part of the SMEC Consortium, during the feasibility study for the Gautrain Extensions Project
- Authority Consultation and Environmental Screening Assessment for the proposed Lombardy East Housing Development, Gauteng Province.
- Application for Flora Permits for the removal and relocation of vegetation species for the Khobab and Loeriesfontein Wind Farm power line corridors.

Feb 2014 – July 2014

Conducting research on adoption of agricultural adaptation practices to climate change in four provinces of South Africa, through primary fieldwork and qualitative data collection. Research conducted under the auspices of the Comprehensive Africa Agriculture Development Programme (CAADP), a NEPAD programme. The research objective was to integrate and implement adaptation to climate change issues into agricultural development strategies.

- Identifying through specific entry points and snowball sampling at least 20 farmers per commodity group and location
- Conducting qualitative interviews with farmers on their farms or at other mutually agreed locations
- Identifying and interviewing any relevant local stakeholders
- Providing comprehensive notes on interviews, highlighting themes explored and emerging answers
- Providing final reports on each of the commodity groups explored and scorecards elaborating each adaptation observed.

Jan 2012 – June 2012

Environmental Scientist, responsible for air quality monitoring, project management dispersion modelling and air quality impact assessments, monitoring station siting for the Department of Environmental Affairs.

CURRICULUM VITAE

Kerry Lianne Schwartz

Name	Kerry Lianne Schwartz
Profession	GIS Specialist
Name of Firm	SiVEST SA (Pty) Ltd
Present Appointment	Senior GIS Consultant: Environmental Division
Years with Firm	24 Years
Date of Birth	21 October 1960
ID No.	6010210231083
Nationality	South African



Professional Qualifications

BA (Geography), University of Leeds 1982

Employment Record

1994 – Present	SiVEST SA (Pty) Ltd - Environmental Division: GIS/Database Specialist.
1988 - 1994	SiVEST (formerly Scott Wilson Kirkpatrick): Town Planning Technician.
1984 – 1988	Development and Services Board, Pietermaritzburg: Town Planning Technician.

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Fluent	Fluent	Fluent

Key Experience

Kerry is a GIS specialist with more than 16 years experience in the application of GIS technology in various environmental, regional planning and infrastructural projects undertaken by SiVEST.

Kerry's GIS skills have been extensively utilised in projects throughout South Africa in other Southern African Countries. These projects have involved a range of GIS work, including:

- Design, compilation and management of a demographic, socio-economic, land use, environmental and infrastructural databases.
- Collection, collation and integration of data from a variety of sources for use on specific projects.
- Manipulation and interpretation of both spatial and alphanumeric data to provide meaningful inputs for a variety of projects.
- Production of thematic maps and graphics.
- Spatial analysis and 3D modelling, including visual and landscape assessments.

Projects Experience

STRATEGIC PLANNING PROJECTS

Provision of database, analysis and GIS mapping support for the following:

- Water Plan 2025: Socio-economic, Land Use and Demographic Update – Umgeni Water (KwaZulu-Natal).
- Eskom Strategic Plan – Eskom (KwaZulu-Natal).
- Umgeni Water Quality Management Plan – Department of Water Affairs and Umgeni Water (KwaZulu-Natal).
- KwaZulu-Natal Development Perspective – Department of Economic Affairs (KwaZulu-Natal).
- Indlovu Regional Integrated Plan – Department of Local Government and Housing (KwaZulu-Natal).
- Umgeni Water and Sanitation Needs Analysis – Umgeni Water (KwaZulu-Natal).
- Metro Waste Water Management Plan – Durban Waste Water management, City of Durban (KwaZulu-Natal).
- KwaZulu-Natal Electrification Prioritisation Model – Eskom (KwaZulu-Natal).
- Umzinyathi Regional Development Plan – Umzinyathi Regional Council (KwaZulu-Natal).
- GIS driven model to assess future population growth in quaternary catchments under different growth scenarios – Umgeni Water (KwaZulu-Natal).
- Ubombo Master Water Plan Study – Mhlathuze Water Board (KwaZulu-Natal).
- Development strategy for local economic development and social reconstruction of the Germiston-Daveyton Activity Corridor – Eastern Gauteng Services Council (Gauteng).
- Structure Plan for the Cities of Beira and Dondo in Mozambique – World Bank.
- Land identification study for low cost housing in the Indlovu Region – Indlovu Regional Council (KwaZulu-Natal).
- Local Development Plan for Manzini – Manzini Town Council (Swaziland).
- Indlovu Project Prioritisation Model – Indlovu Regional Council (KwaZulu-Natal).
- Structure Plans for the Cities of Ndola and Luanshya - Ministry of Local Government and Housing (Zambia).
- Database development for socio-economic and health indicators arising from Social Impact Assessments conducted for the Lesotho Highlands Development Association – Lesotho.
- Development Plan for the adjacent towns of Kasane and Kazungula - Ministry of Local Government, Land and Housing (Botswana).
- Development Plan for the rural village of Hukuntsi - Ministry of Local Government, Land and Housing (Botswana).
- Provision of data platform for the spatial analysis of water supply, demand and affordability in Bulawayo – City of Bulawayo and NORAIID (Zimbabwe).
- Integrated Development Plans for various District and Local Municipalities including:
 - Nquthu Local Municipality (KwaZulu-Natal)
 - Newcastle Local Municipality (KwaZulu-Natal)
 - Amajuba District Municipality (KwaZulu-Natal)
 - Jozini Local Municipality (KwaZulu-Natal)
 - Umhlabuyalingana Local Municipality (KwaZulu-Natal)
- uMhlathuze Rural Development Initiative – uMhlathuze Local Municipality (KwaZulu-Natal).
- Rural roads identification – uMhlathuze Local Municipality (KwaZulu-Natal).
- Mapungubwe Tourism Initiative – Development Bank (Limpopo Province).
- Northern Cape Tourism Master Plan – Department of Economic Affairs and Tourism (Northern Cape Province).

- Spatial Development Framework for Gert Sibande District Municipality (Mpumalanga) in conjunction with more detailed spatial development frameworks for the 7 Local Municipalities in the District, namely:
 - Albert Luthuli Local Municipality
 - Msukaligwa Local Municipality
 - Mkhondo Local Municipality
 - Pixley Ka Seme Local Municipality
 - Dipaleseng Local Municipality
 - Govan Mbeki Local Municipality
 - Lekwa Local Municipality
- Land Use Management Plans/Systems (LUMS) for various Local Municipalities including:
 - Nkandla Local Municipality (KwaZulu-Natal)
 - Hlabisa Local Municipality (KwaZulu-Natal)
 - uPhongolo Local Municipality (KwaZulu-Natal)
 - uMshwathi Local Municipality
- Spatial Development Framework for uMhlathuze Local Municipality (KwaZulu-Natal).
- Spatial Development Framework for Greater Clarens – Maloti-Drakensberg Transfrontier Park (Free State).
- Local Spatial Development Framework for Brackenhurst and Brackendowns (Region 10) – Ekurhuleni Metropolitan Municipality (Gauteng).
- Housing Sector Plan – Ntambanana Local Municipality (KwaZulu-Natal).
- Land use study for the Johannesburg Inner City Summit and Charter – City of Johannesburg (Gauteng).
- Ezikhawini-Vuindlela Corridor study – uMhlathuze Local Municipality (KwaZulu-Natal).
- Port Durnford and Ezikhawini Rural Node study - uMhlathuze Local Municipality (KwaZulu-Natal).
- Port of Richards Bay Due Diligence Investigation – Transnet
- Jozini Sustainable Development Plan – Jozini Local Municipality (KwaZulu-Natal)
- Spatial Development Framework for Umhlabuyalingana Local Municipality (KwaZulu-Natal)

BUILT INFRASTRUCTURE

- Construction Environmental Management Plan for transmission lines from Zeus substation to Mercury substation – Eskom.
- EIA and EMP for a 9km railway line and water pipeline for manganese mine – Kalagadi Manganese (Northern Cape Province).
- EIA and EMP for 5x 440kV Transmission Lines between Thyspunt (proposed nuclear power station site) and several substations in the Port Elizabeth area – Eskom (Eastern Cape Province).
- Environmental Impact Assessment for turn in lines and substation upgrading for Malelane substation – Eskom (Mpumalanga Province).
- Initial Scoping for the proposed 750km multi petroleum products pipeline from Durban to Gauteng/Mpumalanga – Transnet Pipelines.
- Detailed EIA for multi petroleum products pipeline from Kendall Waltloo, and from Jameson Park to Langtaagte Tanks farms –Transnet Pipelines.
- Environmental Management Plan (operational management plan) including visual impact assessment, noise impact assessment and flight path determination for the commercialization of Skukuza Airport – SANParks (Mpumalanga Province).
- Environmental Management Plan for copper and cobalt mine (Democratic Republic of Congo).
- EIA and Agricultural Feasibility study for Miwani Sugar Mill (Kenya).
- EIAs for Concentrated Solar and Photovoltaic power plants (Northern Cape).

- EIAs for Wind Farms (Northern Cape).
- EIAs for 132kV Distribution Lines in North West Province.

STATE OF THE ENVIRONMENT REPORTING

- 2008 State of the Environment Report for City of Johannesburg.
- Biodiversity Assessment – City of Johannesburg.

STRATEGIC ENVIRONMENTAL ASSESSMENTS AND ENVIRONMENTAL MANAGEMENT FRAMEWORKS

- SEA for Greater Clarens – Maloti-Drakensberg Transfrontier Park (Free State).
- SEA for the Marula Region of the Kruger National Park, SANParks.
- SEA for Thanda Private Game Reserve (KwaZulu-Natal).
- SEA for KwaDukuza Local Municipality (KwaZulu-Natal).
- EMF for proposed Renishaw Estate (KwaZulu-Natal).
- EMF for Mogale City Local Municipality, Mogale City Local Municipality (Gauteng).

WETLAND STUDIES

- Rehabilitation Planning for the Upper Klip River and Klipspruit Catchments, City of Johannesburg (Gauteng).
- Wetland Delineation and Assessment for the proposed Eskom CCGT Power Plant near Majuba Power Station – Eskom (Mpumalanga).

VISUAL IMPACT ASSESSMENTS

- Visual Impact Assessment for the proposed relocation of the Skukuza Conference Centre, SANParks.
- Visual Impact Assessment for the proposed re-commercialisation of the Skukuza Airport.
- Visual Impact Assessment for the proposed development of residential apartments in Ramsgate, KZN.
- Visual Impact Assessment for the redevelopment of the Newmarket Racecourse, Alberton, Gauteng
- Visual Impact Assessment for the Thyspunt Transmission Lines Integration Project
- Visual Impact Assessments for 5 Solar Power Plants in the Northern Cape
- Visual Impact Assessments for 2 Wind Farms in the Northern Cape
- Visual Impact Assessment for Mookodi Integration Project (132kV distribution lines)
- Landscape Character Assessment for Mogale City Environmental Management Framework

CURRICULUM VITAE

Shaun Taylor

Name Shaun Taylor

Profession Environmental Scientist

Name of Firm SiVEST SA (Pty) Ltd

Present Appointment Environmental Scientist:
Environmental Division

Date of Birth 02 February 1984

ID Number 8402025020082

Nationality South African



Education

MSc – Aquatic Health
 BSc (Hons) – Geography & Environmental Studies
 BA – Geography and Environmental Science

Professional Qualifications

- MSc – Aquatic Health, Johannesburg University
Research Project: The physico-chemical and biological characteristics of selected seasonal pans in the Kruger National Park, South Africa
- BSc (Hons) – Geography & Environmental Studies, Witwatersrand University (First class)
Research Project: Sitatunga Habitat Suitability in the Okavango Delta, Botswana
- BA – Geography & Environmental Science, Monash University South Africa (Distinction)
- Certification in Wetland Delineation and Rehabilitation Training Course from the School of Continuing Education, University of Pretoria

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Excellent	Excellent	Excellent
Afrikaans	Fair	Fair	Fair

Employment Record

Oct 2010 – Present (Full-time) SiVEST SA (Pty) Ltd Environmental Division – Environmental Scientist

Oct 2009 – Mar 2010 (Part-time) Envirokey cc – Junior Environmental Consultant and GIS support

Aug 2007 – Sep 2009 (Part-time) Holgate, Meyer and Associates Environmental Management Services – Junior Environmental Consultant

Key Experience

Shaun joined SiVEST in October 2010 and is based in the Johannesburg office in the capacity of an Environmental Scientist.

Shaun has a passion for working in the environmental and water (wetlands) field. From an environmental management perspective, Shaun has completed a number of environmental impact assessments, basic assessments, strategic environmental assessments, environmental management plans/programmes, exemption applications, amendment applications and conducted environmental auditing. Within the water field, Shaun has undertaken water use licensing (WUL) and WUL compliance monitoring for various developments. In terms of specialist work, Shaun has completed numerous wetland and riparian assessments for renewable energy projects, linear projects as well as site specific projects. Shaun has also undertaken several wetland rehabilitation plans for developments.

Through his time at SiVEST, Shaun has acquired the following skills:

- Excellent computer skills (Word, excel, powerpoint etc.);
- Excellent proposal and report writing skills;
- Environmental Impact Assessments;
- Environmental Management Plans/Programmes;
- Environmental Compliance and Auditing;
- Environmental Amendment and Exemption Applications;
- Wetland and riparian assessment techniques (including functional assessments);
- Wetland Rehabilitation Plans;
- Water Use License Applications.

Projects Experience

Shaun is responsible for the following activities: conducting EIA, BA and WULA processes, undertaking amendment and exemption applications, general project management, report writing, proposal writing, invoicing, conducting specialist riparian/wetland delineation and functional assessments, environmental and water related compliance monitoring and auditing. Current and completed projects / activities are outlined in detail below.

STRATEGIC ENVIRONMENTAL ASSESSMENTS

- Molemole Local Municipality Strategic Environmental Assessment, Limpopo Province (2014/2015);
- Blouberg Local Municipality Strategic Environmental Assessment, Limpopo Province (2015/2016).

ENVIRONMENTAL IMPACT ASSESSMENTS

- Mookodi Integration Project Environmental Impact Assessment (2011/2012);
- Noupoort Wind Farm, Northern Cape Province (2011/2012);
- Loeriesfontein Wind Farm and PV Plant, Northern Cape Province (2011/2012);
- Renosterberg Wind Farm and PV Plant near De Aar, Northern Cape Province (2012).

BASIC ASSESSMENTS

- Proposed Installation of a 500m³ Bulk Storage Fuel Oil Tank at Grootvlei Power Station, Mpumalanga Province (2011/2012);
- Proposed development of a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province (2012);

CURRICULUM VITAE

Shaun Taylor

- Proposed development of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province (2012);
- Frankfort Strengthening Project: 88kV Power Line from Heilbron (via Frankfort) to Villiers, Free State Province (2013);
- Wilger 132kV Overhead Distribution Power Line, Northern Cape Province (2013/2014);
- Limestone 1 – 132kV Overhead Distribution Power Line, Northern Cape Province (2013/2014);
- Limestone 2 – 132kV Overhead Distribution Power Line, Northern Cape Province (2013/2014);
- Proposed Tweespruit to Welroux Power Line and Substations, Free State Province (2014/2015);
- Sir Lowry's Pass River Flood Alleviation Project, Western Cape Province (2014/2015);
- Loeriesfontein 70MW Photovoltaic and 132kV Power Line, Northern Cape Province (2015/2016).

ENVIRONMENTAL MANAGEMENT PLANS / PROGRAMMES

- Eskom Thyspunt Nuclear Integration Project Environmental Management Plan – Transmission Infrastructure (2011);
- Eskom Thyspunt Nuclear Integration Project Environmental Management Plan – Substations (2011);
- Mookodi Integration Project Environmental Management Plan – Transmission Infrastructure and Substations (2011/12);
- Noupoot Wind Farm Environmental Management Programme (2012);
- Environmental Management Programme for a 500m³ Bulk Storage Fuel Oil Tank at Grootvlei Power Station (2012);
- Environmental Management Programme for a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province (2012);
- Environmental Management Programme for a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province (2012);
- Karowe Diamond Mine Environmental Management Plan Review and Update, Boteti District, Botswana (2012);
- Environmental Management Programme for the Frankfort Strengthening Project: 88kV power line from Heilbron (via Frankfort) to Villiers, Free State Province (2013);
- Environmental Management Programme for the Wilger Photovoltaic 132kV Overhead Distribution Power Line, Northern Cape Province (2013);
- Environmental Management Programme for the Limestone 1 Photovoltaic – 132kV Overhead Distribution Power Line, Northern Cape Province (2013);
- Environmental Management Programme for the Limestone 2 Concentrated Solar Power – 132kV Overhead Distribution Power Line, Northern Cape Province (2013);
- Final Environmental Management Programme for the Khobab 140MW Wind Farm, Northern Cape Province (2014);
- Final Environmental Management Programme for the Loeriesfontein 140MW Wind Farm, Northern Cape Province (2014);
- Final Environmental Management Programme for the Noupoot 80MW Wind Farm, Northern Cape Province (2014);
- Environmental Management Programme for the Tweespruit to Welroux 132kV Power Line and Substations, Free State Province (2014/2015);
- Environmental Management Programme for the Loeriesfontein 70MW Photovoltaic and 132kV Power Line, Northern Cape Province (2015/2016).

AMENDMENT APPLICATIONS

- Loeriesfontein 140MW Wind Farm, Northern Cape Province: Substantive and Minor Amendments (2013/2014);
- Khobab 140MW Wind Farm, Northern Cape Province: Substantive and Minor Amendments (2013/2014);

CURRICULUM VITAE

Shaun Taylor

- Loeriesfontein 50MW Wind Farm, Northern Cape Province: Environmental Authorisation Minor Amendments (2013/2014);
- Loeriesfontein 100MW Solar Photovoltaic Plant, Northern Cape Province: Environmental Authorisation Minor Amendments (2013/2014);
- Noupoot 188MW Wind Farm, Northern Cape Province: Environmental Authorisation Minor Amendments (2013/2014);
- Loeriesfontein 132kV Power Line, Northern Cape Province: Environmental Authorisation Minor Amendment (2015).

ENVIRONMENTAL CONSTRAINTS\FATAL FLAWS

- Social Housing Projects in Sasolburg and Secunda Final Environmental Constraints Analysis Report (2011);
- Establishment of Wind Farms in Northern and Eastern Cape Provinces Environmental Constraints Analysis Report (2011).

ENVIRONMENTAL AND WATER USE LICENSE COMPLIANCE AUDITING

- Environmental Compliance Auditing for the Nigel Substation to Jameson Park (Inland Terminal 2) 88kV power lines – Construction Phase (2011);
- Water Use License Compliance Auditing for Grootvlei Power Station, Mpumalanga Province, South Africa (2012);
- Environmental Compliance Auditing for the Meadow Feeds Standerton Broiler Feed Mill, Mpumalanga Province (2012/2013);
- Kusile Power Station Armcors Water Use License Compliance Audit, Mpumalanga Province (2014 & 2015);
- Kusile Power Station Ash Dump Water Use License Compliance Audit, Mpumalanga Province (2014 & 2015);
- Kusile Power Station Pollution Dams Water Use License Compliance Audit, Mpumalanga Province (2014 & 2015);
- Kusile Power Station Stream Diversion and Water Pipeline Crossings Water Use License Compliance Audit, Mpumalanga Province (2014 & 2015);
- Kusile Power Station Geotechnical Water Use License Compliance Audit, Mpumalanga Province (2015);
- Ga-rankuwa 11kV Underground Power Cable Water Use License Compliance Audit, Gauteng Province (2015/2016);
- Transnet Rail Water Use License Compliance Audit, Northern Cape Province (2014, 2015 & 2016).

WATER USE LICENSES

- Integrated Water Use License Application for the Construction of a CSP and CPV/ PV Plant in De Aar, Northern Cape Province of South Africa (2010);
- Water Use License for Ga-rankuwa Substation, Gauteng Province (2013);
- Water Use License for Klevebank to Dalkieth 88kV Power Line, Gauteng Province (2013);
- Water Use License Application for the Frankfort Strengthening Project: 88kV Power Line from Heilbron (via Frankfort) to Villiers, Free State Province (2014/2015);
- Water Use Licensing for the Integrated Polokwane Rapid Public Transport Network, Limpopo Province (2014/2015);
- Water Use License for the Rooipunt Concentrated Solar Power Project, Northern Cape Province (2015);
- Water Use License for the Katulo Tsatsi Solar Park, Northern Cape Province (2015);
- Water Use License for the Limestone Concentrated Solar Power Project, Northern Cape Province (2015);

- Water Use License for the Wilger Photovoltaic Project, Northern Cape Province (2015);
- Water Use License for the Hertzogville Solar Park, Free-State Province (2015);
- Water Use License for the Dwarsrug Wind Farm, Northern Cape Province (2015);
- Water Use License for the Loeriesfontein 70MW Photovoltaic and 132kV Power Line Project, Northern Cape Province (2015).

WETLAND AND RIPARIAN DELINEATION AND FUNCTIONAL ASSESSMENTS

- Construction of a Wind Farm in Noupoot, Northern Cape Province, South Africa: Surface Water Report – Scoping Phase Assessment (2010);
- Construction of a Wind Farm in Prieska, Northern Cape Province, South Africa: Surface Water Report – Scoping Phase Assessment (2010);
- Construction of a Wind Farm in Loeriesfontein, Northern Cape Province, South Africa: Surface Water Report – Scoping Phase Assessment (2010);
- Construction of a 132KV Distribution Line from the Kudu Substation to Dorstfontein Substation in Mpumalanga Province: Surface Water Impact Assessment (2010);
- EIA for the Thyspunt Transmission Lines Integration Project: Surface Water Impact Assessment Report – EIA – Northern Corridor: Eastern Cape Province (2011);
- EIA for the Thyspunt Transmission Lines Integration Project: Surface Water Impact Assessment Report – EIA – Southern Corridor: Eastern Cape Province (2011);
- Construction of a CSP and a CPV/ PV Plant in De Aar, Northern Cape Province, South Africa – Surface Water Assessment – Scoping Phase Assessment (2011);
- Environmental Management Framework for the Mogale City Local Municipality Surface Water Report – Desired State Report: Gauteng Province (2011);
- Proposed Township Development on the Remainder of Portion 27 of the Farm Middelburg and Townsland 287 JS, Mpumalanga Province: Surface Water Assessment (2011);
- Construction of a CSP and a CPV/ PV Plant in De Aar, Northern Cape Province, South Africa: Surface Water Impact Assessment (2011);
- Construction of a CSP and a CPV/ PV Plant in Kimberley, Northern Cape Province, South Africa: Surface Water Impact Assessment (2011);
- Proposed Mixed Use Industrial Township Development in the Daspoort Area of Tshwane, Gauteng Province, South Africa: Surface Water Impact Assessment (2011);
- Westrand Strengthening Project from Westgate Substation to Hera Substation and Westgate Substation Extension, Gauteng Province, South Africa (2011);
- Mookodi Integration Project 2 Basic Assessment Surface Water Impact Assessment, North West Province, South Africa (2012);
- Wetland Site Investigation Report for Arundo Estate in the Midrand Area, Gauteng Province, South Africa (2011);
- Construction of a Gabion Structure at Waterval Substation in the Midrand Area, Gauteng Province, South Africa: Surface Water Impact Assessment (2011);
- Proposed Construction of a Single 400kV Power Line from Borutho to Nzhlele, North West Province, South Africa: Scoping and Impact Surface Water Assessment (2011/2012);
- Proposed Construction of an 88kV Power Line at Palmridge in the Ekurhuleni Metropolitan Municipality, Gauteng Province, South Africa: Surface Water Impact Assessment (2011);
- Proposed Construction of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province, South Africa: Surface Water Impact Assessment (2012);
- Proposed Rebuilding of a 88kV Power Line from Henneman Substation to Serfontein Substation near Kroonstad, Free State Province, South Africa: Surface Water Impact and Eco-Services Functional Assessment (2012);
- Proposed Deconstruction and Construction of an 11kV Power Line near Delmas, Mpumalanga Province, South Africa: Wetland Delineation, Impact, Functional Assessment and Rehabilitation Plan (2012);
- Proposed Construction of a Solar Photovoltaic Power Plant near De Aar, Northern Cape Province, South Africa: Surface Water Scoping Assessment (2012);

-
- Proposed Construction of a Wind Farm near De Aar, Northern Cape Province: Surface Water Scoping Assessment (2012);
 - Proposed Construction of a Low Cost Housing Development in the Soutpan area of Tshwane, Gauteng Province, South Africa: Wetland Assessment (2012);
 - Proposed Construction of a 132kV Power Line near Kimberley, Northern Cape Province: Surface Water Assessment (2012);
 - Proposed Extension of Delmas Substation and Associated Power Lines, Mpumalanga Province, South Africa: Wetland Delineation, Impact, Functional Assessment and Rehabilitation Plan (2012);
 - Proposed Construction of a Substation in the Midrand area of Gauteng Province: Wetland Delineation and Impact Assessment (2012);
 - Construction of an 88kV Power Line at Lochvaal Kudu in the Emfuleni Municipality, Gauteng Province: Surface Water Impact Assessment and Rehabilitation Plan (2012);
 - Proposed construction of an 88kV Power Line from Klevebank Substation to Dalkeith Substation, Gauteng Province: Wetland and Riparian Delineation, Impact, Functional Assessment and Rehabilitation Plan (2012/2013);
 - Proposed Construction of an 88kV Power Line from Heilbron Substation to Villiers Substation, Free State Province: Surface Water Impact Assessment (2013);
 - Proposed Construction of a 132kV Power Line, Substation and the Extension of Homestead Substation Associated with the 75MW Concentrating Photovoltaic (CPV) / Photovoltaic (PV) Plant (PV 3) on the Farm Droogfontein in Kimberley, Northern Cape Province: Surface Water Assessment (2013);
 - Moddershaft Underground to Overhead Cable Replacement of an 11kV Power Line from Moddershaft Substation to a Minisub near Anzac, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Construction of an 11kV Underground Power Cable from Civic Centre to Zola Substation, Gauteng Province: Wetland Assessment (2013);
 - Proposed Construction of a Substation on Portion 265 Randjesfontein 405-JR, Gauteng Province; Wetland Delineation and Impact Assessment (2013);
 - Proposed Re-build of a Section of the Mathibestad Danhauser 33kV Power Line Network, North West Province: Wetland Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Mathibestad-Danhauser Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Mothutlung North Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Mothutlung South Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Nonyane Madidi North Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Nonyane Swartdam Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Rebuild of a Section of the Existing 33kV Pelly Klipdrift Network, Gauteng and North West Provinces: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Zonderwater Kraal Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Hammanskraal Lusthof Power Line Network, Gauteng Province: Surface Water Impact Assessment (2013);
 - Proposed Re-build of a Section of the Existing 33kV Klipgat Circle Power Line Network, Gauteng Province: Wetland Assessment (2013);
 - Proposed Re-build of Sections of the Existing 33kV Erasmus Aviva Power Line Network, Gauteng Province: Surface Water Assessment (2013);
 - Proposed Construction of an 11kV Underground Power Cable at the Ga-Rankuwa Substation, Gauteng Province: Wetland Assessment (2013);
 - Mamatwan Manganese Mine, Northern Cape Province: Surface Water Assessment (2014);

-
- Two 5MW Photovoltaic Plants, Free State Province: Surface Water Assessment (2014);
 - Dwarsrug Wind Farm, Northern Cape Province: Surface Water Assessment (2014);
 - Manzimtoti Sewer Line Project, Kwa-Zulu Natal Province: Surface Water Assessment (2014);
 - Compensation Flats Development, Kwa-Zulu Natal Province: Surface Water Assessment (2014);
 - Tinley Manor South Road Development, Kwa-Zulu Natal Province: Surface Water Assessment (2014);
 - Ntuzuma Sewer Line Project, Kwa-Zulu Natal Province: Surface Water Assessment (2014);
 - Esphiva Sewer Line Project, Kwa-Zulu Natal Province: Surface Water Assessment (2014);
 - Frankfort 132kV Power Line Wetland Walk-down Assessment, Free State Province (2014);
 - Proposed Construction of the Esphiva Water Pipeline near Ulundi, KwaZulu-Natal Province: Surface Water Assessment (2014);
 - Grootvlei Power Station Wetland Assessment, Mpumalanga Province (2014/2015);
 - Proposed Construction of the Embangweni and Bhekabantu Irrigation Schemes, KwaZulu-Natal Province: Wetland and Aquatic Assessment (2015);
 - Proposed Construction of the Nondabuya and Khwehle Primary Agriculture Schemes, KwaZulu-Natal Province: Wetland and Aquatic Assessment (2015);
 - Proposed Expansion of the Makhathini Irrigation Scheme, KwaZulu-Natal Province: Wetland and Aquatic Assessment (2015);
 - Proposed Construction of the Mbaliyezwe Irrigation Schemes, KwaZulu-Natal Province: Wetland and Aquatic Assessment (2015);
 - Proposed Mixed Use Development on the Remainder of Portion 27 of the Farm Middelburg Town and Townlands 287 JS, Steve Tshwete Local Municipality in the Mpumalanga Province: Wetland Assessment (2015);
 - Proposed Construction of Two Power Lines and Two Substations for the Mainstream Wind Facilities near Beaufort West, Western Cape Province: Surface Water Assessment (2015);
 - Proposed eThekweni Integrated Rapid Transport Network (IRPTN) – Bus Rapid Transport (BRT) Phase 1: Route C1A, KwaZulu-Natal Province: Wetland Assessment (2015);
 - Proposed Coal Railway Siding at the Welgedacht Marshalling Yard and associated Milder Road Upgrade near Springs, Gauteng Province: Wetland Assessment (2015);
 - Proposed Development of a 22kV Medium Voltage Power Line in Mofofutso, North West Province: Surface Water Assessment (2015);
 - Mookodi Integration Power Line Project, North West Province: Wetland Walk-down Assessment (2015);
 - Proposed Construction of a Coal Loading Facility within the existing Bronkhorstspuit Railway Siding near Bronkhorstspuit, Gauteng Province (2015);
 - Proposed Construction of the Two 75MW Tlisitseng Solar Photovoltaic Energy Facilities near Lichtenburg, North West Province: Surface Water Assessment (2015);
 - Proposed Construction of the Tlisitseng Solar Substation and associated 400kV Power Line near Lichtenburg, North West Province: Surface Water Assessment (2015);
 - Proposed Construction of the Two 75MW Sendawo Solar Photovoltaic Energy Facilities near Lichtenburg, North West Province: Surface Water Assessment (2015);
 - Proposed Construction of the Sendawo Solar Substation and associated 400kV Power Line near Lichtenburg, North West Province: Surface Water Assessment (2015);
 - Proposed Construction of a 75MW Solar Photovoltaic Power Plant near Dennilton, Limpopo Province: Surface Water Assessment (2015);
 - Proposed Construction of the Helena 1, 2 & 3 Photovoltaic Energy Facilities near Copperton, Northern Cape Province: Surface Water Assessment (2015);
 - Proposed Construction of a 70MW Photovoltaic Facility and 132kV Power Line near Loeriesfontein, Northern Cape Province: Surface Water Assessment (2015);
 - Proposed Construction of the Eureka West 140MW Wind Farm near Copperton, Northern Cape Province: Surface Water Assessment (2016);
 - Proposed Construction of the Eureka East 140MW Wind Farm near Copperton, Northern Cape Province: Surface Water Assessment (2016);

CURRICULUM VITAE

Shaun Taylor

- Proposed Construction of the Eureka 132kV Power Line near Copperton, Northern Cape Province: Surface Water Assessment (2016);
- Proposed Construction of the Aletta 140MW Wind Farm near Copperton, Northern Cape Province: Surface Water Assessment (2016).

WETLAND AND RIPARIAN REHABILITATION / POST-REHABILITATION / AUDITING ASSESSMENTS

- Post-rehabilitation Assessment of Three Wetland Crossing Sites for Chemwes (Pty) Ltd for the Re-working of a Tailings Dam Project near Stilfontein, North West Province (2011);
- Fourways 22kV Feeder Cable Wetland and River Rehabilitation Plan (2011);
- Post-rehabilitation Assessment of the Inland New Multi-Purpose Pipeline in the Mpumalanga and Gauteng Provinces (2012);
- John Ross Highway Wetland Rehabilitation Plan, KwaZulu-Natal Province (2014);
- Proposed eThekweni Integrated Rapid Transport Network (IRPTN) – Bus Rapid Transport (BRT) Phase 1: Route C1A, KwaZulu-Natal Province: Wetland and Riparian Rehabilitation Plan (2015).

ENVIROKEY CC - JUNIOR ENVIRONMENTAL CONSULTANT AND GIS SUPPORT - OCT 2009 – MAR 2010

Responsible for managing basic assessments, report writing, conducting specialist wetland assessments, auditing procedures and GIS mapping. Full list of activities completed available on request.

JUNIOR ENVIRONMENTAL CONSULTANT AUG 2007 – SEP 2009

Responsible for managing basic assessments, report writing, conducting specialist wetland assessments, environmental auditing procedures and GIS mapping. Full list of activities completed available on request.

Conferences and Publications

Taylor, S. R., 2008: A Critical Review of Strategic Environmental Assessment in South Africa and looking towards Future Considerations, presented at the South African Students Geography Conference, University of Cape Town, Cape Town.

Academic and Work Related Achievements

- Awarded Monash Dean's recognition award for outstanding academic results for second semester of 2006;
- Awarded Monash Dean's recognition award for outstanding academic results for first semester of 2007;
- Awarded Monash Dean's recognition award for outstanding academic results for second semester of 2007;
- Awarded Golden Key membership and certificate to the International Honours Society for outstanding academic achievements in undergraduate studies for Monash 2008;
- Awarded Study Sponsorship from Holgate, Meyer and Associates for Honours study in 2008/09;
- Awarded Certificate of Merit from University of Witwatersrand for outstanding work for the course of Honours in 2009/10;
- Awarded Merit Bursary for MSc from the University of Johannesburg 2010 for excellent academic results;
- Numerous short-course certificates (grass identification, wildflower identification, veld management, wetland buffer assessments and water use licensing).

CURRICULUM VITAE

Kelly Tucker

Name	Kelly Tucker
Profession	Environmental Practitioner
Name of Firm	SiVEST SA (Pty) Ltd
Present Appointment	Divisional Manager: Environmental Gauteng Division
Years with Firm	5 Years
Date of Birth	17 April 1980
ID No.	8004170084085
Nationality	South African



Education

Northcliff High School (1993 – 1997),
Rand Afrikaans University (1998-2002),
Damelin (2005)

Professional Qualifications

B.Sc Earth Sciences (1998 – 2000)
B.Sc. Honours Geography and Environmental Management (2001)
M.Sc. Environmental Management (2002)
Diploma in Advanced Project Management (Damelin 2005)

Employment Record

Apr 2015 - current	Divisional Manager - SiVEST SA (Pty) Ltd - Environmental Division
Feb 2011 – Mar 2015	Senior Environmental Practitioner – SiVEST SA (Pty) Ltd – Environmental Division
May 2008 – Nov 2010	Kazakhmys Services Limited – Environmental Manager. Environmental Management, related to the plans to develop two major (Greenfield) open pit copper/molybdenum mines with onsite concentrators in Kazakhstan. The International ESIA process and the Local Kazakh OVOS process. Managed the Environmental Department as well as the local and international consultants. Responsibilities included guidance and coordination of the owner's team through PreFeasibility and Feasibility Phases.
Aug 2007 – Mar 2008	Parson Brinckerhoff (Pty) Ltd - Environmental Team Leader. Environmental Team Leader responsible for various EIAs for the development of numerous energy related projects within South Africa and Botswana, namely coal-fired power stations and electrical transmission power lines. Tasks included establishment of the division, recruiting junior and senior environmental consultants, marketing and business development of the new environmental division, client liaison, financial, programme and staff management and managing and contributing to the drafting of Environmental Impact Reports.

CURRICULUM VITAE

Kelly Tucker

Sep 2005 – July 2007	Bohlweki Environmental (Pty) Ltd a group of SSI / RHDHV – Environmental Associate. An environmental consultant active in Environmental Impact Assessments, Environmental Monitoring, Environmental Management Programmes and Environmental Management Systems
June 2004 – Aug2005	Cymbian Enviro-Social Consulting Services – Junior Environmental Scientist
Jan 2003 – May 2004	EcoSat Environmental Services Group – Junior Environmental Consultant

Language Proficiency

LANGUAGE	SPEAK	READ	WRITE
English	Fluent	Fluent	Fluent
Afrikaans	Fair	Good	Fair

Key Experience

Kelly joined SiVEST in February 2011 and is based in the Johannesburg Office in the capacity of a Senior Environmental Practitioner. Kelly is an Environmental Scientist with 10 years' experience across various sectors. She specialises in the overall management and compilation of Environmental Impact Assessments (EIAs) and Environmental Management Programmes (EMPs) primarily related to mining, energy generation and electrical transmission projects. She furthermore has been involved in undertaking and managing Public Participation Processes, Consultation, Environmental Scans and Fatal Flaw / Feasibility Studies and independent review of environmental projects. From a business administration side, Kelly is keenly involved in the financial performance, workload and resource planning, quality management and proposal administration for the Johannesburg Environmental Division. Kelly is also heavy involved in business development and marketing of the SiVEST environmental services.

Kelly has extensive knowledge of the South African Environmental legislation as well as World Bank Guidelines and Equator Principles. She has been involved in several projects to which these skills have been applied.

Skills include:

- Environmental Impact Assessment
- Public Participation
- Environmental Due Diligence
- Environmental Management Plans and auditing
- Project Management (MS Project)
- Strategic Environmental Planning
- Environmental Compliance Monitoring
- Pre-Acquisition Auditing
- Environmental Training

Internationally, Kelly has work experience in the following countries:

- Kazakhstan
- Botswana
- Swaziland
- Mozambique
- Madagascar
- Australia

Project Experience

ENVIRONMENTAL MANAGEMENT AND IMPACT ASSESSMENT

- ESIA for the Philco 3000MW Wind Energy Facility near Richmond in the Northern Cape (2016 – Current)
- Hybrid Gold – Environmental Legislative Review and section 24G application (2015)
- CAT- WWL Environmental Legislative Review (2015)
- Lombardy East property Development – Environmental Screening Assessment (2014 – 2015)
- Transnet Coal Link 8 x Basic Assessments for Powerlines for the Ermelo-Richards Bay Coal Line Upgrade (2014 – 2015)
- Colenso Power EIA and Mining Application for new Coal fired power station and Coal mine in Coleso near Ladysmith in KwaZulu Natal (2013 – current).
- Basic Assessment and Waste License Application for the proposed new Iveco manufacturing plant, Rosslyn, South Africa (2013 – current).
- Environmental Advisory Services for the Moloto Development Corridor (MDC) Project which is located between the City of Tshwane Local municipality in Gauteng Province and Groblersdal, Limpopo Province, traversing Mpumalanga Province. Project Leader, SMEC/VelaVKE, 2012 - Current
- Environmental Advisory Services for the Moloto Development Corridor (MDC) Project which is located between the City of Tshwane Local municipality in Gauteng Province and Groblersdal, Limpopo Province, traversing Mpumalanga Province. Project Leader, SMEC/VelaVKE, 2012 - Current
- 3 Year Appointment: Environmental Management Compliance for the Integrated Rapid Transit project for Polokwane Municipality. Project Leader, City of Polokwane, 2013 - Current
- EIA and EMP for the proposed 150 MW Renosterberg Wind Energy Company (RWECC) Wind Farm and 75 MW Solar Photovoltaic (PV) Plant, Northern Cape Province. The EIA includes the scoping process and detailed environmental impact assessment. The project includes detailed specialist studies such as social, visual, noise, heritage and biophysical as well as a full public participation process. RWECC, 2012 - Current
- EIA and EMP for the new proposed Nsoko Integrated Sugar Mill and Ethanol Plant for Nsoko Msele, in Swaziland (2013).
- BA and EMP for the Proposed Bulk Storage Fuel Oil Tank installation at the Grootvlei Power Station, Mpumalanga Province (2011)
- BA for the Proposed development of a 19MW Photovoltaic Solar Power Plant near Kimberley, Northern Cape Province (2012);
- BA for the Proposed development of a 19MW Photovoltaic Solar Power Plant near Danielskuil, Northern Cape Province (2012);
- EIA for the proposed Wind Energy and PV Facilities for Mainstream Renewable Power near Loeriesfontein, Northern Cape (2011 – 2012).

CURRICULUM VITAE

Kelly Tucker

- EIA for the proposed Wind Energy and PV Facilities for Mainstream Renewable Power near Prieska, Northern Cape (2011 – 2012).
- EIA for the proposed Wind Energy and PV Facilities for Mainstream Renewable Power near Noupoort, Northern Cape (2011 – 2012).
- EIA for the proposed CSP and PV Facilities for Mainstream Renewable Power near Kimberley, Northern Cape (2011).
- EIA for the proposed CSP and PV Facilities for Mainstream Renewable Power near DeAar, Northern Cape (2011).
- EIA for the proposed CSP and PV Facilities for Mainstream Renewable Power near Loeriesfontein, Northern Cape (2011).
- Thyspunt Nuclear integration 400kV Project - EIA for the Proposed Eskom Transmission lines from Thyspunt to Port Elizabeth, Eastern Cape Province.
- PPP, EIA and EMP for the Eskom 400kV Transmission Power line from Mercury Substation to the Ferrum Substation and on to the Garona Substation , a distance of approximately 570 km. (2005 – 2007)
- EIA, PPP and EMP for the Petronet New Multi-Products Pipeline (NMPP) from Durban to Johannesburg, a distance of approximately 800 km.(2005 – 2007) Kelly was the Project Manager for the Social work package on this project.
- EIA, PPP and EMP for the Eskom Generation: Steelpoort Pumped Storage Scheme Project (2006 – 2007). This is an Eskom Generation project and Kelly played the role of Project manager for the EIA on this project
- Iveco South Africa – Environmental Legislative Screening for new manufacturing plant in Rosslyn, Gauteng. (2013).
- Tekwana South Africa – Environmental Legislative Screening for new e-waste beneficiation plant in East London IDZ, Eastern Cape (2013).
- Little Green Beverages (PTY) Ltd – Environmental Legislative Screening for manufacturing plant in East London and Johannesburg (2013).
- Environmental Constraints Analysis for four proposed Wind Farm Developments in the Eastern and Northern Cape Provinces for Mainstream Renewable Power SA (2011).
- Umtali Development Managers (PTY) Ltd – Social Housing Projects in Sasolburg and Secunda – Environmental Constraints Analysis (2011).
- Developing an ESIA for the Bozshakol and Ashagay Open Cast Copper Mines to international standards by coordinating and managing a team of International consultants and local experts. This ESIA was undertaken in compliance with the World Bank Guidelines and Equator Principles as well as the the local Kazakh OVOS process.
- Iveco South Africa – Environmental Legislative Screening for new manufacturing plant in Rosslyn, Gauteng. (2013).
- Medupi Power Station, Eskom Generation – Environmental management on site during the

CURRICULUM VITAE

Kelly Tucker

construction phase (2008)

- 400KV Transmission Powerline which is 150km in length for the Botswana Power Corporation in Botswana – Environmental Impact Assessment and Public Participation Process (2008)
- Responsible for assisting the department in being awarded the New Alcoa/Alcan development and plant project in Guinea, West Africa – Community development and Environmental Impact Assessment (2008)
- ArcelorMittal Steel Capacity Expansion Project at the existing Plant, South of Johannesburg, South Africa. This involves an EIA and Public Participation. (2008)
- Impacts and Aspects Register for Transwerk, involved the identification of the aspects and the associated impacts for the Transwerk factory in Germiston (2006)
- SSI: Madagascar Landfill project, included Environmental Screening Report (2006)
- SSI: Pan African Parliament project, included Environmental Screening report (2006)
- Environmental Management Plan for the Grassridge –Poseidon 400kV Transmission Powerline for Eskom Transmission. (2007)
- Update of the EMPR and compilation of the Social and Labour Plan, according to the new Mineral rights act, for Cullinan Diamond Mine; (2005)
- EIA for the upgrade of the Phalaborwa Entrance Gate and Construction of a SAEON Office Park in the Kruger National Park; (2005)
- Site Audits and reporting for the Construction of the SAEON Office Park in the Kruger National Park; (2004 – 2005)
- Project Manager for the EIA process for a housing development based on sustainable development in the Cradle of Humankind, west of Johannesburg; (2004)
- The EIA process, involved mainly in the stakeholder engagement and public participation, for a 25km Dragline walkway for Xstrata Coal South Africa, in Mpumalanga; (2005)
- Project Manager for the scoping process for a housing development in Noordheuwel, Mogale City, west of Johannesburg. (2005)
- EIA for the Clearwater Estates housing development in Boksburg; (2003)
- Involved in the appeal case for the Triple S Service and petrol station in Ermelo (2003 – 2004)
- Scoping process and EMP for the Brits Industrial Water Pipeline; (2003 – 2004)
- Mini Scoping report and EMP for the Upgrade of the Rustenburg Sewage Plant;(2003 – 2004)
- Environmental Management and water monitoring at Cobra Watertech; (2003 – 2004)
- Bulk Water supply pipeline to low cost housing development in Hartebeespoort; (2003 – 2004)
- Clean up and sealing of the floor at the SAPS scrap yard; (2003 – 2004)
- Involved in the project team for the EMPR for President Steyn Gold Mine in Welkom; (2003 – 2004)

CURRICULUM VITAE

Kelly Tucker

- Involved in the project team for the EMPR for ERPM Gold Mine in the East of Johannesburg; (2003 – 2004)

Kazakhmys: Environmental Manager June 2008 – Nov 2010

Kazakhmys is a Kazakhstan based copper mining company that is listed on the London Stock Exchange. Kelly Managed the Environmental Management division for Kazakhmys for a period of 3 years. Responsibilities included:

- Environmental Management, related to the plans to develop two major (Greenfield) open pit copper/molybdenum mines with onsite concentrators in Kazakhstan.
- The International ESIA process and the Local Kazakh OVOS applications.
- Managed the Environmental Department and local and international consultants. Responsibilities included guidance and coordination of the owner's team with regards to:
 - Developing an ESIA for the Bozshakol project to international standards by coordinating and managing a team of external consultants and internal experts
 - Developing a plan for development of the ESIA process for Aktogay Project
 - Obtaining OVOS approval for both Bozshakol and Aktogay Copper Mines.
 - Coordinating permitting requirements and approvals from Republic of Kazakhstan local and National agencies
 - Developing internal programs to support international and Kazakh environmental standards for both projects
 - Supervision of the environmental field works
 - Coordination with other Kazakhmys project team members and external consultants to ensure appropriate and rigorous adherence to applicable environmental standards and regulation
 - Communicating and educating both internal and external stakeholders with respect to the projects and their rigorous adherence to high environmental standards

CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. **Proposed Position** : Civil Engineer
2. **Name of Firm** : BVi Consulting Engineers Western Cape (Pty) Ltd
3. **Name of Staff** : Dirk Jacobus Petrus van der Merwe
4. **Date of Birth** : August 1980
- Nationality** : South African

5. Education:

M.Eng Traffic Engineering: University of Stellenbosch (Current)
B.Eng Civil Engineering: University of Stellenbosch (2005)

6. Membership of Professional Associations:

Professional Engineer, (ECSA), Reg. No. 20120186 (2012)
Member of South African Institution of Civil Engineering (SAICE), Reg. No 2012110

7. Other Training:

February 2014: South African Road Federation (SARF),
HDM 4 (Highway Development and Management)

February 2014: South African National Roads Agency SOC Ltd (SANRAL),
Drainage Manual

October 2012: Computational Hydraulics International,
PCSWMM & EPA SWMMS Modeling

October 2012: Consulting Engineers South Africa (CESA),
Handling Projects in a Consulting Engineering Practice

April 2012: South African Institution of Civil Engineering (SAICE)
Geometric Design

August 2011: Consulting Engineers South Africa (CESA),
Delay Disruption & Extension of Time

March 2010: South African Road Federation (SARF),
Contract Documentation

July 2009: South African Road Federation (SARF),
LIC Level – NQF 7

April 2009: South African Road Federation (SARF),
Road Pavement Design

August 2008: University of Stellenbosch,
Flood Hydrology

8. Languages:

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

9. Countries of Work Experience:

South Africa

10. Employment Record:

Dirk has amassed appreciable experience in Geometric design of roads, Pavement Design, Road Construction Supervision and administration, Project Management, Contract Documentation, Civil Services and Transportation Planning.

Period	Employer	Position
June 2009 – Present	ECKON Engineers and Project Managers, Cape Town	Civil Engineer
February 2005 to May 2009	BVi Consulting Engineers, Cape Town	Civil Engineer

11. Experience and Training most pertinent to this assignment:

Project: Various Solar Farm Developments (12)

Transport of Photovoltaic equipment to rural sites – Traffic assessments

Period: 2015 to Current

Position: Traffic Engineer

Key Assignment: Traffic Engineer

Client: Subsolar Energy (Pty) Ltd

Project: Blaauwberg Development

Blaauwberg Development Area Class 2 & 3 Roads master planning and access management

Period: 2014 to Current

Position: Civil Engineer

Key Assignment: Traffic Engineering and planning

Client: City of Cape Town /Garden Cities

Project: N002-230-2014/1F

Periodic Maintenance of National Route 2 Section 23 from Mzinto River (km32.6) to Mkomazi River (km54.0)

Period: 2013 to Current

Position: Civil Engineer

Key Assignment: Design Engineer

Client: South African National Roads Agency SOC Ltd (SANRAL)

Project: N010-110-2012/1F

Periodic Maintenance (Repair & Reseal) of National Route 10 Section 11 between Groblershoop (km0.00) and Lambrechtsdrift (km61.10)

Period: 2011 to 2012

Position: Civil Engineer

Key Assignment: Design Engineer & Drawing Supervision

Client: South African National Roads Agency SOC Ltd (SANRAL)

Project: N010-110-2011/1F

The Reseal of National Route 10 Section 11 from Lambrechtstroom (km61.0) to Uppington (km116.68)

Period: 2010 to 2012

Position: Civil Engineer

Key Assignment: Design Engineer & Drawing Supervision

Client: South African National Roads Agency SOC Ltd (SANRAL)

Project: N001-160-2014/2F

Design & Construction Monitoring of the Rehabilitation & Upgrading to Dual Carriageway on National Route 1, Section 16 between Winburg Interchange (Km 78.8) & the Intersection to Winburg Station (Km89.0)

Period: 2013 to Current

Position: Civil Engineer

Key Assignment: Design Engineer, Traffic Engineering & Economic viability

Client: South African National Roads Agency SOC Ltd (SANRAL)

Project: N006-050-2014/1F

The Reseal of National Route N6 Section 5 from Kalkoenskrans (Km33) to Aliwal North (Km55)

Period: 2013 to 2014

Position: Civil Engineer

Key Assignment: Design Engineer

Client: South African National Roads Agency SOC Ltd (SANRAL)

Project: Hondeklipbaai Phase 1

Upgrading of DR2963 and MR739 from National Road N7 to Hondeklipbaai

Period: 2010 to Current

Position: Civil Engineer

Key Assignment: Geometric Design & Drawing Supervision

Client: Northern Cape Province: Department of Roads Public Works

Project: Calitzdorp

Rehabilitate Divisional Road 1688 and Surface divisional Road 1699: Calitzdorp - Oudtshoorn

Period: 2011 to Current

Position: Civil Engineer

Key Assignment: Design Engineer

Client: Provincial Government of the Western Cape

Project: Langebaan

Reseal Trunk Road TR77 Section 1: Langebaan - Velddrift

Period: 2011 to 2014

Position: Civil Engineer

Key Assignment: Design Engineer

Client: Provincial Government of the Western Cape

Project: Yzerfontein

The Reseal of Trunk Road 77 Section 1 from Yzerfontein to Langebaan

Period: 2013 to 2016

Position: Civil Engineer

Key Assignment: Design Engineer

Client: Provincial Government of the Western Cape

Project: Vredenburg

Vredenburg-Reseal T23/01 Vredenburg to Velddrift

Period: 2009 to 2011

Position: Civil Engineer

Key Assignment: Project Engineer

Client: Provincial Government of the Western Cape

Project: IRT Infrastructure

Trunk Route Sections, Roadworks & Services in Melkbosstrand & Atlantis

Period: 2009 to 2011

Position: Civil Engineer

Key Assignment: Design Engineer, Drawing Preparation & Project enquiry Management

Client: HHO Africa

Project: Atlantis IRT

Construction of Atlantis Intergrated Rapid Transport Corridor – Blaauwberg Road and R27

Period: 2010 to 2012

Position: Civil Engineer

Key Assignment: Project Administration

Client: HHO Africa

Project: Pinehurst

Pinehurst Phase 5, 6 & 7 Traffic Impact Assessment

Period: 2014 to Current

Position: Civil Engineer

Key Assignment: Traffic Engineering and planning

Client: City of Cape Town /Garden Cities

Project: Berkshire Boulevard

Construction of Berkshire Boulevard, New R27 Intersection and Portion of Sunningdale Drive including Associated Works

Period: 2012 to 2014

Position: Civil Engineer

Key Assignment: Project Leader & Design Engineer

Client: City of Cape Town /Garden Cities

Project: Berkshire Boulevard Wood Drive

Extension of Sunningdale East West Activity Route between R27 & Wood Drive (Berkshire Boulevard)

Period: 2010 to 2011

Position: Civil Engineer

Key Assignment: Design Engineer

Client: City of Cape Town /Garden Cities

12. Certification:


I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (iii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by BVi Consulting Engineers Western Cape (Pty) Ltd continuously for the last seventy (70) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature


Date of Signing 10 August 2016

CURRICULUM VITAE

Paul S van der Merwe

GENERAL

Date of birth: 20 January 1984
Nationality: South African
Marital Status: Married
Languages: Afrikaans (home); English (speak, read, write)
Address: Plot 92 Jakaranda Street
Mikpunt
Klipheuwel
7303
Telephone: 0723179784
Email: paul@mesasolutions.co.za
paulsvdm@gmail.com

UNIVERSITY EDUCATION

March 2011-Nov 2012 **STELLENBOSCH UNIVERSITY**

Studied as a full-time postdoctoral research student funded through the South African Research Chair Initiative (SARCHI). The postdoctoral research's main focus was the SKA Low-Frequency Array (SKALA) and the investigation of various antenna designs and feeding topologies. The work was done in close collaboration with Cambridge University, UK and various other European research institutions such as ASTRON in Dwingeloo, The Netherlands.

Additional work was started in support of the Cape Town SKA office in the development of a real-time transient analyser for the detection and monitoring of radio frequency interference (RFI) around the KAT-7, MeerKAT and SKA sites. It is a broadband system capable of sampling fast changing time domain events as well as provide the corresponding frequency domain results.

Jun 2008 – March 2011 **STELLENBOSCH UNIVERSITY**

Successfully completed the degree of Doctor of Philosophy in Engineering (PhD) which was upgraded from Master of Engineering (MSc) in 2008. Title of dissertation: Cabling and Interfaces for Karoo Array Telescopes: Modelling and Metrology.

The dissertation considers SKA RFI from the cabling and inter-connection perspectives, with the expected infra-structure establishing the parameters of the research. We firstly studied the shielding ability of solid cable trays taking into account the influence of end-terminations and mid-span connections. Comparison between measurements and computational analysis was provided for the various configurations, taking into account high frequency influences. Secondly, we studied the distribution of common mode currents on a number of the KAT-7 radio telescopes in order to determine the requirements of radio frequency interference mitigation measures. This influences, to some extent, the lightning protection policies for each dish. Finally, we examined a more appropriate method to determine the shielding effectiveness provided by the added mitigation measures.

Jan 2007 – Jun 2008 **STELLENBOSCH UNIVERSITY**
Master of Engineering (MSc) in Radio Frequency Interference (RFI) metrology and mitigation for the SKA.
Postgraduate courses completed: *Electromagnetic Compatibility 813*
Microwave Electronics
Computational Electromagnetics

Jan 2003 - Dec 2006 **STELLENBOSCH UNIVERISTY**
Bachelors Degree of Engineering (BEng)
*Distinctions were achieved for the following subjects in the last two years of undergraduate studies: 3rd and 4th year Electronics, Systems and Signals, Energy systems and High Frequency Techniques. The **final year project** entitled, “Phase comparator for monopulse radar receiver” focused on both hardware and software implementation by using a PIC microcontroller to determine the direction of a radar target.*

HIGH SCHOOL EDUCATION

Jan 1998 - Nov 2002 **PAARL GYMNASIUM HIGH SCHOOL**
Senior Certificate
Matriculated in the top 20 of the class

ACADEMIC PUBLICATIONS AND CONFERENCE PRESENTATIONS

Journal

- JP1 *P S van der Merwe, H C Reader, D J Rossouw, “Cable Tray Connections for Electromagnetic Interference (EMI) Mitigation” – accepted by IEEE EMC Transactions.*
- JP2 *P L Kibet, P S van der Merwe, T Ikin, H C Reader, “CAT-7 Cable Evaluation for Square Kilometre Array Analogue Signal Transport – accepted by SAIEE Africa Research Journal.*

Conference

- CP1 *P S van der Merwe and H C Reader, “Modelling and Measurements of Cable Trays for RFI Mitigation”, South African SKA / MeerKAT Project, 2nd Annual Postgraduate Bursary Conference, SA Astronomical Observatory, Cape Town, Nov 2007, presentations available on SKA website: www.ska.ac.za . **Won best MSc presentation award.***
- CP2 *P S van der Merwe and H C Reader, “Interface and cabling characterisation for SKA”, South African SKA / MeerKAT Project, 3rd Annual Postgraduate Bursary Conference, Stellenbosch, Dec 2008, presentations available on SKA website: www.ska.ac.za . **Won best engineering PhD presentation award.***
- CP3 *H C Reader, R H Geschke, P G Wiid, P S van der Merwe, R G Urban, D J Rossouw, “Issues in EMC Metrology and Modelling for Square Kilometre Array Demonstrator”, URSI XXIX General Assembly, Chicago, Illinois, USA, Aug. 7-16, 2008, on conference CD under session AE: EMC Measurements.*
- CP4 *P S van der Merwe and H C Reader, “Cable Trays and Associated Connections”, SAUPEC 2009, Proc. 18th Southern African Univ. Power Eng. Conf, Protea Hotel, Stellenbosch, Jan 2009, paper 20, CD ROM. **Won best presentation award.***

- CP5 *P S van der Merwe and H C Reader, “Investigating EMC policies for the SKA”, South African SKA / MeerKAT Project, 4th Annual Postgraduate Bursary Conference, Stellenbosch, Dec 2009, presentations available on SKA website: www.ska.ac.za . **Won best engineering PhD presentation award.***
- CP6 *P S van der Merwe and H C Reader, “RF Current Audit for KAT-7 Telescope”, South African SKA / MeerKAT Project, 5th Annual Postgraduate Bursary Conference, Stellenbosch, Dec 2010, presentations available on SKA website: www.ska.ac.za . **Won best overall presentation award.***
- CP7 *P G Wiid, A J Otto, P S van der Merwe and H C Reader, “EMI Studies of Lightning Mitigation and Soil Attenuation for KAT-7”, South African IEEE conference, Stellenbosch, April 2011*
- CP8 *P S van der Merwe, A J Otto and H C Reader, “Practical Definition of Interface Barrier Effective Shielding”, 2011 International Conference on Electromagnetics in Advanced Applications (ICEAA),13th Edition, Torino, Italy, September 2011.*

Other publications (Not peer-reviewed)

- GP1 *H C Reader, A J Otto, P G Wiid, P S van der Merwe, P Kibet-Langat, R H Geschke, C van der Merwe and J Andriambelason, “Recent Research Associated with KAT-7 RFI and EMC: Implications for SKA₁”, address given to Astron (Radio Astronomy Institute of the Netherlands), Dwingeloo, The Netherlands, Sept 2010.*
- GP2 *H C Reader, P G Wiid, P S van der Merwe, A J Otto, P Kibet-Langat, R H Geschke, C van der Merwe and J Andriambelason, “Investigations Leading to KAT-7 EMC and RFI Mitigation Policies: Relevance for SKA₁”, address given to Cavendish SKA Group, Cambridge, UK, Nov 2010.*

WORK EXPERIENCE

Jan 2014-Present

MESA SOLUTIONS (PTY) LTD, STELLENBOSCH
Managing Director

Become managing director of MESA Solution along with Dr. Braam Otto. Continue as full-time RFI and EMC consultant to SKA SA. Expand both local and international consulting with an increase in propagational analysis

- Expansion of activities related to the successful deployment of the first MeerKAT telescopes.
- Supports numerous South African companies with successful pre-compliance testing of locally developed products.
- Continue with the EMC training through the presentation of short courses.

MESA PRODUCT SOLUTIONS (PTY) LTD, STELLENBOSCH

Director

Based on development of a real-time transient analyser that I was involved with during my postdoctoral academic career at Stellenbosch University on the, a second sister company to MESA Solutions was started. MESA Product Solutions has the specific focus of developing measurement equipment typically used in the field of RFI and EMC analysis with an African target market. The company has to other directors, Dr. Braam Otto and Mr. Francois Kapp, as well as one full-time and one consulting engineer.

- Development of a variety of radio frequency (RF) measurement equipment on the African market, focussing on stimulating local production.

Jan 2013-Nov 2013

MESA SOLUTIONS (PTY) LTD, STELLENBOSCH

Associate

I started working full-time for MESA Solutions after becoming a shareholder in the company. Because of MESA's role as main RFI and EMC consultant to SKA SA, I started becoming more involved in the professional consultation work, for which my academic experience in related matters proved to be very valuable. MESA's involvement in the field of renewable energy increases especially in relation to the increased demand for power generation to the SKA SA project. The projects include:

- Site inspection of Karoo Array Processing Building for SKA.
- MeerKAT earthing and lighting protection.
- Multiple international measurement campaigns for the characterisation of various renewable energy installation topologies.

March 2012 – Nov 2012

MESA SOLUTIONS (Pty) Ltd, STELLENBOSCH

Consulting Engineer

During my second year of postdoctoral studies at Stellenbosch University, I started working part-time for MESA Solutions, a radio frequency interference (RFI) and electromagnetic compatibility (EMC) specialist consulting company started in 2002. Some of the project during this period include:

- Scanning technology development for the mining industry.
- Interference analysis of antenna coupling on navy vessels.
- Interference measurement and analysis of wind turbines.
- Become involved with presenting EMC fundamentals short course for the training focussing on local industries.

SKILLS, ACTIVITIES AND INTERESTS

- Involved in undergraduate courses as a student assistant from 2007 - 2009.
- Assisted in the presentation of a short course for academics and industry representatives during April 2009
- Member of SAIEE (South African Institute for Electrical Engineers)
- Member of Golden Key Honorary Society
- Contributing author for the Shale Gas Strategic Environmental Assessment

Sept 2009-Oct 2009

JODRELL BANK RADIO ASTRONOMY OBSERVATORY, MANCHESTER, ENGLAND

PhD Research Student

- Spent time investigating 2-PAD aperture array developments for Square Kilometre Array (SKA) in terms of electromagnetic interference and compatibility (EMI/EMC).
- Analysed the gain-chain in order to reduce unwanted oscillations.
- Overall improvement of collaboration between the South African and international SKA development initiatives.

Oct 2009-Nov 2009

ASTRON (RADIO ASTRONOMY INSTITUTE OF THE NETHERLANDS), DWINGELOO, THE NETHERLANDS

PhD Research Student

- Spent time investigating EMBRACE aperture array developments for SKA in terms of electromagnetic interference and compatibility (EMI/EMC).
- Investigated methods to measure system-specific transfer impedance.
- Identified ways to improve system grounding and to reduce interference through unwanted ground loops.
- Attended the SKA Design Study conference in Limelette, Belgium during the first week of Nov 2009.
- Overall improvement of collaboration between the South African and international SKA development initiatives.

PERSONAL DETAILS

I married in October 2013, and moved to a small holding between Durbanville and Malmesbury in the Western Cape during June of 2014. I enjoy the outdoors and love animals. I live an adventurous life centred around our country lifestyle. I particularly enjoy activities such as hiking, mountain-bike riding, fishing and hunting. I travelled through Africa on a month long trip backpacking across Zambia, Malawi and parts of Zimbabwe. It was a very rewarding experience not only because of what I learnt about other cultures, but also how I reacted to being removed from familiar surroundings. I believe one should never stop testing oneself. Being healthy and exercising is another passion of mine. I enjoy cycling in particular mountain biking which I do at least three times a week.

CURRICULUM VITAE – CHRIS VAN ROOYEN

Name of organisation: Chris van Rooyen Consulting
Profession: Ornithological Consultant
Position in Firm: Director/Co-owner
Date of Birth: 30 April 1964
Relevant Experience: 17 years

SPECIALIST FIELD

Ornithological consultant offering specialist advice related to the impact of industrial developments on avifauna, especially in the electricity energy sector.

TERTIARY EDUCATION

1988	B.A. (Law)	Rand Afrikaans University
1991	LLB	Rand Afrikaans University

I work under the supervision of and in association with Albert Froneman (SACNASP Zoological Science Registration number 400177/09) as stipulated by the Natural Scientific Professions Act 27 of 2003.

KEY EXPERIENCE IN ELECTRICITY INDUSTRY

WIND ENERGY SITES

- St Helena Bay, Seeland, Electrawind
- Caledon, Caledon Wind
- Caledon, Langhoogte, SAGIT
- Langebaan, Langfontein, Oelsner Group
- Darling, Kerrifontein Oelsner Group
- Jeffreys Bay, Mainstream
- Ubuntu, Windcurrent
- Bana ba pifhu, Windcurrent
- Coega, Electrawind
- Swellendam, Excelsior, Biotherm
- Vredendal, Inca Energy
- Vredendal, Electrawind
- Morreesburg, Swartberg, Electrawind
- Oyster Bay, Renewable Energies South Africa
- Laingsburg, Spitskopvlakte, Biotherm
- Port Nolloth, Kannikwavlakte, Biotherm
- Vleesbaai, Vleesbaai Independent Power Producer
- Loeriesfontein, Mainstream
- Noupoort, Mainstream
- Indwe, Biotherm
- Pofadder, Mainstream
- Namies, JUWI
- De Aar, Mulilo North
- De Aar, Mulilo South

SOLAR ENERGY SITES:

- Bokpoort, Concentrated Solar Thermal Power (CSP)
- Solar Park, Upington
- Mainstream De Aar PV
- Droogfontein (Kimberley) PV

POWER LINES:

- Chobe 33kV Distribution line
- Athene - Umfolozi 400kV
- Beta-Delphi 400kV
- Cape Strengthening Scheme 765kV
- Flurian-Louis-Trichardt 132kV
- Ghanzi 132kV (Botswana)
- Ikaros 400kV
- Matimba-Witkop 400kV
- Naboomspruit 132kV
- Tabor-Flurian 132kV
- Windhoek - Walvisbaai 220 kV (Namibia)
- Witkop-Overysse 132kV
- Breyten 88kV
- Adis-Phoebus 400kV
- Dhuva-Janus 400kV
- Perseus-Mercury 400kV
- Gravelotte 132kV
- Ikaros 400 kV
- Khanye 132kV (Botswana)
- Moropule – Thamaga 220 kV (Botswana)
- Parys 132kV
- Simplon –Everest 132kV
- Tutuka-Alpha 400kV
- Simplon-Der Brochen 132kV
- Big Tree 132kV
- Mercury-Ferrum-Garona 400kV
- Pebble Rock 132kV
- Reddersburg 132kV
- Thaba Combine 132kV
- Nkomati 132kV
- Louis Trichardt – Musina 132kV
- Endicot 44kV
- Apollo Lepini 400kV
- Tarlton-Spring Farms 132kV
- Kuschke 132kV substation
- Bendstore 66kV Substation and associated lines
- Kuiseb 400kV (Namibia)
- Gyani-Malamulele 132kV
- Watershed 132kV
- Bakone 132kV substation
- Eerstegoud 132kV LILO lines
- Kumba Iron Ore: SWEP - Relocation of Infrastructure
- Kudu Gas Power Station: Associated power lines
- Steenberg Booyse 132kV
- Toulon Pumps 33kV
- Thabatshipi 132kV
- Witkop-Silica 132kV
- Bakubung 132kV
- Nelsriver 132kV
- Rethabiseng 132kV
- Tiilburg 132kV
- and LILO lines
- Stylidrift 132kV
- Taunus – Diepkloof 132kV
- Bighorn NDP 132kV
- Waterkloof 88kV
- Camden – Theta 765kV
- Dhuva – Minerva 400kV Diversion
- Lesedi –Grootpan 132kV
- Waterberg NDP
- Bulgerivier – Dorset 132kV
- Bulgerivier – Toulon 132kV
- Nokeng-Fluorspar 132kV
- Mantsole 132kV
- Tshilamba 132kV
- Thabamooop - Tshebela – Nhlovuko 132kV
- Arthurseat 132kV
- Borutho 132kV MTS
- Grootboom 132kV
- DWAF Steelport 132kV
- Chloe – Gilead 66kV
- Pietersburg – Chloe 66kV
- Tshatane – Lesideng 132kV
- Lesego – Jane Furse 132kV
- DWAF 1 – DWAF 2 132kV
- Pitso 132kV Substation
- Lebowa – Dithabaneng – Boynton LILO 132kV

- Zeus-Perseus 765kV
- Matimba B Integration Project
- Caprivi 350kV DC (Namibia)
- Gerus-Mururani Gate 350kV DC (Namibia)
- Mmamabula 220kV (Botswana)
- Steenberg-Der Brochen 132kV
- Venetia-Paradise T 132kV
- Burgersfort 132kV
- Majuba-Umfolozi 765kV
- Delta 765kV Substation
- Braamhoek 22kV
- Steelpoort Merensky 400kV
- Mmamabula Delta 400kV
- Delta Epsilon 765kV
- Gerus-Zambezi 350kV DC Interconnector: Review of proposed avian mitigation measures for the Okavango and Kwando River crossings
- Giyani 22kV Distribution line
- Liqhobong-Kao 132/11kV distribution power line, Lesotho
- 132kV Leslie – Wildebeest distribution line
- A proposed new 50 kV Spoornet feeder line between Sishen and Saldanha
- Cairns 132kv substation extension and associated power lines
- Pimlico 132kv substation extension and associated power lines
- Gyani 22kV
- Matafin 132kV
- Nkomazi_Fig Tree 132kV
- GaKgapane 66kV
- Knobel Gilead 132kV
- Bochum Knobel 132kV
- Madibeng 132kV
- Witbank Railway Line and associated infrastructure
- Spencer NDP phase 2 (5 lines)
- Akanani 132kV
- Hermes-Dominion Reefs 132kV
- Cape Pensinsula Strengthening Project 400kV
- Magalakwena 132kV
- Benfiosa 132kV
- Dithabaneng 132kV
- Taunus Diepkloof 132kV
- Taunus Doornkop 132kV
- Tweedracht 132kV
- Jane Furse 132kV
- Majeje Sub 132kV
- Tabor Louis Trichardt 132kV
- Riversong 88kV
- Mamatsekele 132kV
- Kabokweni 132kV
- MDPP 400kV Botswana
- Marble Hall NDP 132kV
- Bokmakiere 132kV Substation
- Thulamela 132kV
- Marang 132kV
- Thulamela 132kV
- Merensky 132kV
- Amandla – Makometsane - Moutse 132kV
- Lebatlhane 132kV
- Sun City Substation and associated powerlines
- Solar Park 400kV Integration Project
- Mamatsekele 132kV
- KwaMhlanga 132kV
- Malelane – Buffelspruit 132kV
- Gutshwa 132kV
- Taung-Gold 88kV
- Bredasdorp 66kV
- Vaalkop Dam 88kV
- Freedom Park 88kV
- Winterveld 132kV
- Ohrigstad – Phiring – Lemara 132kV
- Blouwater – Uiekraal 66kV
- Houhoek 400kV substation and LILO lines
- Zandfontein – Carmona 88kV
- Bracken – Roscco 88kV
- Victor 132kV
- Gamma – Kappa 765kV
- Kappa – Omega – Aurora 765kV

POWER STATIONS:

- Open Cycle Gas Turbine Plants & The Associated Transmission Lines & Substation At Atlantis, Western Cape
- Kangra Power Station: Siting Report


OTHER PROJECTS:

- Lizard Point Golf Estate
- Lever Creek Estates
- Leloko Lifestyle Estates
- Vaalowers Residential Development
- Clearwater Estates Grass Owl Impact Study
- Somerset Ext. Grass Owl Study
- Proposed Three Diamonds Trading Mining Project (Portion 9 and 15 of the Farm Blesbokfontein)
- N17 Section: Springs To Leandra –“Borrow Pit 12 And Access Road On (Section 9, 6 And 28 Of The Farm Winterhoek 314 Ir)
- South African Police Services Gauteng Radio Communication System: Portion 136 Of The Farm 528 Jq, Lindley.
- Report for the proposed upgrade and extension of the Zeekoegat Wastewater Treatment Works, Gauteng.
- Bird Impact Assessment for Portion 265 (a portion of Portion 163) of the farm Rietfontein 189-JR, Gauteng.
- Bird Impact Assessment Study for Portions 54 and 55 of the Farm Zwartkop 525 JQ, Gauteng.
- Bird Impact Assessment Study Portions 8 and 36 of the Farm Nootgedacht 534 JQ, Gauteng.
- Shumba’s Rest Bird Impact Assessment Study
- Randfontein Golf Estate Bird Impact Assessment Study
- Zilkaatsnek Wildlife Estate
- Regenstein Communications Tower (Namibia)
- Input into Richards Bay Comparative Risk Assessment Study
- Maquasa West Open Cast Coal Mine
- Glen Erasmia Residential Development, Kempton Park, Gauteng
- Bird Impact Assessment Study, Weltevreden Mine, Mpumalanga
- Bird Impact Assessment Study, Olifantsvlei Cemetery, Johannesburg
- Camden Ash Disposal Facility, Mpumalanga
- Proposed Desalination Project at Mile 6 near Swakopmund, Namibia

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications and experience.

Date: 17 July 2014



Nicolene Venter



Name of firm	Zitholele Consulting
Profession	Senior Public Participation Practitioner
Specialisation	Public Participation
No. of years with firm	2 months
Nationality	South African, ID No. 600421 0065 088

Key Experience

Nicolene has over the past 15 years established herself as an experienced and well recognized public participation practitioner, facilitator and strategic reviewer. She has project managed several high profile public participation projects and excels in not only stakeholder engagements but with humility for street level consultation. Nicolene first formed her own consultancy business in 1997 and joined SIVEST in October 2007, and returned to her own consultancy business in October 2011. She lead public participation and stakeholder engagement projects with insightful strategic thinking to ensure the delivery of highly professional and a target orientated public participation process to her clients as the project dictates. She also has sound knowledge of the Equator Principles especially in terms of the Public Participation Process required for projects that are funded internationally. Nicolene's skills base also includes the facilitation of workshops, public and focus group meetings. As the Public Participation Practitioner, her proven leadership skills ensures the managing, development and motivation of the public participation team to achieve project objectives and to maintain high quality standards.

Professional Registrations

Education	International Association for Public Practitioners (IAP2) (Modules 1 and 2)	IAPP	2009
	Diploma in Public Relations	Public Relations Institute of South Africa	1989
	Higher Secretarial Diploma	Pretoria Technikon	1979

Employment Record

2013 - Present	Zitholele Consulting	Public Participation
----------------	----------------------	----------------------

Project Experience

Mining Projects

Proposed AK6 Diamond Mine	Boteti, Botswana
---------------------------	------------------

Drafting of the Community Consultation Plan for inclusion in the Closure Plan for the updated Environmental Management Plan

Power Plants

Zimbabwe Ethenol Plant

Zimbabwe

Consultation process undertaken for the proposed construction of an ethanol plant in Chisumbanje, Middle Sabie, Zimbabwe in terms of the Zimbabwe's Environmental Management Agency (EMA). Not only did consultation take place with Government Officials, but an intensive consultation process has taken place with the local community.

EIA: Hendrina Ash Dam Expansion

Mpumalanga Province, South Africa

Expansion of Eskom's Hendrina Power Station's Ash Dam Facilities at Pullenshope, Mpumalanga Province

EIA: Wind farms and/or Solar Energy Facilities

Northern Cape Province, South Africa

Proposed construction of wind farms and/or solar energy facilities as proposed by Mainstream Renewable Power South Africa, Northern Cape Province.

Basic Environmental Assessment: Grootvlei Power Station

Mpumalanga Province, South Africa

Proposed installation of an additional 500M3 bulk storage fuel tank at Eskom's Grootvlei power Station, Mpumalanga Province

EIA: Solar Energy Facility

Kimberly, South Africa

(Droogfontein, Kimberley; Kaalplats, Loeriesfontein; Paarde Valley, De Aar). The proposed construction of Concentrating Solar Plants (CSP) and Concentrating/Photovoltaic (CPV/PV) Plants as proposed by Mainstream Renewable Power South Africa in the Northern Cape Province.

Linear Infrastructure

EIA: Aggeneis-Oranjemond

Northern Cape Province, South Africa

Proposed construction of a new 400kV Eskom Transmission Power Line between Aggeneys and Oranjemond, and the expansion of the Aggeneis and Oranjemond Transmission Substations, Northern Cape Province

Impact Phase of EIA: Invubu-Theta

KwaZulu Natal, South Africa

Proposed construction of a double circuit 400kV Eskom Transmission Power Line between Richards Bay and Empangeni, KwaZulu-Natal Province

Basic Environmental Assessment: Westrand

Gauteng Province, South Africa

Proposed construction of a 400kV Eskom Transmission Power Line between Eskom's existing Westrand and Hera Substations, Gauteng Province.

EIA: Mookodi Integration Project

North-West Province, South Africa

Proposed improvement of Eskom's electricity supply network around the Vryburg and Stella, and to supply the proposed Kalplats Mine with electricity, North-West Province.

EIA: Transnet Coallink

KwaZulu Natal & Mpumalanga, South Africa

Transnet's coallink upgrade project from Ermelo to Richard's Bay - Class Application for a number of Basic Assessments and Environmental Impact Assessments (5 Applications), Mpumalanga and KwaZulu-Natal Provinces

EIA: Thyspunt Transmission lines Integration Project

Eastern Cape Province, South Africa

Proposed construction of 5 x 400kV Eskom Transmission power lines between Thyspunt (near Oyster Bay) to Port Elizabeth – 180km in length (Eskom's existing Grassridge & Dedisa Transmission Substations), Port Elizabeth, Eastern Cape Province

EIA: Delarey-Kopela-Phahameng

South Africa

Proposed construction of an Eskom Distribution power line from Delareyville past Kopela to Madibogo.

Basic Environmental Assessment: Malelane Substation

Mpumalanga Province, South Africa

Proposed Construction of a New Malelane Substation and the Proposed Construction of a New Komatipoort-Marathon 275kV Eskom Transmission Power Line Turn-In of approximately 1.5km, Malelane, Mpumalanga Province

Other

Miwani Sugar Mill

Kenya

Consultation process undertaken, under the National Environment Management Authority (NEMA) of Kenya, with the assistance of local specialists (Kenya Marine and Fisheries Research Institute) for the proposed construction of a sugar mill in Miwani, Nyanza Province in terms of Kenya's.

EIA: Middelburg Water Treatment Plant

Mpumalanga Province, South Africa

Water reclamation scheme for BHP Billiton Energy Coal South Africa (BECSA) in the Witbank / Middelburg area, Mpumalanga Province

Strategic Management and Review of Stakeholder Engagement Process were also conducted for a number of EIAs / BAs and the completion of Stakeholder Engagement Process between 1997 to September 2007 is available on request

Facilitation responsibility only:

- Environmental Management Plan for Prospecting Right Application Process (Client: Oresund Environmental Solutions): August 2010 and September 2010
- Ariadne-Eros 400kV/132kV Multi-Circuit Transmission Power Line: July 2009 and March 2010 (Client: Acer Africa)
- Middelburg SmancorCR Chemical Plant (Client: Environmental Science Associates) – Public Meeting: October 2007
- Majuba-Venus 765kV Transmission Power Lines (Client: Acer Africa) – Public Meetings: July 2008 and March 2010

Papers, publications and presentations

None



**Appendix 3:
Authority Consultation**



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environment House · 473 Steve Biko Road, Arcadia · PRETORIA

DEA Reference: 14/12/16/3/3/2/945

Enquiries: Toinette van der Merwe

Tel: 012 399 8630 E-mail: tvandermerwe@environment.gov.za

Andrea Gibb
SiVEST SA (PTY) Ltd
PO Box 2921
RIVONIA
2128

Fax: 011 803 7272
Tel: 011 798 0638
Email: andreag@sivest.co.za

PER EMAIL / MAIL

Dear Sir/Madam

ACKNOWLEDGEMENT OF RECEIPT OF THE NEW APPLICATION FOR ENVIRONMENTAL AUTHORISATION (SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESS) AND DRAFT SCOPING REPORT FOR THE PROPOSED CONSTRUCTION OF THE ALETTA 140MW WIND ENERGY FACILITY, NEAR COPPERTON, NORTHERN CAPE PROVINCE

The Department confirms having received the Application for Environmental Authorisation and Draft Scoping Report for the abovementioned project on 30 June 2016. You have submitted these documents to comply with the Environmental Impact Assessment Regulations (EIA), 2014.

If you did not provide the Department with an electronic copy (CD) containing your application form and annexures you are reminded to submit it to the department upon submission of your Draft or Final Report, whichever is applicable.

Further note that in terms of Regulation 45 of the EIA Regulations, 2014 this application will lapse if the applicant fails to meet any of the time-frames prescribed in terms of these Regulations, unless an extension has been granted by the Department in terms of Regulation 3(7) of the EIA Regulations, 2014.

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No. 107 of 1998, as amended, that no activity may commence prior to an Environmental Authorisation being granted by the Department.

Yours sincerely

Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Letter signed by: Ms Toinette van der Merwe

Designation: Environmental Officer: EIA Coordination, Strategic Planning and Support

Date: 05/07/2016

CC	Jasandra Nyker	BioTherm Energy (Pty) Ltd	Email: eiaadmin@biothermenergy.com
	T Mthombeni	Northern Cape Department of Environment and Nature Conservation	Email: tmtho@webmail.co.za
	O Tshikela	Siyathemba Local Municipality	Email: tshikelaolwethu@gmail.com



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA · 0001· Environment House · 473 Steve Biko Road· PRETORIA
Tel (+ 27 12) 399 9372

DEA Reference: 14/12/16/3/3/2/945

Enquiries: Ms Thabile Sangweni

Telephone: (012) 399 9409 **E-mail:** TSangweni@environment.gov.za

Ms Andrea Gibb
Sivest SA (Pty) Ltd
PO Box 2921
RIVONIA
2128

Telephone Number: (011) 798 0638
Email Address: andreag@sivest.co.za

PER E-MAIL / MAIL

Dear Ms Gibb

COMMENTS ON THE DRAFT SCOPING REPORT FOR THE PROPOSED 140 MW ALETTA WIND ENERGY FACILITY NEAR COPPERTON WITHIN THE SIYATHEMBA LOCAL MUNICIPALITY IN THE NORTHERN CAPE PROVINCE

The draft Scoping Report (SR) dated June 2016 and received by this Department on 30 June 2016 refers.

This Department has the following comments on the abovementioned application:

- i. Please ensure that all relevant listed activities are applied for, are specific and that it can be linked to the development activity or infrastructure as described in the project description.
- ii. If the activities applied for in the application form differ from those mentioned in the final SR, an amended application form must be submitted. Please note that the Department's application form template has been amended and can be downloaded from the following link <https://www.environment.gov.za/documents/forms>.
- iii. The final SR must investigate and identify all traffic impacts associated with the proposed development.
- iv. Please ensure that all issues raised and comments received during the circulation of the SR from registered I&APs and organs of state which have jurisdiction (including this Department's Biodiversity Section) in respect of the proposed activity are adequately addressed in the Final SR. Proof of correspondence with the various stakeholders must be included in the Final SR. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.
- v. The Public Participation Process must be conducted in terms of Regulation 39, 40 41, 42, 43 and 44 of the EIA Regulations 2014.
- vi. Please provide a description of any identified alternatives for the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives will have on the environment and on the community that may be affected by the activity as per Appendix 2 of the EIA Regulations, 2014. Alternatively, you should submit written proof of an investigation and motivation if no reasonable or feasible alternatives exist in terms of Appendix 2.
- vii. The detailed emission campaign and Emissions Control Plan to be undertaken by ITC must be submitted to and comments sought from the Square Kilometre Array (SKA) office. The final SR must include the said comments and report.

- viii. The desktop Soils and Agricultural Potential Assessment dated January 2016 by ACR – Institute for Soil, Climate and Water and annexed as Appendix 6E is noted. However, since this was a desktop assessment, this Department requires a Soils and Agricultural Potential Assessment with thorough ground truthing and with the following terms of reference to be undertaken:
- Assessment of the loss of agricultural land;
 - The current state of agricultural activities on land;
 - The impact of the loss of agricultural land within the property as well as the cumulative impact of the loss of agricultural land on the site and within the area.
- ix. Detailed cumulative impact assessment must be provided in the EIAR for all specialist studies conducted. The specialist studies must provide proof of other specialist reports reviewed that were conducted for renewable energy projects in the area and indicate how the recommendations, mitigation measures and conclusions have been taken into consideration when the conclusion and mitigation measures were drafted for this project.
- x. In accordance with Appendix 2 of the EIA Regulations 2014, the details of—
- (i) the EAP who prepared the report; and
 - (ii) the expertise of the EAP to carry out Scoping and Environmental Impact assessment procedures; must be submitted.
- xi. You are further reminded that the final SR to be submitted to this Department must comply with all the requirements in terms of the scope of assessment and content of Scoping reports in accordance with Appendix 2 and Regulation 21(1) of the EIA Regulations, 2014.
- xii. Further note that in terms of Regulation 45 of the EIA Regulations 2014, this application will lapse if the applicant fails to meet any of the timeframes prescribed in terms of these Regulations, unless an extension has been granted in terms of Regulation 3(7).

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No 107 of 1998, as amended, that no activity may commence prior to an environmental authorisation being granted by the Department.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs
Signed by: Mr Coenrad Agenbach
Designation: Deputy Director: Strategic Infrastructure Developments
Date: 20/07/2016

cc:	Ms J Nyker	BioTherm Energy (Pty) Ltd	Email: eiaadmin@biothermenergy.com
-----	------------	---------------------------	------------------------------------



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environmental House · 473 Steve Biko Road · PRETORIA
Tel (+ 27 12) 399 9972

DEA Reference: 14/12/16/3/3/2/945

Enquiries: Ms Thabile Sangweni

Tel: 012 399 9409 **E-mail:** TSangweni@environment.gov.za

Andrea Gibb
SiVEST Environmental
PO Box 2921
RIVONIA
2157

Tel: 011 798 0600


Email: andreag@sivest.co.za

PER E-MAIL / MAIL

Dear Sir/Madam

ACKNOWLEDGEMENT OF RECEIPT OF FINAL SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF THE ALETTA 140MW WIND ENERGY FACILITY (WEF) NEAR COPPERTON, IN THE NORTHERN CAPE PROVINCE

The Department confirms having received the Final Scoping Report for Environmental Authorisation for the above-mentioned project on 15 August 2016.


You are hereby reminded that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours sincerely

Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Letter signed by: Ms Toinette Van der Merwe

Designation: Environmental Officer Specialised Production: EIA Coordination, Strategic Planning and Support

Date: 25/08/2016



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environment House · 473 Steve Biko Road · Arcadia · PRETORIA
Tel (+ 27 12) 399 9372

DEA Reference: 14/12/16/3/3/2/945

Enquiries: Ms Thabile Sangweni

Telephone: (012) 399 9409 **E-mail:** TSangweni@environment.gov.za

Ms Andrea Gibb
Sivest SA (Pty) Ltd
PO Box 2921
RIVONIA
2128

Telephone Number: (011) 798 0638
Email Address: andreag@sivest.co.za

PER EMAIL / MAIL

Dear Ms Gibb

ACCEPTANCE OF THE SCOPING REPORT FOR THE PROPOSED 140 MW ALETTA WIND ENERGY FACILITY NEAR COPPERTON WITHIN THE SIYATHEMBA LOCAL MUNICIPALITY IN THE NORTHERN CAPE PROVINCE

The Scoping Report (SR) and Plan of Study for Environmental Impact Assessment (PoSEIA) dated August 2016 and received by this Department on 15 August 2016 refer.

This Department has evaluated the submitted SR and the PoSEIA dated August 2016 and is satisfied that the documents comply with the minimum requirements of the Environmental Impact Assessment (EIA) Regulations, 2014. The SR is hereby accepted by the Department in terms of Regulation 22 (a) of the EIA Regulations, 2014.

You may proceed with the Environmental Impact Assessment process in accordance with the tasks contemplated in the PoSEIA and the requirements of the EIA Regulations, 2014.

All comments and recommendations made by all stakeholders and Interested and Affected Parties (I&APs) in the draft SR and submitted as part of the final SR must be taken into consideration when preparing the Environmental Impact Assessment report (EIAr) in respect of the proposed development. Please ensure that all mitigation measures and recommendations in the specialist studies are addressed and included in the final EIAr and Environmental Management Programme (EMPr).

Please ensure that comments from all relevant stakeholders are submitted to the Department with the final EIAr. This includes but is not limited to the Northern Cape Department of Environment and Nature Conservation (DENC), the Department of Agriculture, Forestry and Fisheries (DAFF), the provincial Department of Agriculture, the South African Civil Aviation Authority (SACAA), the Department of Transport, the Local Municipality, the District Municipality, the Department of Water and Sanitation (DWS), the South African National Roads Agency Limited (SANRAL), the Square Kilometre Array (SKA), the South African Heritage Resources Agency (SAHRA), SENTEC, the Endangered Wildlife Trust (EWT), BirdLife SA, the Department of Mineral Resources, the Department of Rural Development and Land Reform, the Department of Environmental Affairs: Directorate Biodiversity and Conservation, and the South African Astronomy Observation (SAAO).

Please be advised that the contact person at the SAAO office is Dr Ramotholo Sefako and he can be contacted on Tel: (011) 447 0025 or E-mail: rrs@saa0.ac.za.

You are also required to address all issues raised by Organs of State and I&APs prior to the submission of the EIAr to the Department.

Proof of correspondence with the various stakeholders must be included in the EIAr. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.

The EAP must, in order to give effect to Regulation 8, give registered I&APs access to, and an opportunity to comment on the report in writing within 30 days before submitting the final EIAr to the Department.

In addition, the following additional information is required for the EIAr:

- i. The EIAr must provide an assessment of the impacts and mitigation measures for each of the listed activities applied for.
- ii. The listed activities represented in the EIAr and the application form must be the same and correct.
- iii. The EAP must specify which sub item in terms of GNR 983 Item 56 applies as this Department cannot authorise both, and the impacts relating to the specific activity must be adequately assessed.
- iv. Following a review of the Topographical Analysis and the Path Loss and Risk Assessment Reports compiled by Mesa Solutions and Interference Testing and Consultancy Services (ITC) respectively, SKA-SA indicated that both reports pointed out that a significant amount of mitigation would be required and that given the calculated path loss between the proposed facility and the nearest SKA station, a requirement on the emissions of the wind facility is specified at between 10dB and 20dB below CISPR-22 Class B emission limits.
- v. Consequently, SKA-SA indicated that based on current risk and available information, the proposed facility remains a high risk to the SKA and further pointed out that detailed emission measurements and EMC control plans which provide sufficient evidence and proof of the determined mitigation required, and that it is technically achievable, would warrant a review of the high risk rating.
- vi. The Path Loss and Risk Assessment (including an Emission Control Plan) report compiled by Interference Testing and Consultancy Services (ITC) is noted. However, comments regarding this report must be sought from SKA-SA and must form part of the draft EIAr.
- vii. The terms of reference of the Traffic Impact Assessment must be expanded to include the following:
 - Evaluate the impacts of the proposed development on existing road network and traffic volumes. The study must determine the specific traffic needs during the different phases of implementation, namely wind turbine construction and installation, operation and decommissioning;
 - Identify the position and suitability of the preferred access road alternative;
 - Evaluate the roadway capacity of the road network;
 - Confirm the associated clearances required for the necessary equipment to be transported from the point of delivery to the various sites;
 - Confirm freight and transport requirements during construction, operation and maintenance;
 - Propose origins and destinations of equipment; and,
 - Determine (Abnormal) Permit requirements if any.
- viii. Due to the number of similar applications in the area, all the specialist assessments must include a cumulative environmental impact statement. Identified cumulative impacts must be clearly defined, and where possible the size of the identified impact must be quantified and indicated, i.e. hectares of cumulatively transformed land.
- ix. The cumulative impacts significance rating must inform the need and desirability of the proposed development.
- x. Detailed cumulative impact assessments must be provided in the EIAr for all specialist studies conducted. The specialist studies must provide proof that other specialist reports that were conducted for renewable energy projects in the area were reviewed and indicate how the recommendations, mitigation measures

- and conclusions have been taken into consideration when the conclusion and mitigation measures were drafted for this project.
- xi. The EIA must provide a detailed description of the need and desirability, not only providing motivation on the need for clean energy in South Africa of the proposed activity. The need and desirability must also indicate if the proposed development is needed in the region and if the current proposed location is desirable for the proposed activity compared to other sites. The need and desirability must take into account cumulative impacts of the proposed development in the area.
 - xii. Two specialist studies were undertaken by in-house specialists i.e. Surface Water Impact Assessment and Visual Impact Assessment. These studies must be peer-reviewed by external specialists. The format of each peer-review must address the following:
 - A CV clearly showing expertise of the peer reviewer;
 - Acceptability of the terms of reference;
 - Is the methodology clearly explained and acceptable;
 - Evaluate the validity of the findings (review data evidence);
 - Discuss the suitability of the mitigation measures and recommendations;
 - Identify any shortcomings and mitigation measures to address the shortcomings;
 - Evaluate the appropriateness of the reference literature;
 - Indicate whether a site-inspection was carried out as part of the peer review; and
 - Indicate whether the article is well-written and easy to understand.
 - xiii. The EIA must provide the technical details for the proposed facility in a table format as well as their description and/or dimensions. A sample for the minimum information required is listed under point 2 of the EIA information required for wind energy facilities below.
 - xiv. The EIA must provide the four corner coordinate points for the proposed development site (note that if the site has numerous bend points, at each bend point coordinates must be provided) as well as the start, middle and end point of all linear activities.
 - xv. The EIA must provide the following:
 - Clear indication of the envisioned area for the proposed wind energy facility; i.e. placing of wind turbines and all associated infrastructure should be mapped at an appropriate scale.
 - Clear description of all associated infrastructure. This description must include, but is not limited to the following:
 - Internal roads infrastructure; and;
 - All supporting onsite infrastructure such as laydown area, guard house and control room etc.
 - All necessary details regarding all possible locations and sizes of the proposed satellite substation and the main substation.
 - xvi. The EIA must also include a comments and response report in accordance with Appendix 3 of the EIA Regulations, 2014.
 - xvii. The EIA must include the detail inclusive of the PPP in accordance with Regulation 41 of the EIA Regulations.
 - xviii. Details of the future plans for the site and infrastructure after decommissioning in 20-30 years and the possibility of upgrading the proposed infrastructure to more advanced technologies.
 - xix. It is imperative that the relevant authorities are continuously involved throughout the EIA process as the development property possibly falls within geographically designated areas in terms of GN R. 985. In addition, a graphical representation of the proposed development within the respective geographical areas must be provided.
 - xx. Information on services required on the site, e.g. sewage, refuse removal, water and electricity. Who will supply these services and has an agreement and confirmation of capacity been obtained? Proof of these agreements must be provided.
 - xxi. This Department requires that the wind resource data be submitted as part of the EIA. The wind resource data must be a summary of the wind resource available in the study area and motivation that the site has a good wind resource to sustain the WEF must also be provided. In addition, whilst the information may be deemed to be confidential, your attention is drawn to Regulation 10 of the EIA Regulations, 2014 which

states that *"An applicant must provide the competent authority with all information that reasonably has or may have the potential of influencing any decision with regard to an application."*

- xxii. The Department of Water and Sanitation (DWS) must be consulted during the course of the process. Proof of consultation must be provided for in the EIAr.
- xxiii. The EIAr must provide an indication of the internal access roads and the impacts associated with them must be adequately assessed in the EIAr and EMPr.
- xxiv. A copy of the final site layout map. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:
 - Wind Turbine positions and its associated infrastructure;
 - Permanent laydown area footprint;
 - Internal roads indicating width (construction period width and operation period width) and with numbered sections between the other site elements which they serve (to make commenting on sections possible);
 - Wetlands, drainage lines, rivers, stream and water crossing of roads and cables indicating the type of bridging structures that will be used;
 - The location of sensitive environmental features on site e.g. CBAs, heritage sites, wetlands, drainage lines etc. that will be affected by the facility and its associated infrastructure;
 - Substation(s) and/or transformer(s) sites including their entire footprint;
 - Connection routes (including pylon positions) to the distribution/transmission network;
 - All existing infrastructure on the site, especially roads;
 - Buffer areas;
 - Buildings, including accommodation; and
 - All "no-go" areas.
- xxv. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- xxvi. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.
- xxvii. A shapefile of the preferred development layout/footprint must be submitted to this Department. The shapefile must be created using the Hartebeesthoek 94 Datum and the data should be in Decimal Degree Format using the WGS 84 Spheroid. The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, .xml (Metadata file). If specific symbology was assigned to the file, then the .avl and/or the .lyr file must also be included. Data must be mapped at a scale of 1:10 000 (please specify if an alternative scale was used). The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title. The shape file must be submitted to:

Postal Address:

Department of Environmental Affairs
Private Bag X447
Pretoria
0001

Physical address:

Environment House
473 Steve Biko Road
Pretoria

For Attention: Muhammad Essop
Integrated Environmental Authorisations
Strategic Infrastructure Developments
Telephone Number: (012) 399 9406
Email Address: MEssop@environment.gov.za

The Environmental Management Programme (EMPr) to be submitted as part of the EIAR must include the following:

- i. All recommendations and mitigation measures recorded in the EIAR and the specialist studies conducted.
- ii. The final site layout map.
- iii. Measures as dictated by the final site layout map and micro-siting.
- iv. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- v. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.
- vi. An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.
- vii. A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site and be implemented prior to commencement of the construction phase.
- viii. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- ix. An open space management plan to be implemented during the construction and operation of the facility.
- x. A traffic management plan for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimize impacts on local commuters e.g. limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
- xi. A transportation plan for the transport of components, main assembly cranes and other large pieces of equipment.
- xii. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
- xiii. A fire management plan to be implemented during the construction and operation of the facility.
- xiv. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.
- xv. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.
- xvi. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.

The EAP must provide detailed motivation if any of the above requirements is not required by the proposed development and not included in the EMPr.

You are required to submit an avifauna and bat pre-construction monitoring report together with the draft EIAR. Baseline monitoring must be undertaken for a period of 12 months. The avifauna and bat preconstruction monitoring must be conducted in accordance with the minimum requirements guidelines produced by Bird Life South Africa and the South African Bat Advisory Panel. The baseline monitoring programme for avifauna and bats must cover the entire site as well as the height of the entire facility. i.e., you may be required to install more monitoring masts at height.

Please ensure that all the relevant Listing Notice activities are applied for, that the Listing Notice activities applied for are specific and that they can be linked to the development activity or infrastructure in the project description.

You are hereby reminded that should the EIA fail to comply with the requirements of this acceptance letter, the project will be **refused** in accordance with the EIA Regulations, 2014.

The applicant is hereby reminded to comply with the requirements of Regulation 45 with regard to the time period allowed for complying with the requirements of the Regulations, and Regulations 43 and 44 with regard to the allowance of a comment period for interested and affected parties on all reports submitted to the competent authority for decision-making.

In addition to the above, the Department will undertake a site inspection prior to or upon receipt of the draft EIA for comment.

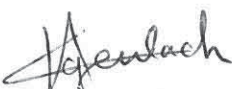
Furthermore, it must be reiterated that, should an application for Environmental Authorisation be subject to the provisions of Chapter II, Section 38 of the National Heritage Resources Act, Act 25 of 1999, then this Department will not be able to make nor issue a decision in terms of your application for Environmental Authorisation pending a letter from the pertinent heritage authority categorically stating that the application fulfils the requirements of the relevant heritage resources authority as described in Chapter II, Section 38(8) of the National Heritage Resources Act, Act 25 of 1999. Comments from SAHRA and/or the provincial department of heritage must be provided in the EIA.

You are requested to submit two (2) electronic copies (CD/DVD and two (2) hard copies of the Environmental Impact Report (EIA) to the Department.

Please also find attached information that must be used in the preparation of the Environmental Impact Report. This will enable the Department to speedily review the EIA and make a decision on the application.

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No 107 of 1998, as amended, that no activity may commence prior to an Environmental Authorisation being granted by the Department.

Yours faithfully



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Letter Signed by: Coenrad Agenbach

Designation: Deputy Director: Strategic Infrastructure Developments

Date: 14/09/2016

cc:	Ms K Nyker	Biotherm Energy (Pty) Ltd	Email: eiaadmin@biothermenergy.com
-----	------------	---------------------------	------------------------------------

A. EIA INFORMATION REQUIRED FOR WIND ENERGY FACILITIES

1. General site information

The following general site information is required:

- Descriptions of all affected farm portions
- 21 digit Surveyor General codes of all affected farm portions
- Copies of deeds of all affected farm portions
- Photos of areas that give a visual perspective of all parts of the site
- Photographs from sensitive visual receptors (tourism routes, tourism facilities, etc.)
- Solar plant design specifications including:
 - Type of technology
 - Structure height
 - Surface area to be covered (including associated infrastructure such as roads)
 - Structure orientation
 - Laydown area dimensions (construction period and thereafter)
 - Generation capacity
- Generation capacity of the facility as a whole at delivery points

This information must be indicated on the first page of the EIA. It is also advised that it be double checked as there are too many mistakes in the applications that have been received that take too much time from authorities to correct.

2. Sample of technical details for the proposed facility

Component	Description/ Dimensions
Location of the site	
Facility area	
SG Codes	
Site access	
Export capacity	
Proposed technology	
Hub height from ground level	
Rotor diameter	
Area occupied by substations	
Area occupied by both permanent and construction laydown areas	
Area occupied by buildings	
Width and length of internal roads	
Proximity to grid connection	
Type and height of fencing	

3. Site maps and GIS information

Site maps and GIS information should include at least the following:

- All maps/information layers must also be provided in ESRI Shapefile format
- All affected farm portions must be indicated
- The exact site of the application must be indicated (the areas that will be occupied by the application)

- A status quo map/layer must be provided that includes the following:
 - Current use of land on the site including:
 - Buildings and other structures
 - Agricultural fields
 - Grazing areas
 - Natural vegetation areas (natural veld not cultivated for the preceding 10 years) with an indication of the vegetation quality as well as fine scale mapping in respect of Critical Biodiversity Areas and Ecological Support Areas
 - Critically endangered and endangered vegetation areas that occur on the site
 - Bare areas which may be susceptible to soil erosion
 - Cultural historical sites and elements
 - Rivers, streams and water courses
 - Ridgelines and 20m continuous contours with height references in the GIS database
 - Fountains, boreholes, dams (in-stream as well as off-stream) and reservoirs
 - High potential agricultural areas as defined by the Department of Agriculture, Forestry and Fisheries
 - Buffer zones (also where it is dictated by elements outside the site):
 - 500m from any irrigated agricultural land
 - 1km from residential areas
 - Indicate isolated residential, tourism facilities on or within 1km of the site
- A slope analysis map/layer that include the following slope ranges:
 - Less than 8% slope (preferred areas for WIND TURBINE and infrastructure)
 - between 8% and 12% slope (potentially sensitive to WIND TURBINE and infrastructure)
 - between 12% and 14% slope (highly sensitive to WIND TURBINE and infrastructure)
 - steeper than 18 % slope (unsuitable for WIND TURBINE and infrastructure)
- A site development proposal map(s)/layer(s) that indicate:
 - Foundation footprint
 - Permanent laydown area footprint
 - Construction period laydown footprint
 - Internal roads indicating width (construction period width and operation period width) and with numbered sections between the other site elements which they serve (to make commenting on sections possible)
 - River, stream and water crossing of roads and cables indicating the type of bridging structures that will be used
 - Substation(s) and/or transformer(s) sites including their entire footprint.
 - Cable routes and trench dimensions (where they are not along internal roads)
 - Connection routes to the distribution/transmission network (the connection must form part of the EIA even if the construction and maintenance thereof will be done by another entity such as ESKOM)
 - Cut and fill areas at WIND TURBINE sites along roads and at substation/transformer sites indicating the expected volume of each cut and fill
 - Borrow pits
 - Spoil heaps (temporary for topsoil and subsoil and permanently for excess material)
 - Buildings including accommodation

With the above information authorities will be able to assess the strategic and site impacts of the application.

4. Regional map and GIS information

The regional map and GIS information should include at least the following:

- All maps/information layers must also be provided in ESRI Shapefile format
- The map/layer must cover an area of 20km around the site
- Indicate the following:
 - roads including their types (tarred or gravel) and category (national, provincial, local or private)
 - Railway lines and stations
 - Industrial areas
 - Harbours and airports
 - Electricity transmission and distribution lines and substations
 - Pipelines
 - Waters sources to be utilised during the construction and operational phases
 - A visibility assessment of the areas from where the facility will be visible
 - Critical Biodiversity Areas and Ecological Support Areas
 - Critically Endangered and Endangered vegetation areas
 - Agricultural fields
 - Irrigated areas
 - An indication of new road or changes and upgrades that must be done to existing roads in order to get equipment onto the site including cut and fill areas and crossings of rivers and streams

5. Important stakeholders

Amongst other important stakeholders, comments from the National Department of Agriculture, Forestry and Fisheries must be obtained and submitted to the Department. Any application, documentation, notification etc. should be forwarded to the following officials:

Ms Mashudu Marubini
Delegate of the Minister (Act 70 of 1970)
E-mail: MashuduMa@daff.gov.za
Tel 012- 319 7619

Ms Thoko Buthelezi
AgriLand Liaison office
E-mail: ThokoB@daff.gov.za
Tel 012- 319 7634

All hardcopy applications / documentation should be forwarded to the following address:

Physical address:

Delpen Building
Cnr Annie Botha and Union Street
Office 270
Attention: Delegate of the Minister Act 70 of 1970

Postal Address:

Department of Agriculture, Forestry and Fisheries
Private Bag X120
Pretoria
0001
Attention: Delegate of the Minister Act 70 of 1970

In addition, comments must be requested from Eskom regarding grid connectivity and capacity. Request for comment must be submitted to:

Mr John Geeringh
Eskom Transmission
Megawatt Park D1Y38
PO Box 1091
JOHANNESBURG
2000

Tel: 011 516 7233
Fax: 086 661 4064
John.geeringh@eskom.co.za

B. AGRICULTURE STUDY REQUIREMENTS

- Detailed soil assessment of the site in question, incorporating a radius of 50 m surrounding the site, on a scale of 1:10 000 or finer. The soil assessment should include the following:
 - Identification of the soil forms present on site
 - The size of the area where a particular soil form is found
 - GPS readings of soil survey points
 - The depth of the soil at each survey point
 - Soil colour
 - Limiting factors
 - Clay content
 - Slope of the site
 - A detailed map indicating the locality of the soil forms within the specified area,
 - Size of the site
- Exact locality of the site
- Current activities on the site, developments, buildings
- Surrounding developments / land uses and activities in a radius of 500 m of the site
- Access routes and the condition thereof
- Current status of the land (including erosion, vegetation and a degradation assessment)
- Possible land use options for the site
- Water availability, source and quality (if available)
- Detailed descriptions of why agriculture should or should not be the land use of choice
- Impact of the change of land use on the surrounding area
- A shape file containing the soil forms and relevant attribute data as depicted on the map.

C. ASTRONOMY GEOGRAPHIC ADVANTAGE ACT, 2007 (ACT NO. 21 OF 2007)

The purpose of the Act is to preserve the geographic advantage areas that attract investment in astronomy. The entire Northern Cape Province excluding the Sol Plaatjie Municipality had been declared an astronomy advantage area. The Northern Cape optical and radio telescope sites were declared core astronomy advantage areas. The Act allowed for the declaration of the Southern Africa Large Telescope (SALT), MeerKAT and Square Kilometre Array (SKA) as astronomy and related scientific endeavours that had to be protected.

You are requested to indicate the applicability of the Astronomy Geographic Advantage Act, Act No. 21 of 2007 on the application in the BAR/EIR. You must obtain comments from the Southern African Large Telescope (SALT) if the proposed development is situated within a declared astronomy advantage area.



**Appendix 4:
Declarations of Interest**



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	14/12/16/3/3/2/945
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province


Specialist:	Dirk van der Merwe (PrEng)		
Contact person:	Dirk van der Merwe		
Postal address:	PO box 86, Century City		
Postal code:	7446	Cell:	084 232 4696
Telephone:	021 527 7000	Fax:	021 527 7001
E-mail:	dirkvdm@bviwc.co.za		
Professional affiliation(s) (if any)	ECSA 20120186 SAICE 2012110		
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Dirk Jacobus Petrus van der Merwe, declare that --

General declaration:

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



Signature of the specialist:

BV Consulting Engineers

Name of company (if applicable):

10/08/2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	14/12/16/3/3/2/945
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	MESA Solutions (Pty) Ltd		
Contact person:	Paul van der Merwe		
Postal address:	PO Box 12572, Die Boord		
Postal code:	7613	Cell:	0723179784
Telephone:		Fax:	
E-mail:	paul@mesasolutions.co.za		
Professional affiliation(s) (if any)			
Project Consultant:	SIVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreaq@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Paul van der Merwe , declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

MESA Solutions (Pty) Ltd

Name of company (if applicable):

09 August 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	14/12/16/3/3/2/945
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	Interference Testing and Consultancy Services (Pty) Ltd		
Contact person:	CFH Fouche		
Postal address:	Private Bag X13, Lynn East		
Postal code:	0039	Cell:	0825559551
Telephone:	012 8081730	Fax:	
E-mail:	callie@itc-services.com		
Professional affiliation(s) (if any)			

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, CEH Fouche _____, declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

Interference Testing and Consultancy Services (Pty) Ltd

Name of company (if applicable):

8 August 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	SiVEST SA (Pty) Ltd		
Contact person:	Stephan Jacobs		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 737 2114
Telephone:	011 798 0677	Fax:	011 803 7272
E-mail:	stephanj@sivest.co.za		
Professional affiliation(s) (if any)			
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Stephan Jacobs, declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

SIVEST SA (Pty) Ltd

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		
Professional affiliation(s) (if any)			

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Andrea Gibb, declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

SIVEST SA (Pty) Ltd

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	SiVEST SA (Pty) Ltd		
Contact person:	Shaun Taylor		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 779 4899
Telephone:	011 798 0691	Fax:	011 803 7272
E-mail:	shaunt@sivest.co.za		
Professional affiliation(s) (if any)	South African Wetland Society (SAWS)		

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Shaun Taylor, declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

SIVEST SA (Pty) Ltd

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	Urban-Econ: Development Economists		
Contact person:	Ruan Fourie		
Postal address:	1st Floor, Lake View Office Park, 137 Muckleneuk Street, Brooklyn		
Postal code:	0181	Cell:	0823875735
Telephone:	012 342 8686	Fax:	086 619 6911
E-mail:	fourie@urban-econ.com		
Professional affiliation(s) (if any)			
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Ruan Fairie, declare that --

General declaration:

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



Signature of the specialist:

Urban-Econ: Development Economists

Name of company (if applicable):

29/06/2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	Urban-Econ: Socio-Economic Impact Assessment		
Contact person:	Mrs Elena Broughton		
Postal address:	1st Floor, Lake View Office Park, 137 Muckleneuk Street, Brooklyn		
Postal code:	0181	Cell:	082 463 2325
Telephone:	012 342 8686	Fax:	086 619 6911
E-mail:	elena@urban-econ.com		
Professional affiliation(s) (if any)	None		
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Elena Konstantinovna Broughton, declare that –

General declaration:

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



Signature of the specialist:

Urban-Econ Development Economists

Name of company (if applicable):

29 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	Jongens Keet Associates		
Contact person:	Adrian Jongens		
Postal address:	8 Wingerd Avenue, Constantia, Cape Town		
Postal code:	7806	Cell:	082 772 1799
Telephone:	021 794 5643	Fax:	
E-mail:	Jongens@yebo.co.za		
Professional affiliation(s) (if any)	ECSA, SAIEE		
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Adrian Jongens , declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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


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

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

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

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

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



Signature of the specialist:

Jongens Keet Associates

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province
--

Specialist:	PGS Heritage (Pty) Ltd		
Contact person:	Wouter Fourie		
Postal address:	PO Box 32542, Totiusdal		
Postal code:	0134	Cell:	0828523575
Telephone:	012 3325305	Fax:	
E-mail:	wouter@pgsheritage.co.za		
Professional affiliation(s) (if any)	ASAPA, AHAP		

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, ~~Wouter Fourie~~, declare that -- General declaration:

I act as the independent specialist in this application;

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

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

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

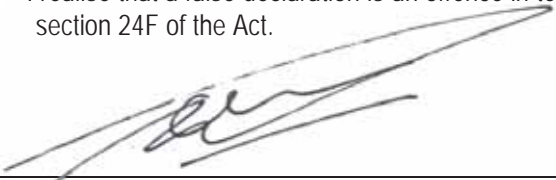
I will comply with the Act, Regulations and all other applicable legislation;

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

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

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

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



Signature of the specialist:

PGS Heritage (Pty) Ltd

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

File Reference Number:	(For official use only) To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province
--

Specialist:	David Hoare Consulting cc		
Contact person:	Dr David Hoare		
Postal address:	Postnet suite 116, Private Bag X025, Lynnwood Ridge		
Postal code:	0040	Cell:	083 284 5111
Telephone:	012 804 2281	Fax:	086 550 2053
E-mail:	dhoare@lantic.net		
Professional affiliation(s) (if any)	SACNASP (Pr.Sci.Nat.)		

Project Consultant:	SIVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, David Hoare, declare that --

General declaration:

I act as the independent specialist in this application;

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

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

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

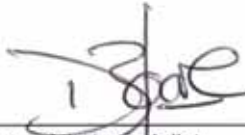
I will comply with the Act, Regulations and all other applicable legislation;

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

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

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

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



Signature of the specialist:

David Hoare Consulting cc

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	Animalia Zoological & Ecological Consultation (Pty) Ltd		
Contact person:	Werner Marais		
Postal address:	3 Godetia str, Heldervue, Somerset West		
Postal code:	7130	Cell:	0781903316
Telephone:		Fax:	
E-mail:	werner@animalia-consult.co.za		
Professional affiliation(s) (if any)	Pr.Sci.Nat. (Zoological Science) 400169/10		
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Werner Marais, declare that –

General declaration:

I act as the independent specialist in this application;

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

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

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

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

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

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

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

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



Signature of the specialist:

Animalia Zoological & Ecological Consultation (Pty) Ltd

Name of company (if applicable):

28 June 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

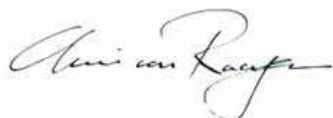
Specialist:	Chris van Rooyen Consulting		
Contact person:	Chris van Rooyen		
Postal address:	30 Roosevelt Street, Robindale, Randburg		
Postal code:	2194	Cell:	0824549570
Telephone:	-	Fax:	-
E-mail:	Vanrooyen.chris@gmail.com		
Professional affiliation(s) (if any)	-		

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andrea@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, ~~Chris van Rooyen~~ declare that -- General declaration:

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



Signature of the specialist:

Chris van Rooyen Consulting

Name of company (if applicable):

Date: 27 July 2016



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140MW Wind Energy Facility, near Copperton, Northern Cape Province

Specialist:	ARC-Institute for Soil, Climate and Water		
Contact person:	Garry Paterson		
Postal address:	Private Bag X79, Pretoria		
Postal code:	0001	Cell:	083 556 2458
Telephone:	012 310 2601	Fax:	012 323 1157
E-mail:	garry@arc.agric.za		
Professional affiliation(s) (if any)	Soil Science Society of SA; SA Soil Surveyors Organisation; International Erosion Control Ass.; Registered Soil Scientist (SACNASP)		
Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, **DG PATERSON**, declare that -- General declaration:

I act as the independent specialist in this application;

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

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

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


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

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

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

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

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

A handwritten signature in black ink, appearing to be 'DG Paterson', is written over a light grey rectangular background.

Signature of the specialist:

Name of company (if applicable): ARC-Institute for Soil, Climate and Water

Date: 28th June 2016



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF EAP AND DECLARATION OF INTEREST

File Reference Number:	(For official use only)
	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140 MW Wind Energy Facility, near Copperton, Northern Cape Province

Environmental Assessment Practitioner (EAP):	SiVEST SA (Pty) Ltd		
Contact person:	Kelly Tucker		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	083 652 4017
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	kellyt@sivest.co.za		
Professional affiliation(s) (if any)			

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The Environmental Assessment Practitioner

I, Kelly Tucker, declare that –

General declaration:

I act as the independent environmental practitioner in this application;
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
I declare that there are no circumstances that may compromise my objectivity in performing such work;
I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
I will comply with the Act, Regulations and all other applicable legislation;
I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
I have no, and will not engage in, conflicting interests in the undertaking of the activity;
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
I will keep a register of all interested and affected parties that participated in a public participation process;
I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
all the particulars furnished by me in this form are true and correct;
will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

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

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

A handwritten signature in black ink, appearing to read "Peter", with a large, sweeping horizontal stroke underneath it.

Signature of the environmental assessment practitioner:

SIVEST SA (Pty) Ltd

Name of company:

09 November 2016

Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF EAP AND DECLARATION OF INTEREST

File Reference Number:	(For official use only)
	To be confirmed.
NEAS Reference Number:	DEA/EIA
Date Received:	

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

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

PROJECT TITLE

Proposed Construction of the Aletta 140 MW Wind Energy Facility, near Copperton, Northern Cape Province

Environmental Assessment Practitioner (EAP):	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		
Professional affiliation(s) (if any)			

Project Consultant:	SiVEST SA (Pty) Ltd		
Contact person:	Andrea Gibb		
Postal address:	P O Box 2921, Rivonia, South Africa		
Postal code:	2128	Cell:	072 587 6525
Telephone:	011 798 0638	Fax:	011 803 7272
E-mail:	andreag@sivest.co.za		

4.2 The Environmental Assessment Practitioner

I, Andrea Gibb , declare that –

General declaration:

I act as the independent environmental practitioner in this application;
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
I declare that there are no circumstances that may compromise my objectivity in performing such work;
I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
I will comply with the Act, Regulations and all other applicable legislation;
I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
I have no, and will not engage in, conflicting interests in the undertaking of the activity;
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
I will keep a register of all interested and affected parties that participated in a public participation process;
I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
all the particulars furnished by me in this form are true and correct;
will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

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

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



Signature of the environmental assessment practitioner:

SIVEST SA (Pty) Ltd

Name of company:

08 November 2016

Date:



**Appendix 5:
Public Participation**



**Appendix 5A:
EIA Newsletter**

Andrea Gibb

From: sivest_PPP
Sent: Thursday, October 13, 2016 12:04 PM
Cc: Andrea Gibb; Stephan Jacobs; 'nicolene@imaginativeafrica.co.za'
Subject: Aletta 140MW Wind Energy Facility: EIA Newsletter
Attachments: 13169_Aletta Wind EIA Newsletter_Rev 1_12Oct2016 AG.PDF; A3_13169_AlettaW_EIA_SiteLocality_LowRes.pdf; A3_13169_AlettaP_BA_RouteOverview_LowRes.pdf

***** Please note that this email was sent from a NO REPLY email address. Please do not reply to this address as it is an unmonitored email account.*****

Dear Interested and/or Affected Party,

We would like to take this opportunity to inform you that the Department of Environmental Affairs (DEA) has accepted the Final Scoping Report and approved the Plan of Study for the Environmental Impact Phase of the proposed Aletta 140MW Wind Energy Facility (WEF).

Attached is the EIA Newsletter and Site Locality Maps for your information.

Kind Regards

Andrea Gibb (B.Sc. Landscape Architecture; B.Sc.(Hons) Environmental Management) Environmental Practitioner and Visual Specialist SiVEST Environmental Division

SiVEST is a Level 3 BBBEE Contributor

Direct +27 11 798 0638 Tel +27 11 798 0600 fax +27 11 803 7272
email andreag@sivest.co.za website www.sivest.co.za

Consulting Engineers - Project Managers - Environmental Consultants - Town and Regional Planners Durban - Johannesburg - Pietermaritzburg - Richards Bay - Ladysmith - Cape Town - Harare (Zimbabwe)

Your reference N/A
Our reference 13169 - Aletta
Date 12 October 2016

Dear Interested and/or Affected or Party,

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED DEVELOPMENT OF THE ALETTA 140MW WIND ENERGY FACILITY (WEF) AND BASIC ASSESSMENT (BA) FOR THE ASSOCIATED 132kV POWER LINE AND SUBSTATION NEAR COPPERTON, NORTHERN CAPE PROVINCE

- **ALETTA WIND – DEA Ref No: 14/12/16/3/3/2/945**
- **ALETTA POWER LINE AND SUBSTATION – DEA Ref No: To be announced**

EIA NEWSLETTER

We trust that you, as a registered Interested and/or Affected Party (I&AP), have received all the various public documents that have been distributed to date regarding the two Environmental Impact Assessment (EIA) that is being conducted for the proposed development of the Aletta 140MW Wind Energy Facility (WEF) as well as the Basic Assessment that will be conducted for the associated 132kV power line and substation near Copperton, Northern Cape Province. If you have not received any of the public documents, you are most welcome to submit your request to us, in writing by e-mail, fax or letter (contact details below), and we will forward the relevant document(s) that you are interested in.

This EIA Newsletter aims to further facilitate your understanding of the proposed WEF, the associated 132kV power line and substation as well as the EIA process, including the public participation process (PPP), being followed. The first phase of the EIA process for the WEF (i.e. the environmental scoping studies) have been completed, and the desktop/preliminary specialist assessments and EIA process was captured in the Final Scoping Report (FSR). The FSR and supporting documents, including the Plan of Study (PoS) for the EIA, was submitted to the Department of Environmental Affairs (DEA) on Friday the 12th of August 2016 for review.

The DEA accepted the FSR on Wednesday the 14th of September 2016. In the letter of acceptance it was indicated that the DEA is satisfied that the content of the FSR and the PoS for the EIA complies with the minimum requirements of the EIA Regulations, 2014 and that the EIA process for the WEF can proceed in accordance with the tasks in the PoS and requirements of the EIA Regulations, 2014.

BRIEF OVERVIEW OF THE 132kV POWER LINE AND SUBSTATION PROJECT

The proposed 132kV power line and substation are aimed at connecting the proposed Aletta WEF onto Eskom's national grid. The proposed corridor alternatives being assessed for the 132kV power line are approximately 500m wide in order to allow for flexibility when determining the final route alignment. The corridor width will form part of the application for environmental authorisation (EA) to the DEA for approval. Should the DEA grant EA for the proposed 132kV power line and substation, the Applicant (BioTherm) will then commence with their negotiations for a 31m wide servitude (15,5m on either side of the centre line of the power line) within the authorised corridor.

The Draft Basic Assessment Report (DBAR) is being compiled based on the information received through the PPP and specialist studies. The DBAR will be made available for public review at the same time as the Draft Environmental Impact Assessment Report (DEIAR) for the WEF, and the Final Basic Assessment Report (FBAR) will be submitted together with the Final Environmental Impact Assessment Report (FEIAR) to the decision-making authority, the DEA.

BRIEF OVERVIEW OF THE WEF PROJECT

The development site for the proposed Aletta WEF is situated approximately 20km east of Copperton. It involves the construction of a WEF with an export capacity of 140MW and associated infrastructure which includes, an on-site substation, laydown area, access roads and Operation and Maintenance (O&M) building.

Scoping Phase

The environmental scoping study identified and evaluated potential environmental impacts (positive and negative) associated with all aspects of the proposed WEF. In terms of the EIA Regulations, 2014, *feasible and reasonable* alternatives were discussed within the FSR.

Impact Phase

As part of the EIA process for the proposed Aletta WEF in-depth assessments were conducted by the various environmental specialists between July 2016 and August 2016, as listed in Table 1 below.

During the environmental impact phase, the DEIAR will be made available for public review and comment for a period of 30 days in accordance with the EIA Regulations, 2014, before the FEIAR is submitted to the DEA. The process to be followed during the EIA phase is indicated below.



Figure 1: Flow-chart of the EIA and BA processes to be followed

Location of the Proposed Developments

The Aletta WEF application site is located on the following farms:

- Portion 1 of Drielings Pan No.101
- Portion 2 of Drielings Pan No.101
- Portion 3 of Drielings Pan No.101
- Remainder of Drielings Pan No.101

The development is located within the Northern Cape Province, within the Siyathemba Local Municipality of the Pixley ka Seme District Municipality. The site locality maps for the proposed WEF as well as the associated power line and substation are included with this newsletter.

Environmental Studies Conducted

As previously stated, detailed environmental studies were conducted for the proposed development. The specialist studies and specialists who conducted the studies are provided in the table below.

Table 1: Specialist studies and specialist conducting the studies

Name and Organisation	Role
Andrea Gibb and Stephan Jacobs – SiVEST	Visual
David Hoare – David Hoare Consulting	Biodiversity
Chris van Rooyen – Chris van Rooyen Consulting	Avifauna
Werner Marais and Monika Moir – Animalia	Bats
Shaun Taylor – SiVEST	Surface Water
D.G. Paterson – ARC Institute for Soil, Climate and Water	Agricultural Potential
Adrian Jongens – Jongens Keet Associates	Noise
Wouter Fourie – PGS	Heritage
Gideon Groenewald – PGS	Palaeontology (Desktop)
Elena Broughton and Memory Madondo – Urban-Econ Development Economists	Socio-economic
Callie Fouché – Interference Testing and Consultancy Services (Pty) Ltd (ITC)	Electromagnetic Interference
Dirk van der Merwe – BVi Consulting Engineers	Traffic
Nicolene Venter – Zitholele Consulting	Public Participation
Kerry Schwartz – SiVEST	GIS and Mapping

Environmental Management Programme (EMPr)

An Environmental Management Programme (EMPr) will also be compiled by SiVEST as part of the environmental impact phase. The EMPr details mitigation and management measures to be undertaken during the construction and operational phases, as well as the decommissioning of a proposed development. Mitigation and management measures address potentially significant impacts associated with activities undertaken during the project phases in order to protect the environment (biophysical as well as social).

The draft EMPr will be made available to I&APs for review and comments during the same review period as the DEIAr. After the review period the EMPr will be submitted to the DEA together with the FEIAr for review and decision-making. Should the DEA require any additional mitigation measures or monitoring activities, the EMPr will be revised to include these recommendations. The EMPr is a tool to ensure that all mitigation requirements that are stipulated in the FEIAr are met and where relevant exceeded.

Public Participation and Consultation Process

Public involvement is one of the cornerstones of an effective EIA or BA as it is your comments that add value to the environmental process. We therefore, once again, request your active participation as your knowledge of the local area will be valuable to the various specialist studies being undertaken.

The PPP that will be followed is indicated below.



Figure 5: Flow-chart of the PPP to be followed

Way Forward

Please note that public involvement is a two-way communication and consultation process and we kindly request that you as an I&AP or possibly affected landowner:

- provide us with the contact details of your neighbour, friend, family member or colleague who you believe should be informed regarding the proposed projects; or
- provide them with our contact details and request them to contact us directly.

As indicated in the public participation flow-chart, the PPP is an ongoing process. You will thus be informed through personal correspondence and advertisements of the various stages of the EIA and BA.

Availability of the DEIAr and DBAR:


You, as a registered I&AP will be notified of the availability of the DEIAr and DBAR which are envisaged to be made available for public review and comment in November 2016.

Should you, during this impact phase, require any additional information or wish to submit comments on the specialist studies or the proposed project, you are welcome to forward your inputs, in writing, to the environmental consultants below.

We look forward to your contributions.


COMMENTS AND QUERIES

Andrea Gibb or Stephan Jacobs

 PO Box 2921, RIVONIA, 2128

 Phone: (011) 798 0600

 E-mail: andreag@sivest.co.za or stephanj@sivest.co.za

 Fax: (011) 803 7272

Websites: www.sivest.co.za

Documents Included: Aletta Wind Locality Map
Aletta Grid Locality Map

