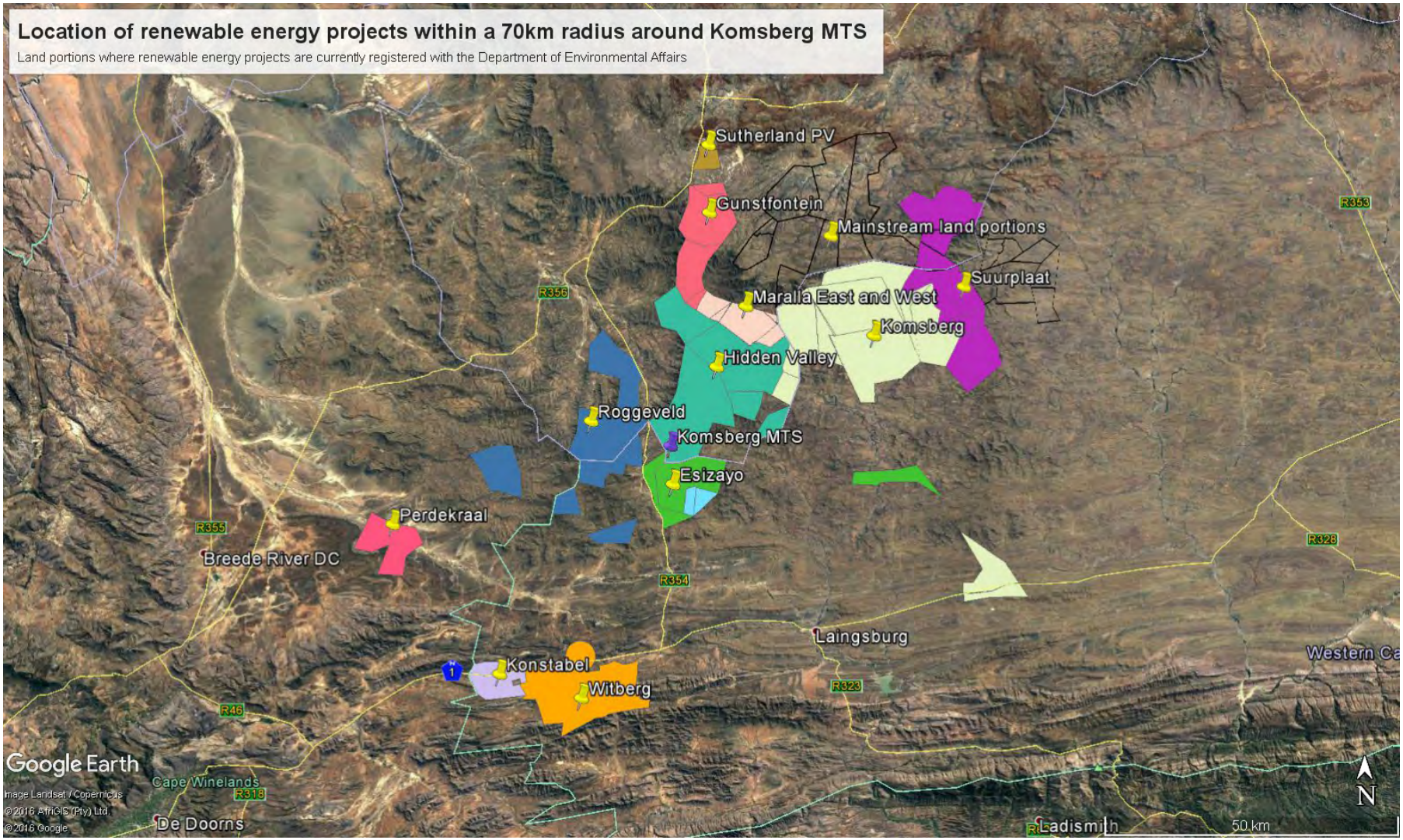

Location of renewable energy projects within a 70km radius around Komsberg MTS
Land portions where renewable energy projects are currently registered with the Department of Environmental Affairs
Sutherland PV
Gunstfontein
Mainstream land portions
Suurplaat
Maralla East and West
Komsberg
Hidden Valley
Roggeveld
Komsberg MTS
Esizayo
Perdekraal
Breede River DC
Konstabel
Witberg
Laingsburg
Ladismith
Cape Winelands
De Doorns
R356
R355
R354
R323
R328
R353
R318
R46
Google Earth
Image Landsat / Copernicus
© 2016 AfriGIS (Pty) Ltd.
© 2016 Google
50 km
N

APPENDIX 3: ENVIRONMENTAL MANAGEMENT PROGRAMME

Management Plan for the Construction Phase (Including pre- and post-construction activities)

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
Displacement of Red Data species due to permanent habitat transformation					
The clearing of vegetation in the proposed on-site substation yard, O&M Building, Laydown Area and the service road	Prevent unnecessary impacts on the surrounding environment by ensuring that contractors are aware of the requirements of the site-specific Construction Environmental Management Programme (CEMPr).	A site-specific CEMPr must be implemented, which gives an appropriate and detailed description of how construction activities must be conducted to reduce unnecessary destruction and degradation of habitat. All contractors are to adhere to the CEMPr and should apply good environmental practice during construction. The CEMPr should specifically include the following: 1. The minimum footprint areas for infrastructure should be used wherever possible, including road widths and lengths; 2. No off-road driving; 3. Maximum use of existing roads; 4. Measures to control dust; 5. Restricted access to the rest of the property; 6. Following construction, rehabilitation of all areas disturbed (e.g. temporary access tracks) must be undertaken and to this end a habitat restoration plan is to be	1. Implementation of the CEMPr. Oversee activities to ensure that the CEMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance. 2. Ensure that the construction area and footprint is kept to a minimum. Carry out regular site inspections to verify the limits of the construction area to ensure unnecessary disturbance is avoided. 3. Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access	1. On a daily basis 2. Weekly 3. Weekly 4. Weekly 5. Weekly 6. Weekly 7. Once-off prior to the completion of construction. 8. Monthly during the construction phase.	1. ECO 2. ECO 3. ECO 4. ECO 5. ECO 6. ECO 7. ECO, Project Developer (Mainstream), and Rehabilitation Specialist, 8. ECO and Construction Manager or Contractor

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
		developed by a rehabilitation specialist and implemented accordingly.	roads must be demarcated clearly. Undertake site inspections to verify. 4. Construction access roads must be demarcated clearly. Undertake site inspections to verify. 5. Monitor the implementation of dust control mechanisms via site inspections and record and report non-compliance. 6. Ensure that the construction area is demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. 7. Appointment of Rehabilitation Specialist to develop a Habitat Restoration Plan		

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
			and ensure that it is approved by auditing the final and signed report acceptance. 8. Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance.		
Displacement of Red Data species due to disturbance					
Construction of the substation, service road and powerline	Prevent unnecessary displacement of Red Data avifauna by ensuring that contractors are aware of the requirements of the CEMPr.	A site-specific CEMPr must be implemented, which gives appropriate and detailed description of how construction activities must be conducted. All contractors are to adhere to the CEMPr and should apply good environmental practice during construction. The CEMPr must specifically include the following: 1. No off-road driving; 2. Maximum use of existing roads; 3. Measures to control noise; 4. Restricted access to the rest of the property; 5. The appointed ECO must be trained by an avifaunal specialist to identify the potential priority species as well as the signs that indicate possible breeding by these	1. Implementation of the CEMPr. Oversee activities to ensure that the CEMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance. 2. Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access roads must be demarcated clearly. Undertake site inspections to verify. 3. Construction access roads must be demarcated clearly.	1. On a daily basis 2. Weekly 3. Weekly 4. Weekly 5. Weekly 6. Once-off before construction commences, for a three-day period. 7. Weekly 8. Once-off and ensure all new construction personnel are trained in this regard. 9. Throughout construction when breeding sites are found.	1. ECO 2. ECO 3. ECO 4. ECO 5. ECO 6. Project Developer (Mainstream), Avifauna Specialist and ECO 7. ECO 8. ECO 9. Project Developer (Mainstream), Avifauna Specialist and ECO 10. Project Developer (Mainstream), Avifauna Specialist and ECO

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
		species. The ECO must then, during audits/site visits, make a concerted effort to look out for such breeding activities of Red Data species, and such efforts may include the training of construction staff to identify Red Data species, followed by regular questioning of staff as to the regular whereabouts on site of these species. If any of the Red Data species are confirmed to be breeding (e.g. if a nest site is found), construction activities within 500m of the breeding site must cease, and an avifaunal specialist is to be contacted immediately for further assessment of the situation and instruction on how to proceed. 6. Prior to construction, an avifaunal specialist should conduct a site walk through, covering the final road and power line routes, to identify any nests/breeding/roosting activity of priority species, as well as any additional sensitive habitats. The results of which may inform the final construction schedule in close proximity to that specific area, including abbreviating construction time, scheduling	Undertake site inspections to verify. 4. Monitor the implementation of noise control mechanisms via site inspections and record and report non-compliance. 5. Ensure that the construction area is demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. 6. Appoint an Avifauna Specialist prior to the construction phase to train and guide the ECO in identify potential priority species and signs for potential breeding. 7. ECO to undertake site visits and audits to find breeding sites. 8. ECO to provide training and information sessions to the construction personnel to identify Red Data species. Conduct regular audits of attendance registers	10. Once-off before the start of construction activities	

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
		activities around avian breeding and/or movement schedules, and lowering levels of associated noise.	for training. 9. Ensure that construction activities are stopped within 500 m of any breeding sites of Red Data species. Ensure that an Avifaunal Specialist is contacted immediately for further assessment. Conduct audits to verify the placement of the buffer area and verify if the Avifaunal Specialist has been appointed. 10. Appointment of Avifaunal Specialist to conduct a site walk through of the final road and power line routes. Record and report any non-compliance.		
Electrocution of Red Data avifauna on the proposed 132kV line and in the on-site substation					
The transmission of electricity generated by the proposed Sutherland 2 WEF	Prevent any electrocutions of Red Data avifauna on the 132kV powerline	The avifaunal specialist must certify that the pole structures to be used on the 132kV powerline are bird-friendly. The pole design must be presented to the avifaunal specialist for sign-off.	Appointment of Avifauna Specialist to sign off on the powerline design. ECO to ensure that this has been complied with by auditing reports, minutes of meetings or sign-off process.	Once-off before construction.	Avifaunal Specialist, Project Developer (Mainstream), ECO and Construction Manager or Contractor -
Mortality of Red Data avifauna due to collisions with the earthwire of the proposed powerline					

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
The transmission of electricity generated by the proposed Sutherland 2 WEF	Mortality of Red Data avifauna due to collisions with the earthwire of the proposed powerline	1. An avifaunal specialist must conduct a site walk through of final pylon positions prior to construction to determine if, and where, bird flight diverters (BFDs) are required. 2. Install BFDs as per the instructions of the specialist following the site walk through, which may include the need for modified BFDs fitted with solar powered LED lights on certain spans.	1. Walk-through to be conducted once the final pole positions have been pegged. 2. Ensure that the BFD design is suitable for installation on the proposed powerline design, and install the devices prior to the line being energized.	1. Once-off before construction commences. 2. Once-off before the line is energized.	1. Avifaunal specialist and Project Developer (Mainstream) 2. Construction Manager or Contractor

Management Plan for the Operational Phase

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
Electrocution of Red Data avifauna on the proposed 132kV line and in the on-site substation					
The transmission of electricity generated by the proposed Sutherland 2 WEF	Ensure effective reactive mitigation if need be in the proposed on-site substation yard if Red Data species are electrocuted.	The hardware within the proposed on-site substation yard is too complex to warrant any mitigation for electrocution at this stage. It is recommended that if on-going impacts are recorded once operational, site specific mitigation be applied reactively. If any electrocutions of Red Data avifauna are reported in the proposed on-site substation yard, the avifaunal specialist must be notified for an inspection of the problem and advice on how the problem can be resolved, if at all, through appropriate mitigation.	1. Avifaunal specialist to be appointed to conduct on-site investigation. 2. Environmental Manager to record impacts of electrocution of Red Data avifauna at the proposed on-site substation and ensure that reactive site specific mitigation is implemented if required. Record and report any non-compliance.	As and when required.	Avifaunal Specialist, Project Developer (Mainstream) and Environmental Manager
Mortality of Red Data avifauna due to collisions with the earthwire of the proposed powerline					
The transmission of electricity generated from the proposed Sutherland 2 WEF	Mortality of Red Data avifauna due to collisions with the earthwire of the proposed powerline.	The operational monitoring programme must include regular monitoring of the grid connection power line for collision mortalities.	1. Avifaunal specialist to be appointed and must conduct a quarterly walk-through of the grid connection. 2. Environmental Manager to verify appointment of specialist and monitor the frequency of monitoring by auditing signed reports and minutes of meetings.	Quarterly	Avifaunal specialist and Facility Manager

Management Plan for the Decommissioning Phase

Impact	Mitigation/Management Objectives and Outcomes	Mitigation/Management Actions	Monitoring		
			Methodology	***Frequency***	***Responsibility***
Displacement of Red Data species due to disturbance					
Removal of the infrastructure	Prevent unnecessary displacement of Red Data avifauna by ensuring that contractors are aware of the requirements of the site-specific Decommissioning Environmental Management Programme (DEMPr).	1. A site-specific DEMPr must be implemented, which gives appropriate and detailed description of how decommissioning activities must be conducted to reduce unnecessary destruction of habitat. All contractors are to adhere to the DEMPr and should apply good environmental practice during decommissioning. 2. Following decommissioning, rehabilitation of all areas disturbed (e.g. temporary access tracks) must be undertaken and to this end a habitat restoration plan is to be developed by a rehabilitation specialist and implemented accordingly.	1. Implementation of DEMPr and oversee activities to ensure that the DEMPr is implemented and enforced, via site audits and inspections. Record and report any non-compliance. 2. Appointment of Rehabilitation Specialist to develop a Habitat Restoration Plan and ensure that it is approved by auditing the final and signed report acceptance. 3. Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance.	1. On a daily basis 2. Once-off prior to the completion of decommissioning. 3. Monthly during the decommissioning phase.	1. ECO 2. Project Developer (Mainstream) and Rehabilitation Specialist and ECO 3. ECO, Construction Manager or Contractor

BASIC ASSESSMENT REPORT

APPENDIX E: PUBLIC PARTICIPATION

contents

Appendix E.1 Proof of Placement of Newspaper Advertisements and Site Notice Board

Project Initiation Phase (Release of BID for 30-day comment period): Newspaper Advertisement – The Cape Times (English)

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS FOR THE PROPOSED DEVELOPMENT OF ELECTRICAL GRID INFRASTRUCTURE TO SUPPORT THE PROPOSED SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES
AND
THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

South Africa Mainstream Renewable Power Developments (Pty) Ltd (hereafter referred to as Mainstream) received three Amended Environmental Authorisations (EAs), dated 10 November 2016 (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3), from the National Department of Environmental Affairs (DEA) to construct and operate the Sutherland Wind Energy Facility (WEF), Sutherland 2 WEF, and Rietrug WEF, each with a generation capacity of 140 MW. EA Amendment Applications will be submitted to the DEA to amend the turbine and hub specifications of each of the separately authorised WEFs (dated 10 November 2016). Mainstream is also proposing to construct electrical infrastructure (including three on-site substations, Operational and Maintenance Buildings, laydown areas, service roads, 132 kV distribution lines, and connection to a proposed third party collector hub or to the proposed Eskom Nuwerust Substation) to support the three separately authorised WEF projects.

In terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) and the 2014 NEMA Environmental Impact Assessment (EIA) Regulations promulgated in Government Gazette 38282 and Government Notice (GN) R982, R983, R984 and R985 on 8 December 2014, the proposed projects require three substantive EA Amendment Application Processes (to amend the turbine specifications) and three Basic Assessment (BA) Processes for the proposed electrical infrastructure. The CSIR has been appointed by Mainstream to undertake the requisite substantive EA Amendment Application and BA Projects, the details of which are indicated in the table below.

Projects	Overall Locality
Substantive EA Amendment Processes (in terms of Regulations 31 to 33 of the 2014 NEMA EIA Regulations): • Sutherland WEF – Amendment 2 • Sutherland 2 WEF – Amendment 2 • Rietrug WEF – Amendment 2	• Rietrug and Sutherland 2 WEFs are located in the Northern Cape, approximately 23 km south of Sutherland and 50 km north of Laingsburg, under the jurisdiction of the Namakwa District Municipality and the Karoo Hoogland Local Municipality. • The proposed Sutherland WEF is located in the Northern Cape, within the aforementioned district and local municipalities; however a small portion of the WEF falls within the Western Cape, under the jurisdiction of the Central Karoo District Municipality and the Laingsburg Local Municipality.
BA Processes: Proposed Electrical Grid Infrastructure • Sutherland WEF – Electrical Grid Infrastructure • Sutherland 2 WEF – Electrical Grid Infrastructure • Rietrug WEF – Electrical Grid Infrastructure	• All three Electrical Grid Infrastructure projects are located in the Northern Cape, approximately 23 km south of Sutherland and 50 km north of Laingsburg, under the jurisdiction of the Karoo Hoogland Local Municipality and the Laingsburg Local Municipality, within the Northern and Western Cape Provinces, respectively.

The BA projects potentially trigger the following activities:

- GN R983 Listing Notice 1: Activity 9; Activity 11 (i); Activity 12 (x), (xii); Activity 19 (i); Activity 27; and Activity 28 (ii); and
- GN R985 Listing Notice 3: Activity 4 [((a), (ii) and (ee) and ((f), (i) and (aa))]; Activity 12 [((a) and (ii)) and ((d) and (ii))]; and Activity 14 [(x), (xii), [(a), (ii) and (ff)] and [(f), (i) and (ff)]].

To ensure that you are included on the project register, as well as to raise any issues and concerns for inclusion in the EA Amendment and BA Reports, you are kindly requested to register your interest in the projects and submit any comments you may have to Shawn Johnston at Sustainable Futures ZA (at the details indicated below via post, email, and fax) within 30 days of this notification (i.e. by no later than 1 February 2017). Kindly note that available project information can be accessed at the following website: https://www.csir.co.za/environmental-impact-assessment. For more information and/or to register as an Interested and Affected Party (I&AP), please contact: Shawn Johnston at Sustainable Futures ZA on Tel: 083 325 9965, Fax: 086 510 2537, P.O. Box 749, Rondebosch, 7701, or E-mail: swjohnston@mweb.co.za.

Project Initiation Phase (Release of BID for 30-day comment period): Newspaper Advertisement – Die Burger and Noordwester (Afrikaans)

GEKOMBINEERDE KENNISGEWING VAN DIE VOORGESTELDE ONTWIKKELING VAN ONDERSTEUNINGSINFRASTRUKTUUR VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG WINDKRAGAANLEGTE, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES
EN
OMGEWINGSIMPAKSTUDIE VAN DIE VOORGESTELDE WYSIGING AAN DIE OMGEWINGSGOEDKEURING VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES

South Africa Mainstream Renewable Power Developments (Pty) Ltd ("Mainstream") het omgewingsmagtiging ontvang by die Nasionale Departement van Omgewingsake (DOS) op 22 Februarie 2012 (DOS verwysingsnommer: 12/12/20/1782, NEAS verwysingsnommer: DEAT/EIA/12225/2011) om 'n hernubare energie aanleg te bou, bestaande uit 'n sonkragaanleg en windkragaanleg. 'n Nie-materiële wysiging aan die omgewingsgoedkeuring was onderneem en is op 06 Oktober 2015 (DOS verwysingsnommer: 12/12/20/1782/AM1) toegestaan. 'n Materiële wysigingsproses aan die omgewingsgoedkeuring was onderneem vir die opdeel van die hernubare energie aanleg in drie aparte projekte, naamlik Sutherland, Sutherland 2 en Rietrug (DOS verwysingsnommers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3) en is op 10 November 2016 toegestaan. Die goedkeurings vervang die oorspronklike goedkeuring (gedateer 22 Februarie 2012) en die gewysigde goedkeuring (gedateer 06 Oktober 2015). Die drie windkragaanlegte kom voor in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland. 'n Deel van die Sutherland windkragaanleg kom ook voor in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Wes-Kaap Provinsie.

Ingevolge die Nasionale Omgewingsbestuurswet (Wet 107 van 1998, soos gewysig) (NEMA) en die 2014 NEMA Omgewingsimpakstudie Regulasies gepubliseer op 08 Desember 2014 in die staatskennisgewing 38282 en Regulasie 982, 983, 984 en 985, moet die wysigingsproses voldoen aan die vereistes van Artikel 32 van die Regulasies en die Basiese Evaluering aan Artikel 19. Die volgende gelyste aktiwiteite is waarskynlik van toepassing op die Basiese Evalueringsprosesse: GN R 983: Aktiwiteit 9; 11(i); 12(x), en (xii); 19(i); 27; en 28(ii) en GN R 985: Aktiwiteit 4 [(a), (ii) en (ee) en (f) en (i) en (aa)]; Aktiwiteit 12 ((a) en (ii)) en ((d) en (ii))]; en Aktiwiteit 14 [(x), (xii), [(a), (ii) en (ff)] en [(f), (i) en (ff)]]. Die WNNR is aangestel deur Mainstream om die proses te bestuur. Die huidige ingligting besikbaar vir die projek word in the table vertoon:

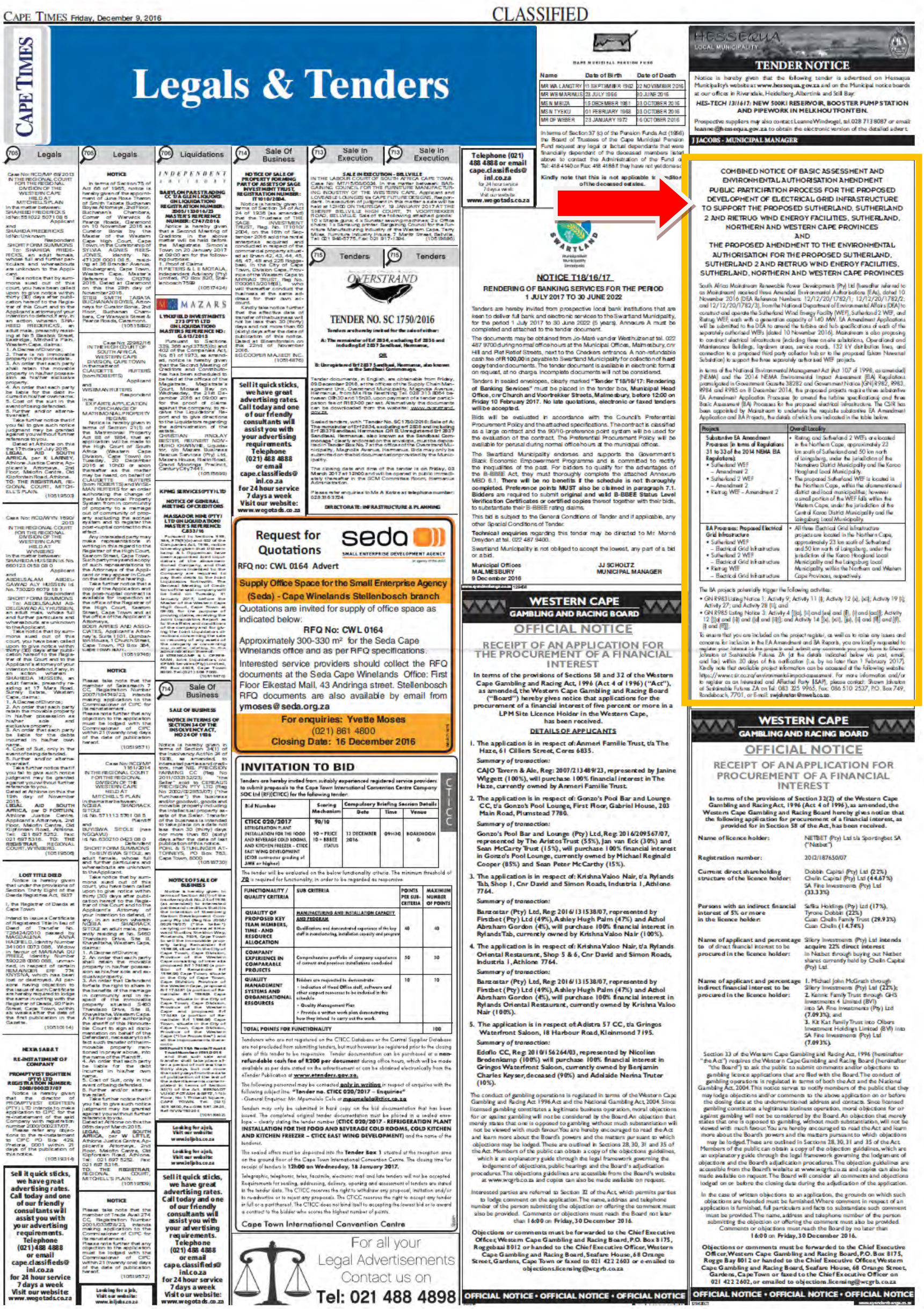
Projekte	Ligging
Materiële wysigings aan die Omgewingsgoedkeuring: • Sutherland WEF – Amendment 2 • Sutherland 2 WEF – Amendment 2 • Rietrug WEF – Amendment 2	• Die Rietrug and Sutherland 2 windkragaanlegte word voorgestel in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland en 50 km Noord van Laingsburg. • Die Sutherland windkragaanleg word ook in die Noord-Kaap voorgestel, met 'n klein gedeelte wat in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Wes-Kaap Provinsie voorkom.
BA Prosesse: Voorgestelde Ondersteuningsinfrastruktuur • Sutherland WEF – Electrical Grid Infrastructure • Sutherland 2 WEF – Electrical Grid Infrastructure • Rietrug WEF – Electrical Grid Infrastructure	• Die ondersteuningsinfrastruktuur word voorgestel in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland en 50 km Noord van Laingsburg.

'n Geïntegreerde openbare deelname proses word vir die prosesse voorgestel, aangesien die projekte in dieselfde area gaan plaasvind, dieselfde aktiwiteit omskryf en ook op dieselfde windkragaanleg van toepassing is. Aparte verslae sal wel vir elk van die projekte saamgestel en vrygestel word.

G&BP's word hiermee in kennis gestel van die registrasie van belanghebende partye die projekte. Die agtergrondsinligting dokument is vir 30-dae beskikbaar vir kommentaar (vanaf 09 Desember 2016 to 01 Februarie 2017, uitsluitend openbare vakansiedae). Harde kopieë van die agtergrondsinligting dokument is beskikbaar by die Laingsburg Openbare Biblioteek, Sutherland Openbare Biblioteek en die Laingsburg en Sutherland Munisipaliteite. Die projek se webtuiste is as volg: https://www.csir.co.za/environmental-impact-assessment

Vir meer inligting, kontak gerus vir: Shawn Johnston by Sustainable FuturesZA op Tel: 0833259965, Faks: 0865102537 of E-pos: swjohnston@mweb.co.za.

Newspaper Advertisement – English (For the Release of the Background Information Document) – The Cape Times – 9 December 2016



CAPE TIMES Friday, December 9, 2016

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SALE IN EXECUTION - BELLVILLE

TENDER NO. SC 1750/2016

NOTICE T18/16/17

RENDERING OF BANKING SERVICES FOR THE PERIOD 1 JULY 2017 TO 30 JUNE 2022

INVITATION TO BID

Request for Quotations — seda SMALL ENTERPRISE DEVELOPMENT AGENCY

RFQ no: CWL 0164 Advert

Supply Office Space for the Small Enterprise Agency (Seda) - Cape Winelands Stellenbosch branch

Quotations are invited for supply of office space as indicated below:

RFQ No: CWL 0164

Approximately 300-330 m² for the Seda Cape Winelands office and as per RFQ specifications.

Interested service providers should collect the RFQ documents at the Seda Cape Winelands Office: First Floor Elkestad Mall, 43 Andringa street. Stellenbosch RFQ documents are also available by email from ymoses@seda.org.za

For enquiries: Yvette Moses (021) 861 4800

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HESSEQUA LOCAL MUNICIPALITY

TENDER NOTICE

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS FOR THE PROPOSED DEVELOPMENT OF ELECTRICAL GRID INFRASTRUCTURE TO SUPPORT THE PROPOSED SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES AND THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

WESTERN CAPE GAMBLING AND RACING BOARD

OFFICIAL NOTICE

RECEIPT OF AN APPLICATION FOR THE PROCUREMENT OF A FINANCIAL INTEREST

WESTERN CAPE GAMBLING AND RACING BOARD

OFFICIAL NOTICE

RECEIPT OF AN APPLICATION FOR PROCUREMENT OF A FINANCIAL INTEREST

OFFICIAL NOTICE • OFFICIAL NOTICE • OFFICIAL NOTICE

OFFICIAL NOTICE • OFFICIAL NOTICE • OFFICIAL NOTICE

Newspaper Advertisement – Afrikaans (For the Release of the Background Information Document) – Die Noordwester – 9 December 2016

DIE JONGSTE CMW WOLVEILING

Koringdal fynwol verdien goeie geld

PORT ELIZABETH – Wolpryse het op die veiling van 30 November 2016 hul goeie pryse voortgesit.

Van die goeie wol op die veiling is 100% verkoop en van die swakker wol is 99% verkoop teen swakker pryse.

CMW kliënte uit hierdie streek wat goeie pryse behaal het is:

* Koringdal Boerdery, Victoria-Wes vir 1 CF van 17,2 mikron teen R131,00/kg.
* Koringdal Boerdery, Victoria-Wes vir 2 AFH van 17,4 mikron teen R130,00/kg.
* Koringdal Boerdery, Victoria-Wes vir 6 AFH van 18,5 mikron teen R127,10/kg.
* Koringdal Boerdery, Victoria-Wes vir 3 BM van 18,4 mikron teen R127,10/kg.
* Koringdal Boerdery, Victoria-Wes vir 6 BF van 18,7 mikron teen R126,50/kg.
* Koringdal Boerdery, Victoria-Wes vir 2 BFH van 18,1 mikron teen R125,60/kg.
* Koringdal Boerdery, Victoria-Wes vir 3 BFH van 16,7 mikron teen R124,40/kg.
* Adidan Trust, Victoria-Wes vir 2 CL van 18,5 mikron teen R124,00/kg.
* Koringdal Boerdery, Victoria-Wes vir 6 AAFH van 18,9 mikron teen R123,-90/kg.

LION SIMEY

SIMEY DE KLERK, lid van die Lions, is die afgelope aantal jare met sy kamera te sien by die ete wat die Lions vir sewentig plussers in Calvinia aanbied. Simey is 'n ywerige fotograaf en met sy kamera word baie byeenkomste gedokumenteer. Hy stel veral belang in natuurfotografie en sien baie dinge raak op sy plaas wat hy met ander deel.

SLUIMERENDE DUIFWENNER

CHRISMARI en Tommie Olivier, verkeer hier baie rustig onderwyl die grootmense van Carnarvon Duiweklub prysuitdeling en hul jaareindfunksie hou. Hulle is die kinders van Hannes en Jane Olivier. Tommie sê hy en sy pa gaan volgende jaar 'n groot faktor wees in die klub se 2017 wedvlug-kompetisie.

23 Jaar gelede

DIE NOORDWESTER: 12 Maart 1993. Die kenmerkende baksteengebou op Fraserburg wat voorheen die administratiewe kantoor van die S.A. Spoorweë was, het 'n pragtige geverfde gesig gekry en sal spoedig sy deure oopgooi vir besigheid. Bevrore vis, vars groente en brood sal te koop aangebied word.

JAPIE: OM AARDSE DORS TE LES

…e teen windpompwater

…eagte Leser,

…ir 'n veeboer in ons geweste is daar min dinge wat so …elangrik is soos windpompwater. Veeboere deur die hele …aroo dra 'n diepe kommer oor die uitwerking wat hi…robreking op hul boerdery kan hê. 'n Mens kan jou nie …oorstel hoe veeboerdery was voordat die windpomp sy …ersky-ning gemaak het nie. 'n Museum oor windpompe, …os die een op Loeriesfontein, is dus heel gepas.

…en van die aangename herinneringe wat ek uit my kin…erdae het, is hoe lekker windpompwater in die warm …omer was. As die wind stoot en die windpomp gooi, kon …y water drink wat altyd by 'n aangename temperatuur …as. Dit was nooit te koud of te warm nie. Dit was net …ekker. Toe ek nog klein was, het my pa, met sy hande …een mekaar, 'n bakkie gevorm. Hy het die water onder …ie pyp opgevang sodat ons kon drink.

Dit is dus met goeie rede dat 'n drink- en eetpiek op Brandvlei "Die Windpomp" genoem is. Dit het soms …eur dat daar op Brandvlei 'n boerevergadering was en …an is daar gewoonlik oor die middag iets geëet …n gedrink. Die betrokke dag was dit besonder warm en was dit aangenaam koel in "Die Windpomp". Ek het by oom Willie gesit. Hy was een van daardie mense wat nie baie gepraat het nie.

Elke omgewing het mos nou maar sy manne wat meer dors word as ander. Een so 'n dors, jong man het sy pa met die boerdery gehelp. Ons het skaars gesit toe kom hy die vertrek binne. Hy sak op die kroegstoeltjie neer en haal sy laphoedjie af en sit dit op die toonbank langs hom neer. Sy hare is gekoek van die sweet. 'n Man kon op 'n afstand sien hy het vanmöre warm gekry. Hy het sekerlik gedroom waar hy saam met die manne in die kraal gesweet het, hoe lekker dit sou wees daar by "Die Windpomp". Hy bestel dadelik twee biere. Hy slaan die eerste bier met een teug weg en trek die tweede een nader. Dit is toe wat oom Willie kommentaar lewer op die ongewone gedrag met die opmerking: "Aarde maar hy's dors".

"n Beter beskrywing kon 'n mens jou nie voorstel nie. Ons het vertrek voordat ons kon sien of twee biere genoeg was om die jongman se dors te les. Miskien moes hy maar 'n bietjie windpompwater gedrink het voordat hy by die bier begin het.

Groete, Japie.

HANTAM MUNISIPALITEIT

01 DESEMBER 2016 tot 22 DESEMBER 2016

TENDER : HUUR VAN FOTOKOPIEERDERS

Tenders word hiermee ngewag vir die huur van die fotokopieerders vir 'n tydperk van 3 jaar.

Spesifikasies is as volg:

Ses (6) fotokopieerders met die volgende funksie: A4 A3 Kopieerder , druk, faks en skandeerder 25 Kopiee per minuut Dokumentvoerder Duplex kopiee 2 x 500 Papier laaie Skandeer na epos Kleur skandeer

Twee (2) fotokopieerders met die volgende funksie: A4 A3 Kopieerder , druk, faks en skandeerder 30 Kopiee per minuut Dokumentvoerder Duplex kopiee 1 x 350 Papier laaie Skandeer na epos Kleur skandeer

Twee (2) fotokopieerders met die volgende funksie: A4 A3 Kopieerder , druk, faks en skandeerder 20 Kopiee per minuut Dokumentvoerder Duplex kopiee 2 x 500 Papier laaie Skandeer na epos Kleur skandeer

Twee (2) fotokopieerders met die volgende funksie: A4 A3 Kopieerder , druk, faks en skandeerder 40 Kopiee per minuut Dokumentvoerder Duplex kopiee 2 x 550 Papier laaie Skandeer na epos Kleur skandeer

Een (1) fotokopieerder met die volgende funksie: A4 A3 Kopieerder , druk, faks en skandeerder 40 Kopiee per minuut Dokumentvoerder Duplex kopiee 4 x 550 Papier laaie Skandeer na epos Kleur skandeer 1000 Bladsye sorteer met 50 Bladsye stapeling

Tenders moet hierdie kantoor nie later as **Donderdag 22 Desember 2016** om **10:00** bereik nie.

Tenderaars moet ASSEBLIEF bewus wees van die volgende aspekte:

- ★ U CSD (MAAAO) Registrasie nommer moet in u aansoek gemeld word
- ★ Geldige SARS Sertifikaat van u besigheid moet aangeheg wees
- ★ Munisipale Diensterekening moet by u kwotasies ingesluit wees
- ★ Geen potensiële diensverskaffer waarvan 'n Staatsamptenaar, hetsy Direkteur, Vennoot en of Bestuurder, mag aansoek doen nie. (SCM Regulasie 45).
- ★ MBD4 vorms moet voltooi word.

Pryse sal oorweeg word volgens die voorgeskrewe Voorsieningskanaal Bestuurs Regulasies, en die 90/10 puntestelsel soos voorgeskryf deur die PPPFA, 5 van 2000.

Riaan van Wyk
Waarnemende Munisipale Bestuurder

GEKOMBINEERDE KENNISGEWING VAN DIE VOORGESTELDE ONTWIKKELING VAN ONDERSTEUNINGSINFRASTRUKTUUR VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG WINDKRAGAANLEGTE, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES EN OMGEWINGSIMPAKSTUDIE VAN DIE VOORGESTELDE WYSIGING AAN DIE OMGEWINGSGOEDKEURING VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES

South Africa Mainstream Renewable Power Developments (Pty) Ltd ("Mainstream") het omgewingsmagtiging ontvang by die Nasionale Departement van Omgewingsake (DOS) op 22 Februarie 2012 (DOS verwysingsnommer: 12/12/20/1782, NEAS verwysingsnommer: DEAT/EIA/12225/2011) om 'n hernubare energie aanleg te bou, bestaande uit 'n sonkragaanleg en windkragaanleg. 'n Niemateriele wysiging van die omgewingsgoedkeuring was onderneem en is op 06 Oktober 2015 (DOS verwysingsnommer 12/12/20/1782/AM1) toegestaan. 'n Materiele wysigingsproses van die omgewingsgoedkeuring was onderneem vir die opdeel van die hernubare energie aanleg in drie aparte projekte, naamlik Sutherland, Sutherland 2 en Rietrug (DOS verwysingsnommers 12/12/20/1782/1, 12/12/20/1782/2; and 2/12/20/1782/3) en is op 10 November 2016 toegestaan. Die goedkeurings vervang die oorspronklike goedkeuring (gedateer 22 Februarie 2012) en die gewysigde goedkeuring (gedateer 06 Oktober 2015). Die drie windkragaanlegte kom voor in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland. 'n Deel van die Sutherland windkragaanleg kom ook voor in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Wes-Kaap Provinsie.

ngevolge die Nasionale Omgewingsbestuurswet (Wet 107 van 1998, soos gewysig) NEMA) en die 2014 NEMA Omgewingsimpakstudie Regulasies gepubliseer op 08 Desember 2014 in die staatskennisgewing 38282 en Regulasie 982, 983, 984 en 985, moet die wysigingsproses voldoen aan die vereistes van Artikel 32 van die Regulasies en die Basiese Evaluering aan Artikel 19. Die volgende gelyste aktiwiteite is waarskynlik van oepassing op die Basiese Evalueringsprosesse: GN R 983: Aktiwiteit 9, 11(ii), 12(x), en (xii), 19(i), 27, en 28(iii) en GN R 985: Aktiwiteit 4 [(a), (ii) en (ee) en (f) en (i) en (cc)]; Aktiwiteit 12 [(a) en (iii)] en [(d) en (iii)], en Aktiwiteit 14 [(x), (xii), [(a), (ii) en (ff)] en [(f), (i) en (ff)]. Die WNNR is aangestel deur Mainstream om die proses te bestuur. Die huidige ingigting beskikbaar vir die projex word in the tabie vertoon:

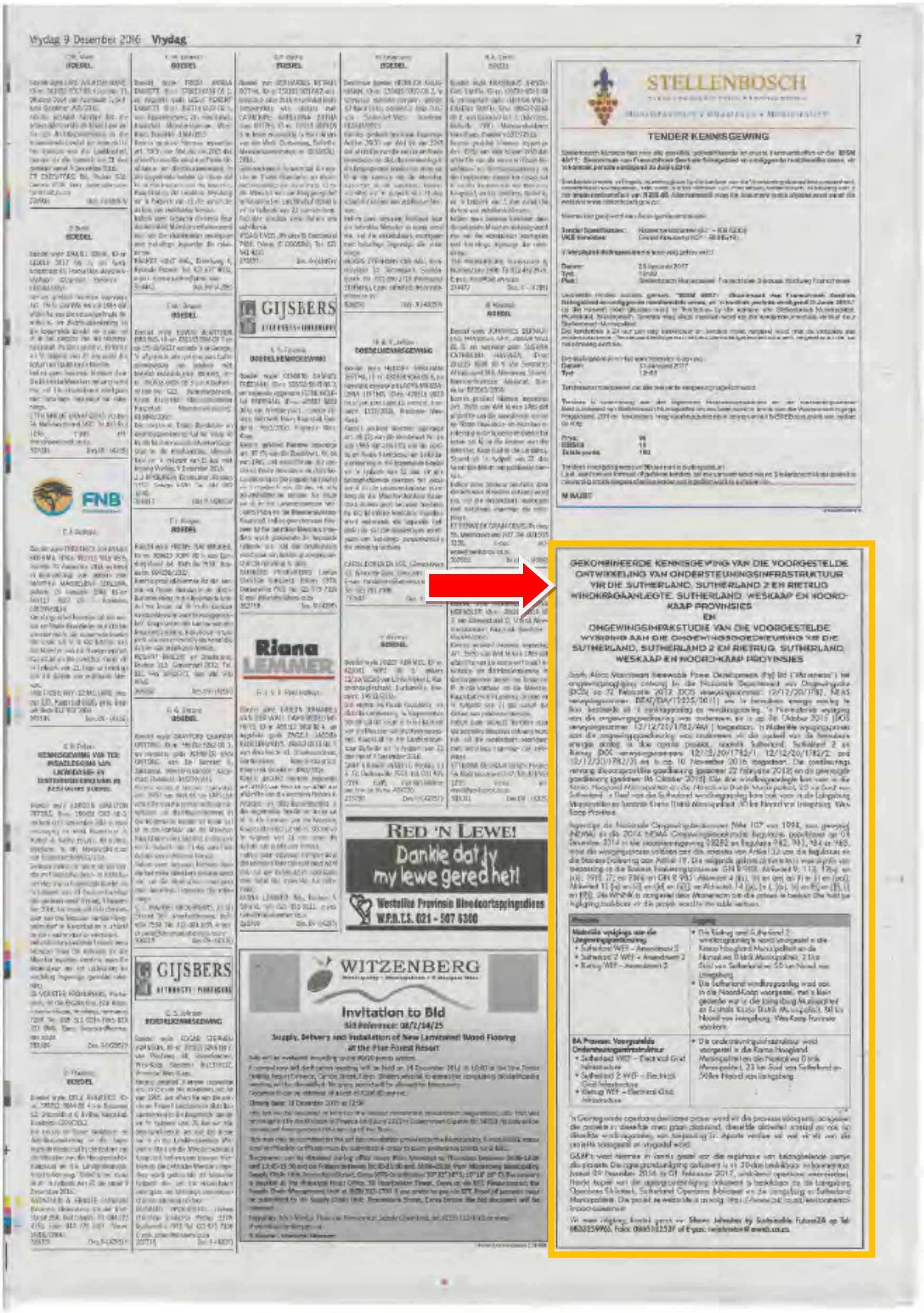
Projekte	Ligging
Materiële wysigings aan die Omgewingsgoedkeuring: • Sutherland WEF – Amenament 2 • Sutherland 2 WEF – Amendment 2 • Rietrug WEF – Amendment 2	• Die Rietrug and Sutherland 2 windkragaanlegte word voorgestel in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland en 50 km Noord van Laingsburg. • Die Sutherland windkragaanleg word ook in die Noord-Kaap voorgestel, met 'n klein gedeelte wat in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Wes-Kaap Provinsie voorkom.
BA Prosesse: Voorgestelde Ondersteuningsinfrastruktuur • Sutherland WEF – Electrical Grid Infrastructure • Sutherland 2 WEF – Electrical Grid Infrastructure • Rietrug WEF – Electrical Grid Infrastructure	• Die ondersteuningsinfrastruktuur word voorgestel in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland en 50 km Noord van Laingsburg.

'n Geintegreerde openbare deelname proses word vir die prosesse voorgestel, aangesien die projekte in dieselfde area gaan plaasvind, dieselfde aktiwiteit omskryf en ook op dieselfde windkragaanleg van toepassing is. Aparte verslae sal wel vir elk van die projekte saamgestel en vrygestel word.

G&BP's word hiermee in kennis gestel van die registrasie van belanghebende partye die projekte. Die agtergrondsinligting dokument is vir 30-dae beskikbaar vir kommentaar (vanaf 09 Desember 2016 to 01 Februarie 2017, uitsluitend openbare vakansiedae). Harde kopiee van die agtergrondsinligting dokument is beskikbaar by die Laingsburg Openbare Biblioteek, Sutherland Openbare Biblioteek en die Laingsburg en Sutherland Munisipaliteite. Die projek se webtuisie is as volg: https://www.csir.co.za/environmental-impact-assessment

Vir meer inligting, kontak gerus vir: **Shawn Johnston by SustainableFuturesZA op Tel: 0833259965, Faks: 0865102537 of E-pos: swjohnston@mweb.co.za.**

Newspaper Advertisement – Afrikaans (For the Release of the Background Information Document) – Die Burger – 9 December 2016



Copy of the Site Notice Boards: English and Afrikaans

JOINT NOTICE OF BASIC ASSESSMENT AND SUBSTANTIVE ENVIRONMENTAL AUTHORISATION AMENDMENT PROCESSES

THE PROPOSED CONSTRUCTION OF ELECTRICAL GRID INFRASTRUCTURE, AND AMENDMENT OF THE TURBINE AND HUB SPECIFICATIONS OF THREE WIND ENERGY FACILITIES NEAR SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

South Africa Mainstream Renewable Power Developments (Pty) Ltd (hereinafter referred to as Mainstream) received three Amended Environmental Authorisations (EAs), dated 10 November 2016 (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3), from the National Department of Environmental Affairs (DEA) to construct and operate the Sutherland Wind Energy Facility (WEF), Sutherland 2 WEF, and Rietrug WEF, each with a generation capacity of 140 MW. Notice is hereby given in terms of Regulation 41 of the Environmental Impact Assessment (EIA) Regulations published in Government Notice (GN) R982 in Government Gazette 38282 of 8 December 2014, under Section 24(4)(a) of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA), that **Mainstream** is proposing to **amend the turbine and hub specifications** of each of the separately authorised WEFs (as part of a substantive EA Amendment Process); and to construct **electrical infrastructure (including three on-site substations, Operational and Maintenance Buildings, laydown areas, service roads, 132 kV distribution lines, and connection to a proposed collector hub or the proposed Eskom Nuwerust substation)** to support the separately authorised Sutherland WEF, Sutherland 2 WEF, and Rietrug WEF. The Rietrug and Sutherland 2 WEFs and the proposed supporting electrical infrastructure are located within the Northern Cape, approximately 23 km south of Sutherland and 50 km north of Laingsburg, under the jurisdiction of the Namakwa District Municipality and the Karoo Hoogland Local Municipality. The proposed Sutherland WEF is located in the Northern Cape, within the aforementioned district and local municipalities; however a small portion of the WEF falls within the Western Cape, under the jurisdiction of the Central Karoo District Municipality and the Laingsburg Local Municipality.

The proposed amendment to the turbine specifications constitutes a substantive EA Amendment Process (in terms of Regulations 31 to 33 of the 2014 NEMA EIA Regulations). Basic Assessment (BA) Processes are required for the construction of the proposed supporting electrical infrastructure. The CSIR has been appointed by Mainstream to undertake the requisite substantive EA Amendment Application and BA Projects, which are referred to as:

Projects	
Substantive EA Amendment Processes	**BA Processes: Proposed Electrical Grid Infrastructure**
• Sutherland WEF – Amendment 2 • Sutherland 2 WEF – Amendment 2 • Rietrug WEF – Amendment 2	• Sutherland WEF – Electrical Grid Infrastructure • Sutherland 2 WEF – Electrical Grid Infrastructure • Rietrug WEF – Electrical Grid Infrastructure

The need for a BA is triggered by the following potential listed activities listed in GN R983 and GN R985:

Process	Government Notice	Listed Activity Number
BA Processes	GN R983 - 8 December 2014	Activity 9; Activity 11 (i); Activity 12 (x), (xii); Activity 19 (i); Activity 27; and Activity 28 (ii)
	GN R985 - 8 December 2014	Activity 4 [((a), (ii) and (ee) and ((f), (i) and (aa))]; Activity 12 [((a) and (ii)) and ((d) and (ii))]; and Activity 14 [(x), (xii), [(a), (ii) and (ff) and (f), (i) and (ff)]]

Since the three BA and three substantive EA Amendment projects are located within the same geographical area and constitute the same type of activity (i.e. generation of electricity via wind resources and transmission to the National Grid), an integrated Public Participation Process will be undertaken for the proposed projects. However, separate Applications for EA for each BA project and separate Applications for EA Amendment for each WEF Amendment 2 project will be lodged with the Competent Authority (i.e. the DEA). As such separate reports (i.e. EA Amendment and BA Reports) will be compiled for each project.

To ensure that you are included on the project register as an Interested and Affected Party (I&AP), as well as to raise any issues and concerns for inclusion in the EA Amendment and BA Reports, you are kindly requested to register your interest in the projects and submit any comments you may have to the Public Participation Facilitator, Shawn Johnston at Sustainable Futures ZA (at the details indicated below via post, email, and fax). Available project information can be accessed at the following website: **https://www.csir.co.za/environmental-impact-assessment.** A Background Information Document is currently available for a 30-day commenting period (9 December 2016 – 1 February 2017).

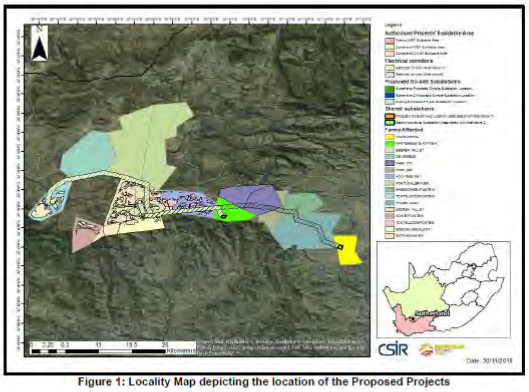


Figure 1: Locality Map depicting the location of the Proposed Projects

To obtain further information or to register as I&AP, please contact:
Sustainable Futures ZA
Shawn Johnston
Postal Address: P.O. Box 749, Rondebosch, 7701
Phone: 083 325 9965
Fax: 086 510 2537
Email: swjohnston@mweb.co.za

GEKOMBINEERDE KENNISGEWING VAN DIE VOORGESTELDE ONTWIKKELING VAN ONDERSTEUNINGSINFRASTRUKTUUR VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG WINDKRAGAANLEGTE, EN
OMGEWINGSIMPAKSTUDIE VAN DIE VOORGESTELDE WYSIGING AAN DIE OMGEWINGSGOEDKEURING VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES

South Africa Mainstream Renewable Power Developments (Pty) Ltd ("Mainstream") het omgewingsmagtiging ontvang by die Nasionale Departement van Omgewingsake (DOS) op 22 Februarie 2012 (DOS verwysingsnommer: 12/12/20/1782, NEAS verwysingsnommer: DEAT/EIA/12225/2011) om 'n hernubare energie aanleg te bou, bestaande uit 'n sonkragaanleg en windkragaanleg. 'n Nie-materiële wysiging aan die omgewingsgoedkeuring was onderneem en is op 06 Oktober 2015 (DOS verwysingsnommer: 12/12/20/1782/AM1) toegestaan. 'n Materiële wysigingsproses aan die omgewingsgoedkeuring was onderneem vir die opdeel van die hernubare energie aanleg in drie aparte projekte, naamlik Sutherland, Sutherland 2 en Rietrug (DOS verwysingsnommers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3) en is op 10 November 2016 toegestaan. Die goedkeurings vervang die oorspronklike goedkeuring (gedateer 22 Februarie 2012) en die gewysigde goedkeuring (gedateer 06 Oktober 2015). Die drie windkragaanlegte kom voor in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland. 'n Deel van die Sutherland windkragaanleg kom ook voor in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Wes-Kaap Provinsie. Mainstream is van voorneme om die windkragaanlegte se spesifikasies te wysig asook om die nodige ondersteuningsinfrastruktuur (wat drie substasies, geboue, paaie, 132 kV kraglyne insluit) te bout om die drie windkragaanlegte te ondersteun.

Ingevolge die Nasionale Omgewingsbestuurswet (Wet 107 van 1998, soos gewysig) (NEMA) en die 2014 NEMA Omgewingsimpakstudie Regulasies gepubliseer op 08 Desember 2014 in die staatskennisgewing 38282 en Regulasie 982, 983, 984 en 985, moet die wysigingsproses voldoen aan die vereistes van Artikel 32 van die Regulasies en die Basiese Evaluering aan Artikel 19. Die WNNR is aangestel deur Mainstream om die proses te bestuur. Die huidige ingligting besikbaar vir die projek word in the tabel hieronder vertoon:

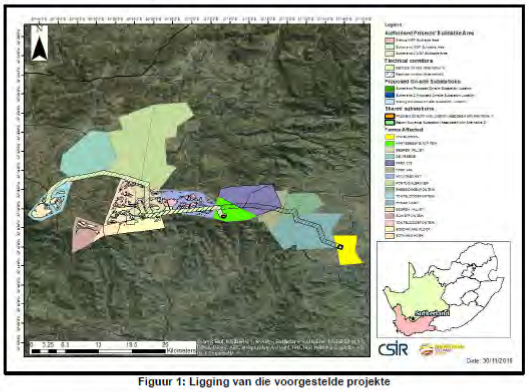
Projekte	
Materiële wysigings aan die Omgewingsgoedkeuring:	**BA Prosesse: Voorgestelde Ondersteuningsinfrastruktuur**
• Sutherland WEF – Amendment 2 • Sutherland 2 WEF – Amendment 2 • Rietrug WEF – Amendment 2	• Sutherland WEF – Electrical Grid Infrastructure • Sutherland 2 WEF – Electrical Grid Infrastructure • Rietrug WEF – Electrical Grid Infrastructure

'n Basiese evalueringsproses word benodig omdat die volgende aktiwiteite ingesluit in GN R983 and GN R985 van belang is op die voorgestelde projekte:

Process	Staatskennisgewings	Gelyste aktiwiteit
BA Prosesse	GN R983 - 8 Desember 2014	Aktiwiteit 9; 11(i); 12 (x), en (xii); 19(i); 27; en 28(ii)
	GN R985 - 8 Desember 2014	Aktiwiteit 4 [(a), (ii) en (ee) en (f) en (i) en (aa)]; Aktiwiteit 12 [((a) en (ii)) en ((d) en (ii))]; en Aktiwiteit 14 [(x), (xii), [(a), (ii) en (ff)] en [(f), (i) en (ff)]

'n Geïntegreerde openbare deelname proses word vir die prosesse voorgestel, aangesien die projekte in dieselfde area gaan plaasvind, dieselfde aktiwiteit omskryf en ook op dieselfde windkragaanlegte van toepassing is. Aparte verslae sal wel vir elk van die projekte saamgestel en vrygestel word.

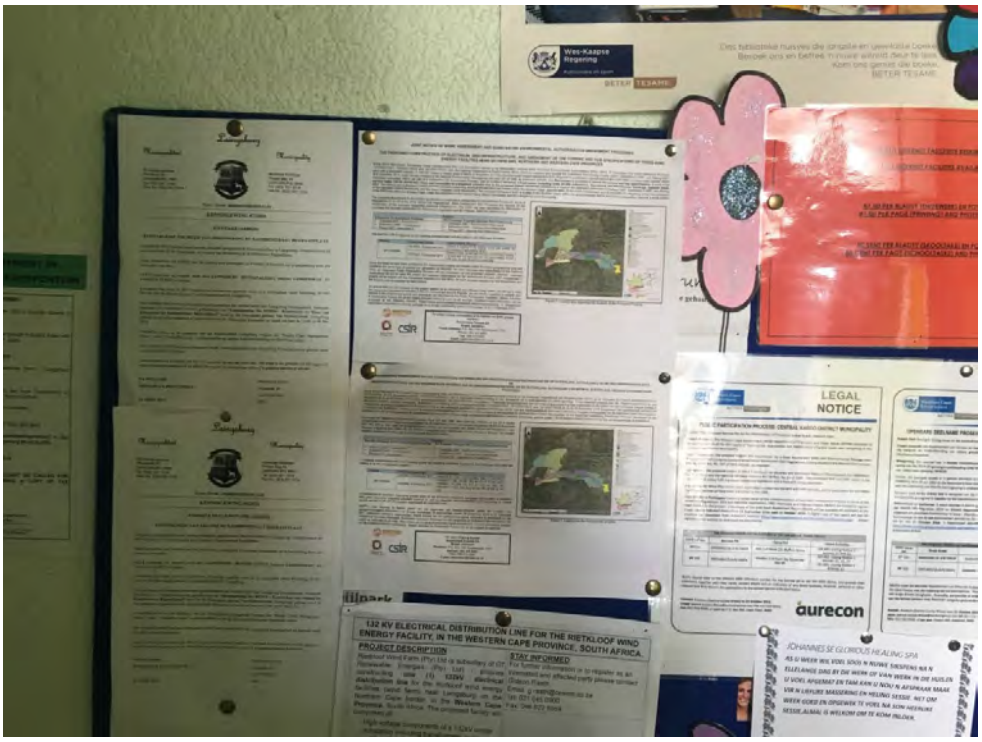
G&BP's word hiermee in kennis gestel van die registrasie van belanghebbende partye die projekte. Die agtergrondsinligting dokument is vir 30-dae beskikbaar vir kommentaar (vanaf 09 Desember 2016 to 01 Februarie 2017, uitsluitend openbare vakansiedae). Harde kopieë van die agtergrondsinligting dokument is beskikbaar by die Laingsburg Openbare Biblioteek, Sutherland Openbare Biblioteek en die Laingsburg en Sutherland Munisipaliteite. Die projek se webtuiste is as volg: https://www.csir.co.za/environmental-impact-assessment. U word vriendelike versoek om die publiekedeelname fasiliteerder, Shawn Johnston by Sustainable Futures ZA vir die projekte te registreer.



Figuur 1: Ligging van die voorgestelde projekte

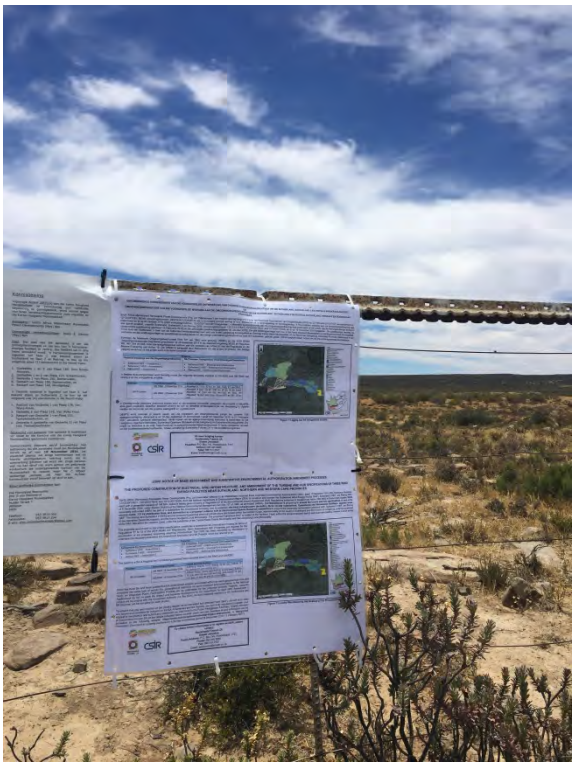
Vir meer inligting kontak:
Sustainable Futures ZA
Shawn Johnston
Posadres: P.O. Box 749, Rondebosch, 7701
Selfoon: 083 325 9965
Faks: 086 510 2537
E-pos: swjohnston@mweb.co.za

Proof of Placement of Site Notice Boards: 7 and 8 December 2016



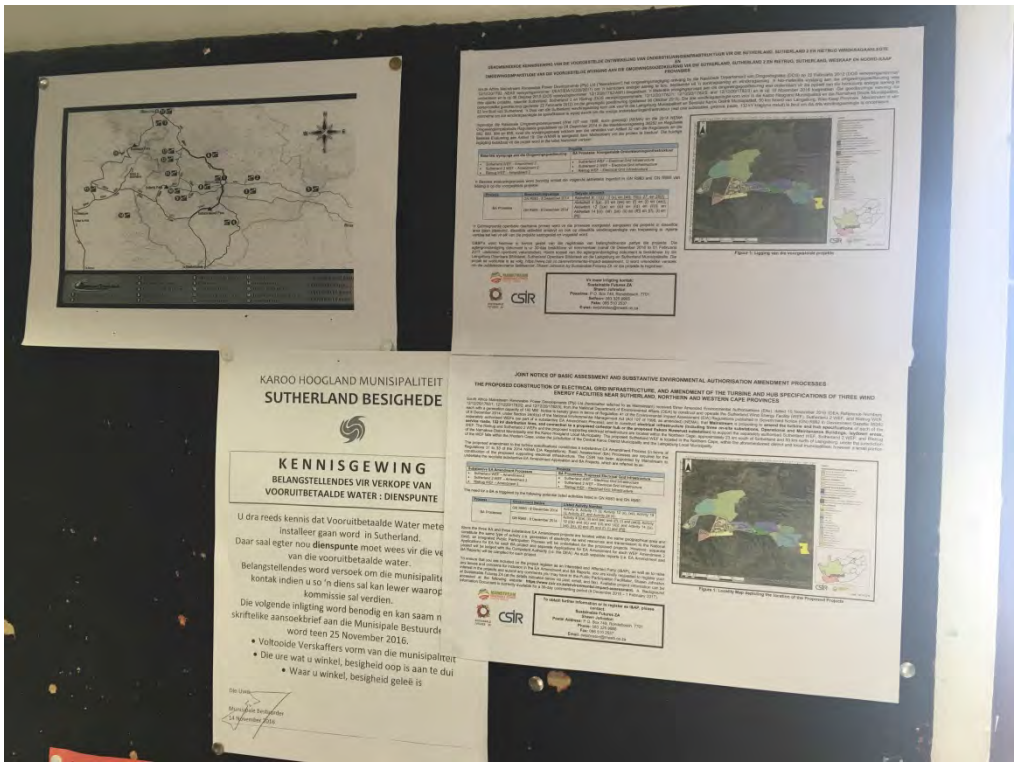
Site Notice Board 1 (English and Afrikaans) placed at the Laingsburg Public Library and Local Municipality and Library, Western Cape

Site Notice Board 2a (English and Afrikaans) placed at the boundary of the Sutherland 2 WEF Site A, Sutherland, Northern Cape



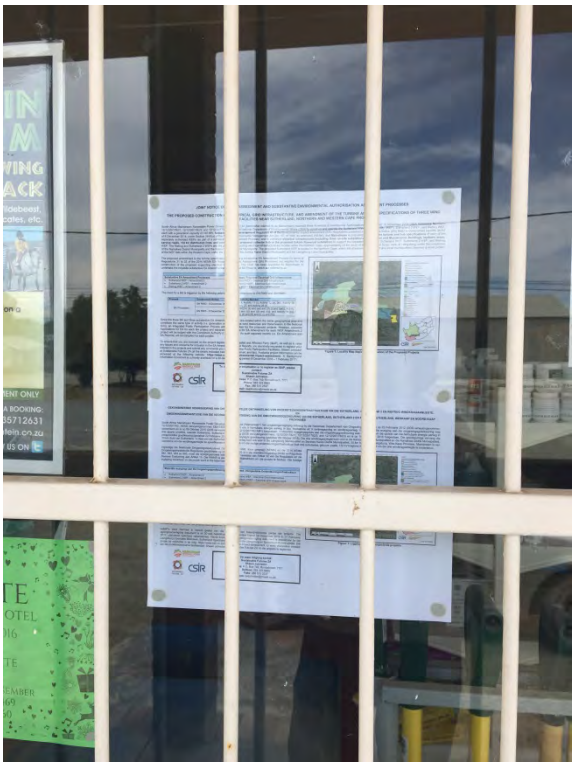
Site Notice Board 2b (English and Afrikaans) placed at the boundary of the Sutherland 2 WEF Site B, Sutherland, Northern Cape

Site Notice Board 2c (English and Afrikaans) placed at the boundary of the Sutherland 2 WEF Site C, Sutherland, Northern Cape

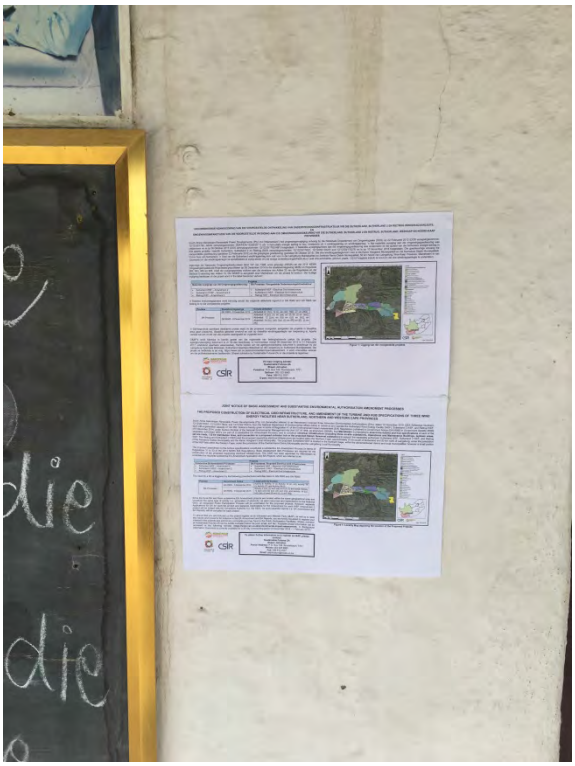


Site Notice Board 3 (English and Afrikaans) placed at the Sutherland OK Bazaar (Mini-Market), Northern Cape

Site Notice Board 4 (English and Afrikaans) placed at the Karoo Hoogland Local Municipality, Northern Cape



Site Notice Board 5 (English and Afrikaans) placed at the Sutherland Farmers Co-operation, Sutherland, Northern Cape



Site Notice Board 6 (English and Afrikaans) placed at the Sutherland Public Library, Sutherland, Northern Cape

Site Notice Board 7 (English and Afrikaans) placed at the Sutherland Multi-Save Market, Sutherland, Northern Cape

Site Notice Board 8 (English and Afrikaans) placed at the boundary of the Rietrug WEF Site (Farm Entrance), Sutherland, Northern Cape

Site Notice Board 9 (English and Afrikaans) placed at the boundary of the Sutherland WEF Site (Farm Entrance), Sutherland, Northern Cape

Appendix E.2 Correspondence Sent to I&APs, Organs of State and Stakeholders

Copies of Correspondence Sent to I&APs, Stakeholders and Organs of State Prior to the Release of the Basic Assessment Report for I&AP Review (i.e. during the Project Initiation Phase)

Note from the CSIR: During the Project Initiation Phase, an integrated PPP was undertaken for the proposed BA Projects and the Amendment 2 Projects.

Letter 1 dated 9 December 2016: English: Notification of the BA (and Amendment 2) Processes

SUSTAINABLE FUTURES ZA

P.O. Box 749 Rondebosch 7701 Tel: 0833259965 Fax: 0865102537
e-mail: swjohnston@mweb.co.za

9 December 2016

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS

PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

South Africa Mainstream Renewable Power Developments (PTY) Ltd ("Mainstream") received Environmental Authorisation (EA) from the National Department of Environmental Affairs (DEA) on 22 February 2012 (DEA Reference Number: 12/12/20/1782) for the proposed construction of the Sutherland Renewable Energy Facility, consisting of a Solar Energy Facility and a Wind Energy Facility (WEF). An amended EA was issued on 06 October 2015 (DEA Reference Number: 12/12/20/1782/AM1), following a non-substantive process. Mainstream undertook a second amendment process to split the original EA into three separate WEF projects entitled the Sutherland, Sutherland 2, and Rietrug WEFs. On 10 November 2016, the National DEA accordingly granted three separate EAs for the WEFs (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3). These EAs replace the original EA (dated 22 February 2012) and the amended EA (dated 6 October 2015). The Sutherland, Sutherland 2 and Rietrug WEFs are located within the Karoo Hoogland Local Municipality and the Namakwa District Municipality, 23 km south of Sutherland, Northern Cape Province. A portion of the Sutherland WEF occurs in the Laingsburg Local Municipality and the Central Karoo District Municipality, approximately 50 km north of Laingsburg, in the Western Cape Province.

This notice serves as a notification to inform potential Interested and Affected Parties (I&APs) of the following processes proposed by Mainstream:

1. **Substantive EA Amendment Processes to increase the turbine hub height and rotor diameter of the Sutherland, Sutherland 2 and Rietrug WEFs.**

2. **Basic Assessment (BA) Processes for the proposed supporting electrical grid infrastructure, including (but not limited to) an on-site substation and 132 kV distribution line, and connection to a proposed collector hub or the proposed Eskom Nuwerust substation in order to connect the approved Sutherland, Sutherland 2 and Rietrug WEFs to the national grid. The proposed collector hub and Eskom Nuwerust Substation have been assessed as part of the separate Moyeng Energy (PTY) Ltd Suurplaat WEF Environmental Impact Assessment (EIA) (DEA Reference Number: 12/12/20/1583).**

In terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) and the 2014 NEMA EIA Regulations promulgated in Government Gazette 38282 and Government Notice (GN) R982, R983, R984 and R985 on 8 December 2014, the Amendment Processes must adhere to the provisions included within Section 32 of the EIA Regulations which outlines the process and consideration of an application for amendment where a change in scope occurs and the BA Processes must be undertaken in accordance with Section 19 of the Regulations. The proposed BA Process potentially triggers the following activities, GN R 983: Activity 9; 11(i); 12(x), and (xii); 19(i); 27; and 28(ii) and GN R 985: Activity 4 [((a), (ii) and (ee) and ((f), (i) and (aa))]; Activity 12 [((a) and (ii)) and ((d) and (ii))]; and Activity 14 [(x), (xii), [(a), (ii) and (ff)] and [(f), (i) and (ff)]].

An integrated Public Participation Process is being undertaken for the processes as they are located within the same geographical area, constitute the same type of activity and is applicable to the same WEFs. However, separate reports (i.e. BA and Amendment Reports) will be compiled for each process.

I&APs are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from **9 December 2016** to **1 February 2017** (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

Hard copies of the background information document are available for public viewing at the **Laingsburg Library, Sutherland Library, Karoo Hoogland and Laingsburg Local Municipalities.** The background information document can also be downloaded from the following website: **https://www.csir.co.za/environmental-impact-assessment**

You are kindly requested to submit any comments you may have on the background information document to **Shawn Johnston at Sustainable Futures ZA** within 30 days of this notification (i.e. by no later than **1 February 2017**). For more information, please contact: **Shawn Johnston at Sustainable FuturesZA on Tel: 0833259965, Fax: 0865102537 or E-mail: swjohnton@mweb.co.za.**

Sincerely,
Shawn Johnston
Process Facilitator
Sustainable Futures ZA

Letter 2 dated 9 December 2016: Afrikaans: Notification of the BA (and Amendment 2) Processes

SUSTAINABLE
FUTURES ZA

P.O. Box 749 Rondebosch 7701 Tel: 0833259965 Fax: 0865102537
E-Mail: swjohnston@mweb.co.za

09 DESEMBER 2016

GEKOMBINEERDE KENNISGEWING VAN DIE VOORGESTELDE ONTWIKKELING VAN ONDERSTEUNINGSINFRASTRUKTUUR VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG WINDKRAGAANLEGTE, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES

EN

OMGEWINGSIMPAKSTUDIE VAN DIE VOORGESTELDE WYSIGING AAN DIE OMGEWINGSGOEDKEURING VIR DIE SUTHERLAND, SUTHERLAND 2 EN RIETRUG, SUTHERLAND, WESKAAP EN NOORD-KAAP PROVINSIES

Geagte Belanghebende Party,

South Africa Mainstream Renewable Power Developments (Pty) Ltd ("Mainstream") het omgewingsmagtiging ontvang by die Nasionale Departement van Omgewingsake (DOS) op 22 Februarie 2012 (DOS verwysingsnommer: 12/12/20/1782, NEAS verwysingsnommer: DEAT/EIA/12225/2011) om 'n hernubare energie aanleg te bou, bestaande uit 'n sonkragaanleg en windkragaanleg. 'n Nie-materiële wysiging aan die omgewingsgoedkeuring was onderneem en is op 06 Oktober 2015 (DOS verwysingsnommer: 12/12/20/1782/AM1) toegestaan. 'n Materiële wysigingsproses aan die omgewingsgoedkeuring was onderneem vir die opdeel van die hernubare energie aanleg in drie aparte projekte, naamlik Sutherland, Sutherland 2 en Rietrug (DOS verwysingsnommers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3) en is op 10 November 2016 toegestaan. Die goedkeurings vervang die oorspronklike goedkeuring (gedateer 22 Februarie 2012) en die gewysigde goedkeuring (gedateer 06 Oktober 2015). Die drie windkragaanlegte kom voor in die Karoo Hoogland Munisipaliteit en die Namakwa Distrik Munisipaliteit, 23 km Suid van Sutherland. 'n Deel van die Sutherland windkragaanleg kom ook voor in die Laingsburg Munisipaliteit en Sentrale Karoo Distrik Munisipaliteit, 50 km Noord van Laingsburg, Weskaap Provinsie.

Hierdie dien as 'n kennisgewing om enige potensiële Geïnteresseerde en/of Belanghebbende Party (G&BP) te laat weet van die die volgende prosesse wat deur Mainstream voorgestel word:

1. Materiële wysigingsprosesse om die turbine groottes van die goedgekeurde Sutherland, Sutherland 2 and Rietrug windkragaanlegte te verhoog.

2. Basiese Evalueringsprosesse vir die ontwikkeling van ondersteuningsinfrastruktuur, insluitend, maar nie beperk tot, 'n 132 kV kraglyn en 'n substatsie, om sodoende die goedgekeurde windkragaanleg aan die Moyeng Suurplaat windkragaanleg (DOS verwysingsnommer: 12/12/20/1583) se substasie of die Eskom Nuwerust substasie te verbind.

Ingevolge die Nasionale Omgewingsbestuurswet (Wet 107 van 1998, soos gewysig) (NEMA) en die 2014 NEMA Omgewingsimpakstudie Regulasies gepubliseer op 08 Desember 2014 in die staatskennisgewing 38282 en Regulasie 982, 983, 984 en 985, moet die wysigingsproses voldoen aan die vereistes van Artikel 32 van die Regulasies en die Basiese Evaluering aan Artikel 19. Die volgende gelyste aktiwiteite is waarskynlik van toepassing op die Basiese Evalueringsprosesse: GN R 983: Aktiwiteit 9; 11(i); 12 (x), en (xii); 19(i); 27; en 28(ii) en GN R 985: Aktiwiteit 4 [(a), (ii) en (ee) en (f) en (i) en (aa)]; Aktiwiteit 12 [((a) en (ii)) en ((d) en (ii))]; en Aktiwiteit 14 [(x), (xii), [(a), (ii) en (ff)] en [(f), (i) en (ff)]].

'n Geïntegreerde openbare deelname proses word vir die prosesse voorgestel, aangesien die projekte in dieselfde area gaan plaasvind, dieselfde aktiwiteit omskryf en ook op dieselfde windkragaanleg van toepassing is. Aparte verslae sal wel vir elk van die projekte saamgestel en vrygestel word.

G&BP's word hiermee in kennis gestel van die registrasie van belanghebende partye die projekte. Die agtergrondsinligting dokument is vir 30-dae beskikbaar vir kommentaar (vanaf 09 Desember 2016 to 01 Februarie 2017, uitsluitend openbare vakansiedae). **Harde kopieë van die agtergrondsinligting dokument is beskikbaar by die Laingsburg Openbare Biblioteek, Sutherland Openbare Biblioteek en die Laingsburg en Sutherland Munisipaliteite.**

Die projek inligting kan ook afgelaai word vanaf die projekwebtuiste: https://www.csir.co.za/environmental-impact-assessment

U word vriendelik uitgenooi om te registreer en enige kommentaar aan **Shawn Johnston by Sustainable Futures ZA** binne 30 dae van die kennisgewings te stuur (teen nie later as 01 **Februarie 2017**). Vir meer inligting, kontak gerus vir: **Shawn Johnston by Sustainable Futures ZA op Tel: 0833259965, Faks: 0865102537 of e-pos: swjohnton@mweb. co.za.**

Die uwe,
Shawn Johnston
Proses fasiliteerder
Sustainable Futures ZA

Comment and Registration Form sent with Letter 1

SUSTAINABLE FUTURES ZA

COMBINED BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES
AND
ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

PUBLIC PARTICIPATION INTERESTED AND AFFECTED PARTY REGISTRATION AND REPLY FORM

Complete and return this form to: Shawn Johnston of Sustainable FuturesZA

Telephone: 083 325 9965 **Fax:** 086 510 2537 **E-mail:** swjohnston@mweb.co.za

Postal Address: P.O. Box 749 Rondebosch 7701 Cape Town

Provide us with your correct contact details:

Name:	
Surname:	
Organisation & Portfolio:	
Postal Address:	
Telephone:	
Cellphone:	
Fax:	
E-mail:	

Are you an interested and affected party?
Please tick the relevant box.

YES	
NO	

Would you like to register as an Interested and affected party and receive the BA and EA Amendment correspondence?
Please tick the relevant box.

YES by e-mail	
YES by post	
NO	

If you are a farmer/landowner of the area on which the proposed WEF's and/or Electrical Grid Infrastructure will be constructed, please provide us with your:

Current farm name:	
Historical farm name:	
Erf number/farm number:	

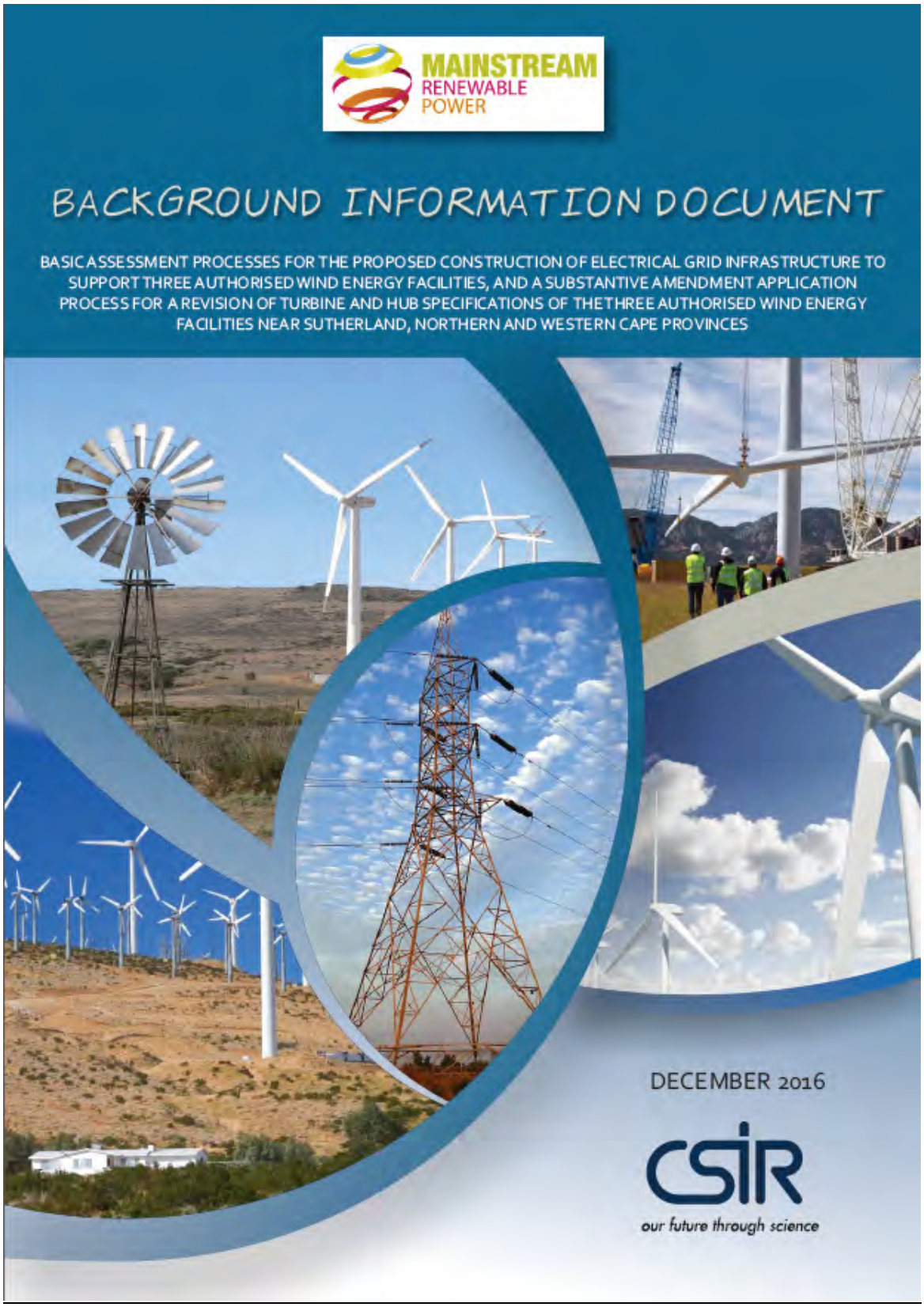
Name of nearest farmer or home owners association:	
Name of chairperson:	
Contact details of farmers or home owners association:	

Please clarify your interest in this project & list your questions (feel free to add additional pages to this form)

Language choice:

English	
Afrikaans	

Background Information Document sent with Letter 1



BACKGROUND INFORMATION DOCUMENT

1. BACKGROUND AND INTRODUCTION TO THE PROPOSED PROJECTS

South Africa Mainstream Renewable Power Developments (PTY) Ltd (hereinafter referred to as Mainstream) appointed an Environmental Assessment Practitioner (EAP) in 2010 to undertake an Environmental Impact Assessment (EIA) for the proposed construction and operation of the Sutherland Renewable Energy Facility (REF), consisting of a Solar Energy Facility and a Wind Energy Facility (WEF), with a collective generation capacity (i.e. for wind and solar) of 747 MW to 1137 MW. The EIA was undertaken in terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) and the NEMA EIA Regulations promulgated on 21 April 2006, in Government Notice (GN) R385, R386, and R387. Mainstream accordingly received Environmental Authorisation (EA) on 22 February 2012 (DEA Reference Number: 12/12/20/1782), from the National Department of Environmental Affairs (DEA) to construct and operate the proposed Sutherland REF. Following this, a non-substantive amendment process (to amend certain project details, the details of the Applicant, and to extend the validity period of the EA) was undertaken and an amended EA, dated 6 October 2015 (DEA Reference Number: 12/12/20/1782/AM1), was issued to Mainstream.

The original and amended EA authorised Mainstream to develop a 747 MW to 1137 MW REF, with 325 turbines on site. Based on the generation capacity of the wind turbines, this provision allocated roughly 650 MW to the WEF component of the REF. Mainstream wishes to potentially bid these projects in a tender round of the Department of Energy's (DOE) Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). However, the maximum generation capacity that can currently be bid for a WEF is 140 MW. Therefore, in February 2016, Mainstream appointed the Council of Scientific and Industrial Research (CSIR) to submit applications to the National DEA for two further substantive amendments of the original EA (dated 22 February 2012) and the amended EA (dated 6 October 2015). The first amendment (i.e. Amendment 1) was undertaken to split the existing EA into three separate projects so that each WEF has a generation capacity of 140 MW. The three split WEFs are referred to as the Sutherland WEF; Sutherland 2 WEF; and Rietrug WEF. The CSIR accordingly submitted the Application for Amendment (i.e. Amendment 1) to the National DEA on 20 April 2016.

Three separate Amendment Reports (for each WEF) were produced and released for a 30-day review period extending from 30 May 2016 to 01 July 2016. The reports were then finalised (with the inclusion of comments received during the comment period), and submitted to the National DEA in July 2016 for consideration and decision-making in terms of Regulation 33 of the 2014 NEMA EIA Regulations. On 10 November 2016, the National DEA accordingly granted separate EAs for the Sutherland, Sutherland 2, and Rietrug WEFs (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3). These EAs replace the original EA (dated 22 February 2012) and the amended EA (dated 6 October 2015).

The second amendment (i.e. **Amendment 2**) is to apply to change the turbine and hub specifications of the split WEFs. In line with the above, the CSIR is now in a position to submit the second substantive Amendment Applications to the National DEA (in accordance with Regulation 31 (Part 2) of the 2014 NEMA EIA Regulations) in order to amend the three separate EAs (dated 10 November 2016) in terms of turbine and hub specifications.

The proposed Rietrug and Sutherland 2 WEFs are located in the Northern Cape, approximately 23 km south of Sutherland and 50 km north of Laingsburg, under the jurisdiction of the Namakwa District Municipality and the Karoo Hoogland Local Municipality. The proposed Sutherland WEF is also predominantly located in the Northern Cape, within the aforementioned district and local municipalities; however a small portion of the WEF falls within the Western Cape, under the jurisdiction of the Central Karoo District Municipality and the Laingsburg Local Municipality.

In addition to this, Mainstream is also proposing to construct electrical infrastructure (i.e. three substations, laydown areas, Operational and Maintenance (O&M) Buildings, three 132 kV distribution lines, including service roads and the connection to a third party substation) in order to support the three separately authorised WEFs. In terms of the NEMA and the 2014 NEMA EIA Regulations, the three proposed Electrical Grid Infrastructure projects require a **Basic Assessment** (BA) Process.

As noted above, the CSIR has been appointed to undertake the three requisite substantive EA Amendment Application and BA Processes, which will be referred to as:

Substantive EA Amendment Processes:	BA Processes: Proposed Electrical Grid Infrastructure
▪ Sutherland WEF – Amendment 2	▪ Sutherland WEF – Electrical Grid Infrastructure
▪ Sutherland 2 WEF – Amendment 2	▪ Sutherland 2 WEF – Electrical Grid Infrastructure
▪ Rietrug WEF – Amendment 2	▪ Rietrug WEF – Electrical Grid Infrastructure

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Since the three BA projects and the three substantive Amendment Application projects are located within the same geographical area, an integrated Public Participation Process (PPP) will be undertaken for the proposed projects. However, separate Applications for EA will be lodged with the National DEA for each BA project and separate Applications for EA Amendment will be lodged for each WEF Amendment 2 project. As such, separate reports (i.e. BA and Amendment Reports) will be compiled for each project.

2. AIM OF THIS DOCUMENT

The aim of this Background Information Document (BID) is to provide Stakeholders, Organs of State and I&APs with:

- Background information on the proposed projects;
- A description of the combined BA Application Process, Substantive EA Amendment Process, and PPP that will be undertaken for the projects; and
- Details on how Stakeholders, Organs of State and I&APs can become involved in the proposed projects.

As a registered I&AP, there will be opportunities for involvement in the BA and Substantive Amendment Processes by registering interest in the projects, receiving information, raising issues of concern and commenting on draft reports. The input received from I&APs together with the information and assessment provided by the EAP and relevant specialists, will assist the Competent Authority, the National DEA, with their decision making process in terms of whether to grant or refuse EA for the proposed projects.

3. NEED AND JUSTIFICATION FOR THE PROPOSED PROJECTS

As noted above, the proposed development of the electrical grid infrastructure is envisaged to support the Sutherland, Sutherland 2 and Rietrug WEFs. Therefore, the proposed electrical grid infrastructure projects will ensure that the proposed WEFs are equipped with the fundamental infrastructure required to enable the WEFs to supply and transmit electricity to the National Grid. In addition, the proposed substantive amendments to the turbine and hub specifications will ensure that the WEFs are more feasible, efficient and suitable for submission in the next bidding round of the REIPPPP. In South Africa, national government has encouraged the utilisation of renewable energy through national policy and strategic planning, as the country is facing serious electricity shortages as well as water scarcity. The objective is to expand electricity generation capacity in South Africa and promote the practice of sustainable development. The proposed projects therefore aim to contribute to the above strategic imperative (by enabling the realisation of electricity generation via wind resources).

4. WHAT DO THE PROPOSED PROJECTS ENTAIL?

The respective farm portions affected by the proposed BA and Substantive EA Amendments projects and the relative location of the proposed projects are shown in the locality map (Figure 1) included with this BID. The proposed projects will be situated on land that is owned by third parties and as such, consent will be obtained from the respective landowners. It is anticipated that the properties on which the proposed projects will be constructed will be leased from the landowners. The BA Electrical Grid Infrastructure and the Substantive EA Amendment projects occur within the Northern and Western Cape.

4.1. ELECTRICAL GRID INFRASTRUCTURE BA PROCESSES

Each WEF will consist of the components already authorised within the EAs (dated 10 November 2016) which include wind turbine generators, internal and external electrical connections, internal roads, upgrading of access roads and additional infrastructure. The supporting electrical infrastructure for each WEF will consist of an on-site substation, laydown area, O&M Building, a 132 kV distribution line, a service road, and the connection to a third party substation.

Two alternatives of the third party substations (and the associated distribution line routing thereto) will be considered as part of the BA Processes. It is important to note that both alternatives of the proposed third party substations have been assessed as part of the separate Moyeng Energy (PTY) Ltd Suurplaat WEF EIA, which received EA on 5 April 2011 (DEA Reference Number: 12/12/20/1583) and therefore will not be considered as part of these BA Processes. Construction of the proposed third party substations (which are planned to be used for the proposed BA Projects) has not commenced yet. The proposed third party substations will be constructed by a separate developer and it is expected that it will have multiple users and it will service many projects. It is understood that an application for EA Amendment is currently underway to split the approved Moyeng Energy (PTY) Ltd Suurplaat WEF EIA project into four separate EAs (DEA Reference Number: 12/12/20/1583/AM3).

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Alternative 1 of the grid connection is the proposed 132 kV Suurplaat on-site substation (which will be referred to as the proposed collector hub for the BA Projects), which is located on the Farm Hartebeeste Fontein in the Northern Cape, whilst Alternative 2 is the proposed 400 kV Eskom Main Transmission Substation (which is also known as the Eskom Nuwerust Substation), which is located on Farm Hamelkraal in the Western Cape.

The distribution line for each WEF will be routed from each on-site substation (i.e. Sutherland, Sutherland 2 and Rietrug) to either the proposed 132 kV Suurplaat on-site substation (i.e. proposed collector hub) on the Farm Hartebeeste Fontein (Alternative 1) or to the proposed Eskom Nuwerust Substation (Alternative 2). As shown in Figure 1, the routing of the distribution lines for Alternative 1 and Alternative 2 are the same up until a point on the Farm Hartebeeste Fontein, where it splits in a southerly direction towards the proposed collector hub for Alternative 1; and in a separate easterly direction towards the proposed Eskom Nuwerust Substation for Alternative 2. A 1000 m wide corridor has been included in Figure 1 to indicate the area within which each distribution line will be constructed.

A summary of the approximate details of the proposed Electrical Grid Infrastructure for each of the WEFs is provided in Table 1 below.

Table 1: Estimated WEF Electrical Grid Infrastructure Specifications

	Alternative 1: Connection to the proposed collector hub (i.e. the proposed 132 kV Suurplaat On-site Substation assessed as part of the Moyeng Energy Suurplaat WEF EIA (DEA Reference Number: 12/12/20/1583)) and located on Farm Hartebeeste Fontein in the Northern Cape	**Alternative 2: Connection to the proposed Eskom Nuwerust Substation (assessed as part of the Moyeng Energy Suurplaat WEF EIA (DEA Reference Number: 12/12/20/1583)) and located on Farm Hamelkraal in the Western Cape**
Sutherland WEF Electrical Grid Infrastructure		
Length of Distribution Line	14 km	37 km
Service Road	Width: 4 m to 6 m Length: 14 km	Width: 4 m to 6 m Length: 37 km
Development Envelope Area (i.e. area to be assessed) for the On-site Substation, Laydown Area and O&M Building	500 m x 500 m (25 ha)	500 m x 500 m (25 ha)
Sutherland 2 WEF Electrical Grid Infrastructure		
Length of Distribution Line	40 km	64 km
Service Road	Width: 4 m to 6 m Length: 40 km	Width: 4 m to 6 m Length: 64 km
Development Envelope Area (i.e. area to be assessed) for the On-site Substation, Laydown Area and O&M Building	500 m x 500 m (25 ha)	500 m x 500 m (25 ha)
Rietrug WEF Electrical Grid Infrastructure		
Length of Distribution Line	16 km	39 km
Service Road	Width: 4 m to 6 m Length: 16 km	Width: 4 m to 6 m Length: 39 km
Development Envelope Area (i.e. area to be assessed) for the On-site Substation, Laydown Area and O&M Building	500 m x 500 m (25 ha)	500 m x 500 m (25 ha)

As noted in Table 1 above, each Electrical Grid Infrastructure BA Project will include an assessment of the necessary infrastructure to ensure that any WEF will be able to connect to the grid. This will ensure that, if for any reason, one of the Electrical Grid Infrastructure projects do not receive EA or preferred bidder status, the other WEFs will still be allowed to efficiently connect to the National Grid.

Furthermore, as noted in Table 1 above, a large development envelope area has been provided and will be assessed for the on-site substations in order to determine the most suitable location for each on-site substation, laydown area, O&M Building, in terms of environmental and topographical sensitivities. However, the actual on-site substation, laydown area, O&M Building and the infrastructure required to connect to the collector hub or the Eskom Nuwerust Substation for each Electrical Grid Infrastructure BA Project, will cover a significantly smaller area. It is important to note that all non-linear components of the projects (i.e. the on-site substations, O&M Buildings and laydown areas) will cover an area less than 20 ha.

4.2. SUBSTANTIVE AMENDMENT PROCESSES

The EAs for the three WEFs, approved as part of Amendment 1 (for splitting the projects) as described above, approve the following:

- Sutherland WEF: Maximum of 56 wind turbines, with a height up to 120 m and a rotor diameter up to 120 m;
- Sutherland 2 WEF: Maximum of 47 wind turbines, with a height up to 120 m and a rotor diameter up to 120 m; and
- Rietrug WEF: Maximum of 56 wind turbines, with a height up to 120 m and a rotor diameter up to 120 m.

Therefore, the total number of turbines has decreased from 325 (as originally approved in the original EA (dated 22 February 2012)) to 159 (as part of the amended EAs (dated 10 November 2016)).

The **Substantive Amendment 2** will include an application to increase the hub height and rotor diameter from the authorised 120 m to 150 m.

5. ENVIRONMENTAL AUTHORISATION REQUIREMENTS

In terms of the NEMA and the 2014 NEMA EIA Regulations, the proposed Electrical Grid Infrastructure BA Projects trigger the need for a BA Process as they include, amongst others, the following listed activities in terms of Listing Notices 1 (GN R983) and 3 (GN R985), which require approval from the National DEA prior to commissioning:

- GN R983 Listing Notice 1: Activity 9; Activity 11 (i); Activity 12 (x), (xii); Activity 19 (i); Activity 27; and Activity 28 (ii); and
- GN R985 Listing Notice 3: Activity 4 [((a), (ii) and (ee)) and ((f), (i) and (aa))]; Activity 12 [((a) and (ii)) and ((d) and (ii))]; and Activity 14 [(x), (xii), [(a), (ii) and (ff)] and [(f), (i) and (ff)]].

Note from the CSIR: A precautionary approach has been adopted by the CSIR when identifying listed activities, in that if there is any doubt at this stage of the project planning whether or not an activity is included in the project design, then the activity is listed. This list may be refined during the course of the BA Processes, and listed triggers may be removed or added as applicable.

As noted above, the Substantive Amendment Projects will be undertaken in accordance with Regulations 31 to 33 (Chapter 5, Part 2) of the 2014 NEMA EIA Regulations.

6. BA AND SUBSTANTIVE EA AMENDMENT PROCESSES AND PPP

The main objectives of the BA Processes are to:

- Undertake specialist investigations to address the issues of concern that have been raised and identified during the Project Initiation Phase, and to investigate and assess potential impacts;
- Identify and motivate a preferred site, activity and technology alternative;
- Determine the policy and legislative context of the proposed project;
- Describe the need and desirability of the proposed project;
- Identify, determine and assess the significance of the predicted impacts;
- Recommend management actions to enhance positive benefits or avoid/minimise potential negative impacts (based on specialist input); and
- Identify residual risks that need to be managed and monitored.

Table 2 indicates the specialist studies that have been identified, at this stage, to form part of the BA and Amendment Projects.

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Table 2: Specialist Studies to be undertaken as part of the BA and Amendment Processes

Specialist Study	Specialist Study for the BA Projects	Specialist Study for the Substantive Amendment Projects
Terrestrial Ecology Assessment	✓	✓- Professional Opinion Letter
Aquatic Ecology Assessment (including Wetlands and Freshwater Systems)	✓	✓- Professional Opinion Letter
Visual Impact Assessment	✓	✓- Specialist Study
Heritage Impact Assessment (Archaeology, Palaeontology and Cultural Landscape)	✓	✓- Professional Opinion Letter
Avifauna Impact Assessment	✓	✓- Specialist Study
Bat Impact Assessment	✓	✓- Specialist Study
Noise Impact Assessment	✓	✓- Specialist Study

The main steps in BA and Amendment Processes are discussed below and shown in Figure 2. As also shown, proactive engagement with stakeholders forms a key component of the entire BA and Amendment Processes. As noted above, an integrated PPP will be undertaken for the BA and Amendment Processes.

Step 1: Notify Authorities and I&APs of the BA and Amendment Processes (30 days) – Current Stage

The initial step entails providing notification to Authorities and potential I&APs of the proposed projects and the commencement of the BA and Amendment Processes. An initial database of potential I&APs and Authorities will be compiled. Authorities and potential I&APs will be provided with a BID (i.e. this document), including a Comment and Registration Form and written notification (i.e. Letter 1). Advertisements will also be placed in three local newspapers (i.e. The Cape Times, Die Noordwester, and Die Burger) during this phase. Site notices will also be placed at strategic locations in the vicinity of the proposed project area. The Project Initiation documents will be placed on the project website (https://www.csir.co.za/environmental-impact-assessment).

I&APs will be provided with a 30-day review period within which to raise any issues or concerns for inclusion in the BA and Amendment Reports. During this review period, I&APs are required to register their interest on the project database in order to be included from the outset of the BA and Amendment Processes.

Step 2: Preparation of Applications for EA, Applications for EA Amendment, Commissioning of Specialist Studies, and Preparation of BA and Amendment Reports

Separate Applications for EA for each Electrical Grid Infrastructure BA project will be prepared (i.e. a total of three applications will be prepared). Separate Applications for Amendment of the EA will be compiled for each WEF (i.e. a total of three applications will be prepared). The specialist studies (as listed in Table 2) will be commissioned and completed during this phase.

The BA Reports will be compiled in line with Appendix 1 of the 2014 NEMA EIA Regulations, and the Amendment Reports will be compiled in line with Regulations 31 and 32 of the 2014 NEMA EIA Regulations. The Environmental Management Programmes (EMPRs) will be compiled in line with Appendix 4 of the 2014 NEMA EIA Regulations for both the BA and Amendment Processes.

All issues and concerns raised by the Authorities and I&APs during the review of the BID will be recorded and compiled into an Issues and Responses Trail for inclusion in the BA and Amendment Reports.

Step 3: Submission of Applications for EA Amendment

The three separate Applications for EA Amendment will be submitted to the National DEA for consideration (in accordance with Regulation 31 of the 2014 NEMA EIA Regulations).

Step 4: Submission of Applications for EA for the BA Projects and Authority and I&AP Review of the BA and Amendment Reports (30 days)

The three separate Applications for EA for the Electrical Grid Infrastructure BA projects will be submitted to the National DEA for processing together with the BA and Amendment Reports.

The BA and Amendment Reports will be released to the public, registered I&APs and Authorities (including the National DEA) for a 30-day review period. All Authorities and registered I&APs on the project database will be notified in writing (via Letter 2) of the opportunity to review the BA and Amendment Reports. A Comment and Registration Form will also be sent with the written notification to all registered stakeholders. Copies of the BA and Amendment Reports will be placed on the project website (https://www.csir.co.za/environmental-impact-assessment), and at the Sutherland and Laingsburg Public Libraries and Karoo Hoogland and Laingsburg Local Municipality. Advertisements will also be placed in three local newspapers (i.e. The Cape Times, Die Noordwester, and Die Burger) during this phase.

p.6

BACKGROUND INFORMATION DOCUMENT

Step 5: Submission of the finalised BA and Amendment Reports to the National DEA for Decision-Making

The comments received from I&APs during the 30-day review of the BA and Amendment Reports will be recorded into a comprehensive Issues and Responses Trail, and will be included in the reports before submission to the National DEA. The Comments and Responses Trail will indicate the nature of the comment, when and who raised the comment, as well as indicate how the comment received has been considered in the BA and Amendment Reports, in the project design or the EMPr. The BA and Amendment Reports will thereafter be finalised and submitted to the National DEA for decision making (in terms of Regulations 20 (1) and 33 (1) respectively).

The National DEA will have 10 days (from receipt of the BA and Amendment Reports) to acknowledge the reports and will thereafter have 107 days to grant or refuse EA.

Step 6: Notification of Environmental Decision and Appeal Period

All registered stakeholders on the project database will be notified in writing of the environmental decision for the proposed projects, and will be informed of the opportunity to appeal.

Figure 2: Main steps summarised for the PPP for the BA and Amendment Processes

GET INVOLVED

1. Respond to our invitation for your involvement advertised in local newspapers (Die Burger, Cape Times and Noordwester).
2. Email, fax or mail the attached Comment and Registration Form to the Public Participation Facilitator, Shawn Johnston, Sustainable Futures ZA, P.O. Box 749, Rondebosch, 7701; Fax: 086 510 2537; E-mail: swjohnston@mweb.co.za.
3. Visit the project website at https://www.csir.co.za/environmental-impact-assessment to download relevant project information.
4. Review the various reports within the stipulated comment periods provided.
5. Attend any focus group meetings, which may be held during the review periods.

To register as an I&AP, please complete the Comment and Registration Form included with this BID and kindly return to:

Sustainable FuturesZA
P.O. Box 749, Rondebosch, 7701
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za
Tel: 083 325 9965

p.7

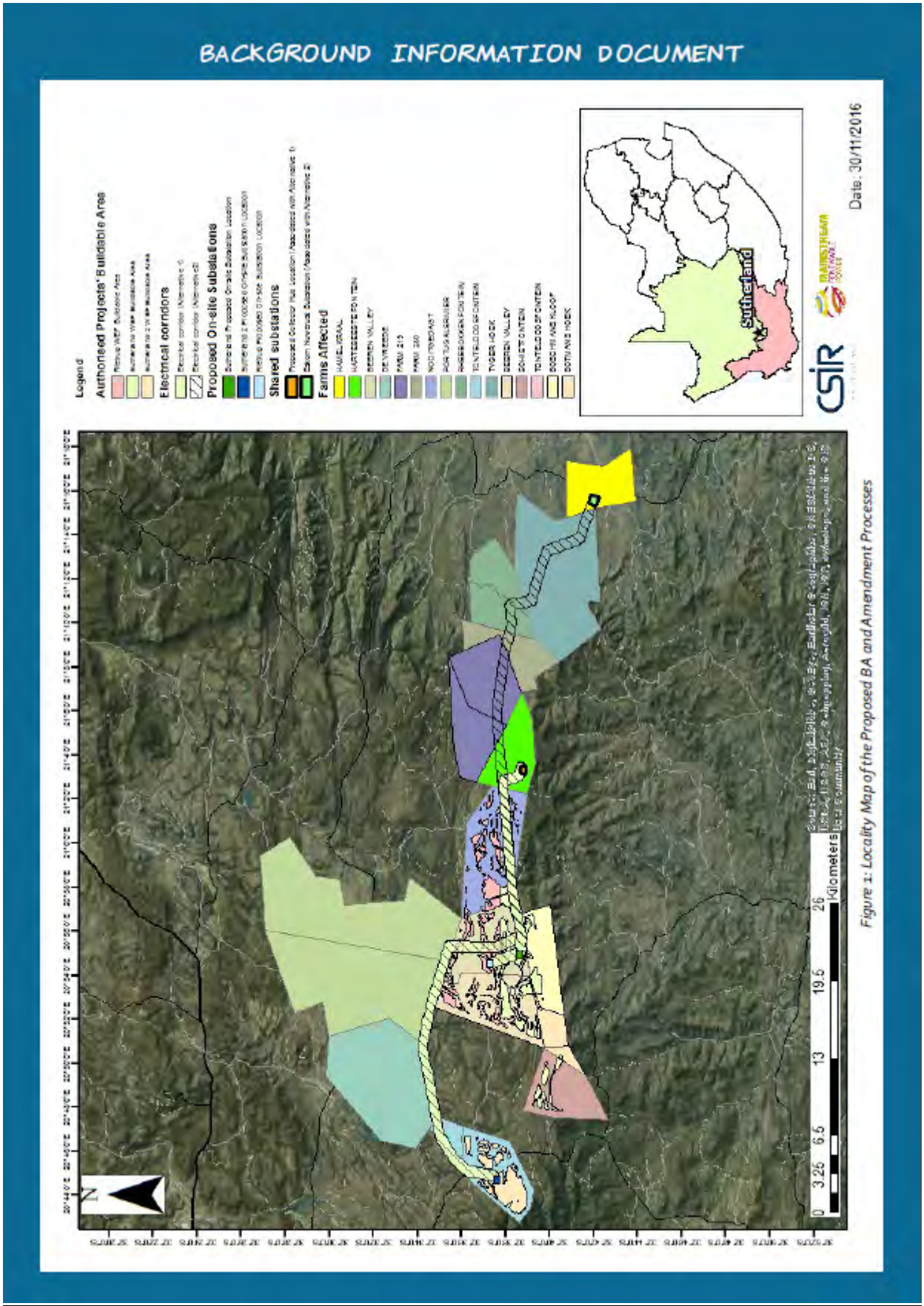

Figure 1: Locality Map of the Proposed BA and Amendment Processes

Proof of Correspondence with I&APs, Stakeholders and Organs of State (Hand Delivery Receipts for Letter 1, BID and Comment and Registration Form)

SUSTAINABLE FUTURES ZA

PROPOSED SUTHERLAND 1, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITY 132KV BA & AMENDMENTS (30-DAY I&AP REGISTRATION PERIOD)

BID DELIVERY NOTES

Date: 07-09 DECEMBER 2016

NAME & SURNAME	ORGANISATION	POSTAL ADDRESS	CONTACT NUMBERS	SIGNATURE
W. Miles Winnie PA. Williams (Mrs)	Laingsburg Municipality	Private Bag X14 Laingsburg 6900	Tel: 023-5511019 Cell: 0827108853 Fax: 023-5511019	LAINGSBURG MUNISIPALITEIT 08-12-2016 ONTVANG / RECEIVED
Liezl Koenze	Laingsburg Library	Private Bag X14 Laingsburg 6900	Tel: 0235511019 Cell: 0612732937 Fax: 0235511019	MUNISIPALITEIT - MUNICIPALITY LAINGSBURG BIBLIOTEEK - LIBRARY Koenze

Delivery included registration forms and background information documents for 30-day I&AP registration period.

SUSTAINABLE FUTURES ZA

PROPOSED SUTHERLAND 1, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITY 132KV BA & AMENDMENTS (30-DAY I&AP REGISTRATION PERIOD)

BID DELIVERY NOTES

Date: 07-09 DECEMBER 2016

NAME & SURNAME	ORGANISATION	POSTAL ADDRESS	CONTACT NUMBERS	SIGNATURE
Reze du Plessis Abra van Wyk	Sutherland Boere vereniging	Po Box 27 Sutherland 6920	Tel: 0235711201 Cell: 0828248560 Fax:	
Mnr Allistair Gibbons	Karoohoogland Mun	Posbus 24 Sutherland 6920	Tel: 0235711020 Cell: Fax: 0235711089	

Delivery included registration forms and background information documents for 30-day I&AP registration period.

SUSTAINABLE FUTURES ZA

PROPOSED SUTHERLAND 1, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITY 132KV BA & AMENDMENTS (30-DAY I&AP REGISTRATION PERIOD)

BID DELIVERY NOTES

Date: 07-09 DECEMBER 2016

NAME & SURNAME	ORGANISATION	POSTAL ADDRESS	CONTACT NUMBERS	SIGNATURE
Nicolene Oraai Ranel Cloete	Sutherland Library	Sarel Cilliers Sutherland	Tel: 023 571 1429 Cell: Fax:	BIBLIOTEEK SUTHERLAND 6920 LIBRARY
			Tel: Cell: Fax:	

Delivery included registration forms and background information documents for 30-day I&AP registration period.

Proof of Correspondence with I&APs, Stakeholders and Organs of State: Email 1 sent to I&APs, Stakeholders and Organs of State on 9 December 2016

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS

PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

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ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

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This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,
Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel: +27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Proof of Email 1 sent to I&APs, Stakeholders and Organs of State on 9 December 2016

From: ShawnJohnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendments & Basic Assessment (BA) Amendments
Date: 09 December 2016 9:49:55 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: sweetness.malete@nersa.org.za, scharlton@wwf.org.za, Stuart Shearer <stuart.shearer@telkomsa.net>, s.chymist@gmail.com, sam.vukela@dpw.gov.za, StrohL@caa.co.za, shs@roggeveld.co.za, suthbookings@saao.ac.za, salkaste@pgwc.gov.za, seb@absamail.co.za, sutherlandsaps@saps.org.za, segomoco.scheppers@eskom.co.za, swebb@pgwc.gov.za, Samantha De la Fontaine <sdelafontaine@gmail.com>, "Snyders Louis ((KBY))" <snydersl@dwa.gov.za>

4 Attachments, 4 MB

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Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 9:50:00 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: petergm@telkomsa.net, porchia@awk.co.za, pieter.swart@dmr.gov.za, pa.dg@daff.gov.za, pseboko@ncpg.gov.za, paulh@elsenburg.com, petrusvanh@gmail.com, Rhett Smart <landuse@capenature.co.za>, ria.laynes@hotmail.com, ranwedzim@dwa.gov.za, rlevin@economic.gov.za, rellis@pawc.wcape.gov.za, rkhanzi@gmail.com, Sam Ralston <energy@birdlife.org.za>, Shibambus@dwa.gov.za

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Bcc: mabokor@dwa.gov.za, Mr gwija@gmail.com, Nelie Bezuidenhout <nbezuidenhout@powergrp.co.za>, ningcaba@deat.gov.za, Neil Parker <neil@capeafricans.co.za>, njohnston@pgwc.gov.za, nndobochani@sahra.org.za, "(null)" <pentecg@telkom.co.za>, "Nicole Abrahams (WFI)" <AbrahamsN@nra.co.za>, Nosipho Ngcaba <ningcaba@environment.gov.za>, Natalie Uys <nuys.denc@gmail.com>, nellie@mac.com, nic@agrisa.co.za, Ordain Riba <ordain.denc@gmail.com>, Onwabile N'Zumo DENC Springbok <onwndzumo@gmail.com>

1 Attachment, 4 MB

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Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 9:50:38 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: Bernard Geldenhuys@investec.co.za, brian mcmahon <brianmcmahon@mweb.co.za>, BarryB@cefgroup.co.za, BarnarJM.BFN.FS_Bloemfontein@eskom.co.za, busiswe.magazi@dmr.gov.za, Colin Fordham <landuseadvicesouth@capenature.co.za>, canham@capenature.co.za, cvanwyk98@gmail.com, cobusdup@telkomsa.net, carelg@atns.co.za, cfortune@agri.ncape.gov.za, Carolyn Ah Shene-Verdoorn <advocacy@birdlife.org.za>, charmaine@agrisa.co.za, claudinev@saao.ac.za, dhvanheerden@vodamail.co.za

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To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: azknoop@gmail.com, agrisa@agrinfo.co.za, awolfaardt@kingsley.co.za, amsterdam@new.co.za, Adri La Meyer <Adri.LaMeyer@westerncape.gov.za>, Afriwea <office@afriwea.org>, agrisa@agrinfo.co.za, advocacy@birdlife.org.za, Alain Morry <Alain.Morry@gdfsuez.com>, allistar.gibbons@gmail.com, Alana Duffell-Canham <aduffell-canham@capenature.co.za>, Agri Western Cape Carl Opperman <carl@awk.co.za>, anneke@agrisa.co.za, AC du Plessis <elbe@mentalhealth.org.za>, Brandon Layman <brandonl@elsenburg.com>

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To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: ster@roggeveld.co.za, thysh@atns.co.za, twessels@grand.ncape.gov.za, Tommie Potgieter <tommiep.potgieter@gmail.com>, thys.heyns@debeersgroup.com, tmanyathi@pgwc.gov.za, tristen@earthlife.org.za, vickyn@ewt.org.za, wmiles@laingsburg.gov.net, wessanc@yahoo.com, wildlifetorali@hotmail.com, wineroutexpress@live.co.za, "Colene Runkel (WR)" <crunkelc@nra.co.za>, Yolan Friedmann <yolanf@ewt.org.za>, zaitoon@mweb.co.za, zini@earthlife.org.za

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Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 9:58:00 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: karoo-Desert-NBG@sanbi.org.za, klawrence@trpw.ncape.gov.za, Koos Pretorius <pretoriusk@caa.co.za>, karooadmin@telkomsa.net, Lance Blaine <africansky@yebo.co.za>, mbongwat@caa.co.za, Abra van Wyk <abra@roggeveld.co.za>, mumman@karoohoogland.gov.za, mabule@ghouse.org.za, mwabisa.qwanyashe@dmr.gov.za, mbarnes@biothermenergy.com, mabele@ncapeeda.co.za, mduplessis@wwf.org.za, marketing@westerncapetourism.co.za

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Date: 09 December 2016 10:05:03 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: fdconradie@telkomsa.net, fdconradie@roggeveld.co.za, Gabriele Wood <gabriele@savannahsa.com>, gerdavdh@namakwa-dm.gov.za, KarendeBruyn G7 G7 <eia@g7energies.com>, hwc@pgwc.gov.za, hooglandtourism@telkomsa.net, Helena van Eeden <helena@awk.co.za>, hannah@saao.ac.za, info@nersa.org.za, info@sutherlandhotel.co.za, info@namakwa-dm.gov.za, info@birdlife.org.za, lbezuidenhout@biothermenergy.com

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From: ShawnJohnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 10:12:25 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: ster@roggeveld.co.za, thysh@atns.co.za, twessels@grand.ncape.gov.za, Tommie Potgieter <tommiep.potgieter@gmail.com>, thys.heyns@debeersgroup.com, tmanyathi@pgwc.gov.za, tristen@earthlife.org.za, vickyn@ewt.org.za, wmiles@laingsburg.gov.net, wessanc@yahoo.com, wildlifetorali@hotmail.com, wineroutexpress@live.co.za, "Colene Runkel (WR)" <crunkelc@nra.co.za>, Yolan Friedmann <yolanf@ewt.org.za>, zaitoon@mweb.co.za, zini@earthlife.org.za

4 Attachments, 4 MB

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,

Shawn Johnston

Process Specialist

Sustainable Futures ZA

P.O. Box 749 Rondebosch 7701

Cape Town, South Africa

Tel:++27 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

From: ShawnJohnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 10:24:50 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: info@icasa.org.za, jaco.nel@vodamail.co.za, JacolineMa <JacolineMa@daff.gov.za>, johan@awk.co.za, jdemunck@iafrica.com, Julie Meswatu <julie@saao.ac.za>, Jessica P Christie <Jessica.Christie@westerncape.gov.za>, Jo-Anne Thomas <joanne@savannahsa.com>, Karen Jodas <karen@savannahsa.com>, karel@saao.ac.za, kleinbron12@telkomsa.net, karoohoogland@telkom.co.za, khanr@dwaf.gov.za, Karen de Bruyn <karen@g7energies.com>

4 Attachments, 4 MB

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

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Tel:++27 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

From: ShawnJohnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 10:28:00 AM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: dodg@daff.gov.za, dineo.moraile@energy.gov.za, DNgwenya@icasa.org.za, Danie Swanepoel <Danie.Swanepoel@westerncape.gov.za>, dvanheerden@ncpg.gov.za, Doug.Harebottle@uct.ac.za, dg@daff.gov.za, driesnee@global.co.za, Dekockr@nra.co.za, Elsenburg.Landcare@elsenburg.com, Elsabe Swart <elsabe.dtec@gmail.com>, elias@roggeveld.co.za, enquiries@ncpg.gov.za, energy@birdlife.org.za, "Doug Jenman, Rainmaker Energy" <doug@rainmakerenergy.co.za>, "Rob Invernizzi, Rainmaker Energy" <rob@rainmakerenergy.co.za>

4 Attachments, 4 MB

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

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ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

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Sincerely,

Shawn Johnston

Process Specialist

Sustainable Futures ZA

P.O. Box 749 Rondebosch 7701

Cape Town, South Africa

Tel:++27 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

From: ShawnJohnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendments & Basic Assessment (BA) Amendments
Date: 09 December 2016 1:46:13 PM SAST
To: Shawn Johnston <swjohnston@mweb.co.za>
Bcc: Marine le Roux <dlipfontein@breede.co.za>, ster@roggeveld.co.za, davidmuller@roggeveld.co.za, abriedewet@overbergwireless.co.za, bft148@gmail.com

4 Attachments, 4 MB

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

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See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,

Shawn Johnston

Process Specialist

Sustainable Futures ZA

P.O. Box 749 Rondebosch 7701

Cape Town, South Africa

Tel:++27 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

Response and Follow-up Emails sent to I&APs, Organs of State and Stakeholders during the 30-day review of the BID

From: Rohaida Abed
To: onteta@wwf.org.za
Date: 14/12/2016 14:24
Subject: Fwd: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Cc: ShawnJohnston; Laurie, Surina; Dludla, Andile
Attachments: Sutherland KMZ - Copy.kmz

Dear Onkemetse

Thank you for your email below regarding the Mainstream Sutherland, Sutherland 2 and Rietrug WEFs EA Amendment and BA Projects.

Please see attached a KMZ file which shows the project extent and property descriptions. Please confirm if this is suitable?

Kind Regards,
Rohaida

CSIR - Environmental Management Services
P. O. Box 17001, Congella, Durban, 4013
Tel: 031 242 2318
Cell: 072 204 6224
Fax: 031 261 2509
Email: RAbed@csir.co.za

Appendix E.3 Comments and Response Report

APPENDIX E.3.1 - COMMENTS RECEIVED FROM I&APS, STAKEHOLDERS AND ORGANS OF STATE DURING THE PROJECT INITIATION PHASE

1. BA Process and Public Participation (General)

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
1.1	Thank you for your e-mail notification of the BA and EA amendment processes. Kindly note that the Department will only comment on those applications falling within the boundaries of the Western Cape. Kindly confirm whether my understanding is correct that we therefore have to comment on the following applications: • Amendment Application (Nr. 2) for the Sutherland (1) WEF to change the turbine and hub specifications; and • BA process for electrical infrastructure for Alternative 2: Connection to the proposed Eskom Nuwerust Substation located on Farm Hamelkraal in the Western Cape (I assume this is for all 3 WEFs?) Please note that only the Directorate: Development Management (Region 3) will be commenting on the applications and as such, it would be appreciated if you could provide them with hard copies of the relevant reports (Amendment Application Report for the Sutherland WEF and the BARs) once it is available for comment. Please submit the reports to the details below: • Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) • Private Bag X6509, George, 6530. Registry Office, 4th Floor, York Park Building, 93 York Street, George, 6530.	Adri La Meyer, Directorate Development Facilitation, Department of Environmental Affairs and Development Planning, Western Cape Government, George & Cape Town	09 December 2016, Email	**Shawn Johnston (Sustainable FuturesZA):** Dear Adri, thank you for your response to the release of the background information document. We hereby note the requirements of the Department of Environmental Affairs and Development Planning Western Cape. All relevant documents will be submitted through your office and that of Region 3. Sincerely, Shawn Johnston. **CSIR:** Comment noted. As noted in Section C of the BA Report, the BA Projects and Amendment 2 projects are no longer aligned and therefore, an integrated PPP will not take place for these specific projects. However, the Western Cape Department of Environmental Affairs and Planning (DEADP) is correct in providing comment for the Amendment 2 (Sutherland WEF) project, as well as all Electrical Grid Infrastructure BA projects, as Alternative 2 of the proposed distribution line routing and connection to the proposed Eskom Nuwerust Substation are located within the Western Cape. The contact details for Region 3 of the DEADP have been added to the BA Project I&AP database. Refer to Appendix E.4 of this BA Report for a copy of the current database of I&APs. DEADP Region 3 will accordingly be provided with copies of the BA Reports for the Sutherland, Sutherland 2 and Rietrug BA projects.

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
	Please do not hesitate to contact me if you have any queries.			
1.2	Thank you for notification of this process. Attached find our 2016 requirements for development applications document, please send a hard copy as well as cd with electronic copies of all relevant documentation to me here in George, as I will be providing comment.	Colin Fordham, Scientist: Land Use Advice, CapeNature	09 December 2016, Email	**Shawn Johnston (Sustainable FuturesZA):** Dear Colin, Thank you for your e-mail. We are currently only registering I&APs and getting information out. The project documentation will be sent to you as per the CapeNature requirements in February 2017. Sincerely, Shawn Johnston. **CSIR:** Comment noted. The following document was received from Mr. Colin Fordham via email on 9 December 2016: ▪ CapeNature's Requirements for providing comments on Agricultural, Environmental, Mining, Planning and Water Use related Applications. The abovementioned document is included in Appendix E.5 of this report, and it was sent to the Terrestrial and Aquatic Ecology specialists for consideration in the specialist studies, where required and as applicable. Refer to the Terrestrial Ecology Impact Assessment and Aquatic Ecology Impact Assessment in Appendix D.1 and Appendix D.2 of this BA Report respectively, for additional feedback regarding CapeNature's requirements. CapeNature will be provided with copies of the BA Reports for the Sutherland, Sutherland 2 and Rietrug BA projects.
1.3	Please register the following landowner in the vicinity of your projects on your interested and affected parties database. The Managing Trustee, Rietpoort Trust, Attention: Mr. Ralph Damonse, PO Box 16099, Panorama, 7506. Please mail relevant background information. Thank you.	Ralph Damonse, Managing Trustee, Rietpoort Trust	12 December 2016, Email	**Shawn Johnston (Sustainable FuturesZA):** Dear Mr Ralph Damonse, Thank you for your e-mail. You have been registered as an interested and affected party. Find attached requested information. Sincerely, Shawn Johnston. **CSIR:** Comment noted. The contact details for Mr. Ralph Damonse have been added to the BA Project I&AP database. Refer to Appendix E.4 of this BA Report for a copy of the current database of I&APs.
1.4	Building Energy would like to be registered as an	Janine Brasington,	12 December	**Shawn Johnston (Sustainable FuturesZA):** Dear Janine, Thank you for your e-mail and attached registration form.

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
	Interested and Affected Party for the Sutherland, Sutherland 2, and Rietrug Wind Energy Facilities. Please see attached our complete registration form. Building Energy has renewable energy projects in this area. Please register Paolo Fagnoli.	Building Energy South Africa PTY (Ltd), Junior Developer	2016, Email	I hereby confirm that Building Energy have been registered as an interested and affected party. Sincerely, Shawn Johnston. **CSIR:** Comment noted. The contact details for Building Energy (PTY) Ltd have been added to the BA Project I&AP database. Refer to Appendix E.4 of this BA Report for a copy of the current database of I&APs.
1.5	We would like to determine the location and footprint of this development. Could you kindly forward me the GIS shapefiles of the development footprint and the full property descriptions?	Onkemetse Nteta, Programme Coordinator: WWF Land Programme	12 December 2016, Email	**CSIR:** The CSIR provided a copy of the project mapping details to Onkemetse Nteta at WWF via email on 14 December 2016. Refer to Appendix E.2 of this report for a copy of this follow up email correspondence. Onkemetse Nteta also acknowledged receipt on 14 December 2016. A copy of this email acknowledgment is included in Appendix E.5 of this report.
1.6	The Northern Cape Regional Office of WESSA is not dealing with EIA and development matters. Please address letters, registered letters, faxes or hard copies of documents to Morgan Griffiths, Environmental Governance Programme Manager. His contact details are: WESSA PE Office Tel: +27 (0)41 585 9606 Fax: +27 (0)86 6149701 Cell: +27 (0)72 4175793 Email: morgan.griffiths@wessa.co.za URL: www.wessa.org.za Street: 2 Lawrence Street, Central Hill, Port Elizabeth, 6001 Post: PO Box 12444, Centrahil, Port Elizabeth, 6006, South Africa	WESSA Northern Cape Office	13 December 2016, Email	**Shawn Johnston (Sustainable FuturesZA):** The Wildlife and Environmental Society of South Africa (WESSA) comment is noted and all correspondence will be submitted to Morgan Griffiths at WESSA in Port Elizabeth. **CSIR:** Comment noted. Project documents will be submitted to the WESSA PE office, as requested. Refer to Appendix E.4 of this BA Report for a copy of the current database of I&APs.

2. Heritage Impacts

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
2.1	Response to NID (Notification of Intent to Develop) In terms of Section 38(2) of the National Heritage Resources Act (Act 25 of 1999) Attention: South Africa Mainstream Renewable Power Developments (Pty) Ltd, P.O. Box 45063 Claremont 7753 South Africa Mainstream Renewable Power Developments (Pty) Ltd (Mainstream) received three Amended Environmental Authorisations (EAs), dated 10 November 2016 (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3), from the National Department of Environmental Affairs (DEA) to construct and operate the Sutherland Wind Energy Facility (WEF), Sutherland 2 WEF, and Rietrug WEF, each with a generation capacity of 140 MW. Mainstream is now proposing to amend the turbine and hub specifications of each of the separately authorised WEFs (dated 10 November 2016). Three separate EA Amendment Applications will be submitted to the DEA accordingly. Mainstream is also proposing to construct electrical infrastructure (including three on-site substations, Operational and Maintenance Buildings, laydown areas, service roads, 132 kV distribution lines, and connection to a proposed third party collector hub or to the proposed Eskom Nuwerust Substation) to support the three separately authorised WEF projects. Three separate Basic Assessment (BA) Processes are being undertaken for each Electrical Infrastructure project. An integrated Public Participation Process will be undertaken for the proposed projects. This specific application is for the BA Electrical Infrastructure project and is referred to as "Sutherland 2 WEF – Electrical Infrastructure". The proposed project will take place approximately 23 km	Natasha Higgitt, Heritage Officer, South African Heritage Resources Agency and John Gribble, Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and Meteorites Unit	9 January 2017, Letter via SAHRIS and email	**Shawn Johnston (Sustainable FuturesZA)**: I hereby acknowledge the comments received from Natasha Higgitt and John Gribble from the South African Heritage Resources Agency (SAHRA). These comments will be studied and presented to all relevant specialist and commenting authorities. **CSIR:** During the Project Initiation Phase, the BID, Letter 1 and Comment and Registration Form were uploaded to the South African Heritage Resources Information System (SAHRIS) for comment on 8 December 2016. Three different cases were created for the BA Projects, and the following Reference Numbers were provided: • Sutherland WEF – Electrical Grid Infrastructure (Case: 10493); • Sutherland 2 WEF – Electrical Grid Infrastructure (Case: 10495); and • Rietrug WEF – Electrical Grid Infrastructure (Case: 10494). The BA Reports and all relevant BA Process documents will be uploaded to SAHRIS to facilitate comment from SAHRA. As noted in the BA Report, Alternative 1 of the proposed distribution line routing and connection to the third party substation will occur within the Northern Cape; however Alternative 2 will extend into both the Northern Cape and Western Cape. Therefore, it is necessary that SAHRA provide comments for the Northern Cape aspect of the project, and Heritage Western Cape provide comments for the Western Cape aspect. In line with this, a Notification of Intent to Develop (NID) was submitted to the Heritage Western Cape for the proposed projects on 7 February 2017. A full Phase 1 Heritage Impact Assessment (Archaeology, Palaeontology and Cultural Landscape) has been undertaken as

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
	south of Sutherland and 50 km north of Laingsburg, within the Northern and Western Cape Provinces. Thank you for notifying SAHRA of the proposed Electrical Infrastructure Grid to support the authorised Sutherland 2 Wind Energy Facility (WEF), near Sutherland, Northern Cape Province. It must be noted that sections of the development are located within the Western Cape Province. SAHRA cannot provide comments for developments within the Western Cape Province. Comments must be sought from Heritage Western Cape for those sections of the development. In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer to ensure that a **Heritage Impact Assessment (HIA)** is done as per Section 38(8) of the NHRA. This must include the archaeological component (Phase 1) and any other applicable heritage components. The HIA must be conducted as part of the Environmental Impact Assessment (EIA) phase of the Environmental Authorisation Application in terms of the National Environmental Management Act, No 107 of 1998 (NEMA) and the NEMA EIA Regulations 2014. The quickest process to follow for the archaeological component would be to contract a specialist (see www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. The Phase 1 Impact Assessment Report will identify the			part of the BA Process (i.e. prior to the commencement of construction of the proposed project (which is subject to the issuing of an EA)). The Heritage Impact Assessment is included in Appendix D.4 of this BA Report, which is being made available to registered I&APs and the public for a 30-day comment period. The Archaeology and Cultural Landscape component of the Heritage Impact Assessment was conducted by Dr. Jayson Orton of ASHA Consulting (PTY) Ltd, who is a registered member of the Association of Southern African Professional Archaeologists. The Palaeontological component of the Heritage Impact Assessment was conducted by Dr. John Almond of Natura Viva cc, who is an accredited member of the Palaeontological Society of South Africa (PSSA) and the Association of Professional Heritage Assessment Practitioners – Western Cape. The Heritage Impact Assessment (Archaeology, Palaeontology and Cultural Landscape) has identified and assessed the significance of archaeological and palaeontological sites that are located within the proposed project area. The specialist assessment also indicates the relevant permit requirements, including if a permit is required from the Heritage Western Cape and/or SAHRA for the potential disturbance of any heritage features on site. The specialist study provides recommendations and suggests appropriate mitigation measures (if required) for inclusion in the EMPr (Appendix G of the BA Report).

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
	archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites. If the property is very small or disturbed and there is no significant sites the specialist may choose to send a letter to the heritage authority to indicate that there is no necessity for any further assessment. Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desktop study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary (see www.palaeontologicalsocitey.co.za for qualified paleontologists). Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed. Please note that all Environmental Reports (Scoping Report and EIA) with all appendices must be submitted to the SAHRIS Case file in order for an informed comment to be issued.			

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
	Should you have any further queries, please contact the designated official using the case number quoted above in the case header.			

Appendix E.4 Database of I&APs and Organs of State

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
Organs of State													
National Government Departments													
1.	Muhammad	Essop	National Department of Environmental Affairs: Department of Environmental Affairs: Integrated Environmental Authorisations		X								
2.	Rene	de Kock	South African National Roads Agency Ltd		X	X							
3.	Nosipho	Ngcaba	National Department of Environmental Affairs: Department of Environmental Affairs		X	X							
4.	Mashudu	Marubini	Department of Agriculture, Forestry and Fisheries		X								
5.	Anneliza	Collett	Department of Agriculture, Forestry and Fisheries - AgriLand Liaison office		X								
6.	Dr. Adrian	Tiplady	Square Kilometre Array South Africa (SKA)		X								
7.	Colene	Runkel (WR)	South African Roads Agency Limited (SANRAL) Northern Cape (Western Region)		X	X							
8.	A.	Botes	Department of Labour Northern Cape		X								

[1] I&APs that did not receive the Background Information Document as part of Letter 1 will receive an updated Letter 2 during the release of the BA Report (which will include information regarding the release of the BA Report for comment. The BA Report includes a detailed project description and routing changes since the release of the Background Information Document).

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
9.	Lizell	Stroh	South African Civilian Aviation Authority		X	X							
10.	John	Geeringh	Eskom Holdings Limited		X								
11.	Andrea	van Gensen	Eskom Holdings Limited		X								
12.	Kevin	Leask	Eskom Holdings Limited		X								
13.	Justine	Wyngaardt	Eskom Holdings Limited: Eskom Distribution Western Operating Unit		X								
14.	C. G.	Jooste	Eskom Holdings Limited		X	X							
15.	J. M	Barnar	Eskom Holdings Limited		X	X							
16.	The	Director	National Government: Department of Economic Development		X								
17.	The	Director General	National Government: Department of Energy		X								
18.	The	Director General	National Government: Department of Transport		X								
19.	The	Director General	National Government: Department of Public Works		X	X							
20.	Danie	Swanepoel	Department of Environmental Affairs & Development Planning Western Cape: George Office (Central Karoo)		X	X							
			Provincial Government Departments										
21.	The	Director	Independent Communications Authority of SA (ICASA)		X								
22.	D	Ngwenya	Independent Communications Authority of SA (ICASA)		X	X							
23.	Jessica	Christie	Western Cape Provincial Government: Environmental Affairs and Development Planning		X	X							
24.	Adri	La Meyer	Directorate: Development Facilitation, Department of		X	X		X					

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
			Environmental Affairs and Development Planning, Western Cape Government										
25.	The	Department Head	Northern Cape Provincial Government: Transport, Safety and Liaison		X	X							
26.	J.	Gooch	Department of Transport and Public Works - Strategy, Planning and Co-ordination		X								
27.	M.L.	Watters	Road and Transport Management Western Cape Government		X								
28.	J.	Mcha	Department of Mineral Resources - Western Cape		X								
29.	Sunday	Mabaso	Department of Mineral Resources - Northern Cape		X								
30.	Colette M	Scheermeyer	Heritage Western Cape		X								
31.	Ali	Diteme	Department Agriculture, Land Reform & Rural Development		X								
32.	Pieter	Buys	National Energy Regulator of South Africa (NERSA)		X								
33.	I.A.	Bulane	Department of Public Works, Roads and Transport		X								
34.	Denver	van Heerden	Department of Public Works, Roads and Transport		X	X							
35.	Cor	van der Walt	Department of Agriculture Western Cape Provincial Government		X								
36.	Melissa	Lintnaar-Strauss	Western Cape Department of Water and Sanitation		X								
37.	The Project Manager	Agriculture	Northern Cape Economic Development Agency		X								
38.	The	Head of Department	Western Cape Provincial Government		X	X							
39.	The	Director	Department of Energy Northern Cape		X								
40.	Onwabile	Ndzumo	Provincial Department of Environment and Nature Conservation:		X	X							

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
			Northern Cape - Springbok Office										
41.	The Director	Spatial Planning	Western Cape Provincial Government: Environmental Affairs and Development Planning		X								
42.	Mashudu	(Randwedzi) Kgaphola	Department of Water and Sanitation Northern Cape		X	X							
43.	The	Head of Department	Western Cape Provincial Government: Department of Economic Development and Tourism		X								
44.	The	Head of Department	Northern Cape Provincial Government: Economic Affairs		X								
45.	Jaco	Roelofse	Northern Cape Provincial Government: Roads		X								
46.	N.J.	Toerien	Northern Cape Department of Agriculture		X								
47.	Natasha	Higgitt	South African Heritage Resources Agency		X	X		X					
48.	Schalk	Grobelaar	Northern Cape Land Use Planning		X								
49.	Colin	Fordham	CapeNature Scientific Services- Jonkershoek		X	X		X					
50.	Alana	Duffell-Canham	CapeNature Scientific Services		X	X							
51.	L.	Manong	Department of Agriculture and Land Reform (Northern Cape)		X								
52.	C	Fortune	cfortune@agri.ncape.gov.za		X	X							
53.	Andile	Hawes	Department of Agriculture, Forestry and Fisheries (National)		X								
54.	Jacoline	Mans	Department of Agriculture, Forestry and Fisheries Upington Northern Cape		X	X							
Local Government Departments (District and Local Municipalities)													
55.	Stefanus	Jooste	Central Karoo District Municipality (Municipal Manager)		X								

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56.	Stephanus	Pieterse	Laingsburg Local Municipality (Municipal Manager)		X	X							
57.	Winnie	Miles	Laingsburg Local Municipality (PA to Municipal Manager)		X	X							
58.	Chris	Fortuin	Namakwa District Municipality (Municipal Manager)		X	X							
59.	Gustav	von Mollendorf	Karoo Hoogland Local Municipality (Municipal Manager)		X	X							
60.	Alistar	Gibbons	Karoo Hoogland Local Municipality (Sutherland Office)		X	X							
61.	Sandra	Isaacs	Karoo Hoogland Local Municipality		X	X							
Interested and Affected Parties, NPOs, NGOs, Other Organisations													
I&APs, NPOs, NGOs and Other Organisations													
62.	M.	Horak	Air Traffic and Navigation Services (ATNS)		X	X							
63.	Carel	Gersbach	Air Traffic and Navigation Services (ATNS)		X	X							
64.	Dr. Stuart	Shearer	Interested Party Birds & Bats		X	X							
65.	Simon	Gear	Birdlife South Africa		X	X							
66.	Naseema	Fakir	Legal Resource Centre (LRC)		X								
67.	Gabriele	Stein	Savannah Environmental		X	X							
68.	Japie	Grobler	AgriSA		X								
69.	Carl	Opperman	Agri Western Cape		X	X							
70.	B.	Barry	CEF Group		X	X							
71.	Doug	Jenman	Rainmaker Energy		X	X							
72.	Rob	Invernizzi	Rob Invernizzi, Rainmaker Energy		X	X							
73.	Brandon	Layman	Department of Agriculture Western Cape Provincial Government -		X	X							

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			Elsenberg										
74.	Nic	Opperman	AgriSA		X	X							
75.	Busisiwe	Magazi	Department of Mineral Resources National		X	X							
76.	Bernard	Geldenhuys	Investec		X	X							
77.	Anneke	Roux	AgriSA		X	X							
78.	The	Chairperson	African Wind Energy Association (AWEA)		X	X							
79.	Amsterdam	New	Individual Private		X	X							
80.	The Executive	Director	AgriSA		X	X							
81.	Ravisha	Ajodhapersadh	Enel Green Energy		X								
82.	Yats	Gopaul	CAPE AFRICA Renewable Energy Services cc		X								
83.	Lance	Blaine	Red Cap		X	X							
84.	Brain	McMahon	Interested Party Birds & Bats		X	X							
85.	Cobus	du Plessis	Private		X	X							
86.	Ramotholo	Sefako	South African Astronomical Observatory Cape Town & Sutherland		X	X							
87.	Dineo	Moraile	Department of Energy		X	X							
88.	Dr Morne	du Plessis	World Wide Fund South Africa		X	X							
89.	Ralph	Damonse	Rietpoort Trust Managing Trustee		X	X	X						
90.	Alain	Morry	GDF Suez Energy Southern Africa		X	X							
91.	A.	Le Roux	Laingsburg & Komsberg Farmers Association		X								

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
92.	Abra	van Wyk	Sutherland Farmers Association		X	X							
93.	Johan	Koegelenberg	Sentech		X								
94.	Hennie	Barnard	Vodacom South Africa Tele Communications		X								
95.	Corne	Botha	MTN South Africa Tele Communications		X								
96.	Tyrin	Naidoo	Cell C Tele Communications		X								
97.	Brian	Dryer	Neotell Tele Communications		X								
98.	Coert	Loubse	Telkom Tele Communications		X								
99.	Leonard	Shaw	Telkom Tele Communications		X								
100.	Heleen	van der Westhuizen	Telkom Tele Communications Wayleave Central		X								
101.	Samantha	Ralston	BirdLife South Africa		X	X							
102.	Tania	Anderson	BirdLife South Africa		X	X							
103.	Lynne	Hannay	Shell South Africa Exploration (PTY)Ltd		X								
104.	Bonnie	Schumann	Endangered Wildlife Trust Drylands Conservation Programme Loxton Office		X	X							
105.	Mercia	Grimbeek	Mainstream Renewable Power South Africa		X	X							
106.	Raymond	Takuba	Mainstream Renewable Power South Africa		X	X							
107.	Francisca	Jansen	Laingsburg Public Library		X	X							
108.	Mavela	Hlazo	Southern African Large Telescope(SALT) & South African Astrological Observatory (SAAO) Sutherland		X								
109.	Claudine	V	South African Astrological Observatory (SAAO) Sutherland		X	X							

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110.	Ronell	Cloete	Sutherland Public Library		X	X							
111.	Morgan	Griffiths	Wildlife and Environmental Society of South Africa - Port Elizabeth Office (WESSA) - Environmental Governance Programme *Note that the BID and Letter 1 was originally sent to the Northern Cape office of WESSA, who then responded that M. Griffiths needs to be added to the database.*		X	X							
112.	Stephanie	Kot	ACED		X	X							
113.	Dawie	Augustyn	Sutherland Landbou Kooperasie		X	X							
114.	Nellis	Bezuidenhout	Power Group		X	X							
115.	Sweetness	Maletse	NERSA		X	X							
116.	Michael	Barnes	BioTherm Energy (PTY)Ltd		X	X							
117.	Karen	de Bruyn	G7 Renewable Energies PTY (Ltd)		X		X						
118.	Janine	Brasington	Building Energy South Africa		X	X	X						
119.	Paolo	Fagnoli	Building Energy South Africa		X	X	X						
120.	Tommie	Potgieter	Moyeng Consultant and Advisor		X	X							
121.	Serame	Motlhake	Sentech		X	X							
122.	A	Wolfaardt	I&AP		X	X							
123.	Doug	Harebottle	I&AP		X	X							
Surrounding and Adjacent Landowners													
124.	Elias Nel	Basson	Remaining Extent of Portugalsrivier Farm 218 - Surrounding Landowner (Sutherland 2 EGI BA Project)		X								

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
125.	Cornelius Jacobus	Symington	Portion 5 of Tonteldoosfontein Farm 152; and Remaining Extent of de Vreede Farm 133 - Surrounding Landowner (Sutherland 2 EGI BA Project)		X								
126.	Albie	Olivier	Portion 1 of Portugalsrivier Farm 218 (Bolindein (PTY) LTD) – Surrounding Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
127.	Sybrand and Hannelie	Burger	Remaining Extent of Nooitgedacht Farm 148 - Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
128.	Dawid	Muller	Portion 1 of Tonteldoosfontein Farm 152 - Project Landowner (Sutherland 2 EGI BA Project)		X	X							
129.	Abrie	De Wet	Remaining Extent of Beeren Valley Farm 150 (GVA Boerdery CC) - Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
130.	Ria	Laynes	Portion 1 of Beeren Valley Farm 150 - Project Landowner (Sutherland 2 EGI BA Project) and Surrounding Landowner (Sutherland and Rietrug EGI BA Projects)		X	X							
131.	Andreas and Lynette	Muller	Portion 1 of Gunsfontein Farm 151 - Project Landowner (Sutherland 2 EGI BA Project)		X								
132.	Andreas and Lynette	Muller	Portion 2 of Gunsfontein Farm 151 - Project Landowner (Sutherland 2 EGI BA Project)		X								
133.	Komsberg Private Nature Reserve	Becky	Komsberg Private Nature Reserve		X	X							

Number	First Name	Surname	Company/ Organisation	Deregister interest	Automatically registered I&APs	Letter 1: BID[1]	Request to Register	Comment BID	Letter 2: Notice of Release of Consultation BA Reports	Comment on Consultation BA Reports	Email: Notice of Submission of BA Reports to DEA	Let 4: Notice of EA for BAs	Email 5: Outcome of Appeal Process
134.	Andre	Knoop	Remaining Extent of Hartbeesfontein Farm 147 – Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
135.	A.C and Elbie	du Plessis and du Toit	Power line route landowner - Previous Alternative		X	X							
136.	Thys	Heyns	Power line route landowner - Previous Alternative		X	X							
137.	Piet	van Heerden	Portion 1 of Farm 219 (Eiendomme Beleggings PTY LTD) – Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
138.	Francois	Conradie	Power line route landowner - Previous Alternative		X								
139.	John	Rupert	Power line route landowner - Previous Alternative		X	X							
140.	Kobus	le Roux	Power line route landowner - Previous Alternative		X	X							
141.	Arend	de Waal	Remaining Extent of Farm 219, Farm 280, Portion 1 of Rheebokkfontein Farm 4, and Portion 2 of Rheebokkfontein Farm (Nova Vita Boerdery (PTY) Ltd) – Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
142.	Charles	Muller	Portion 2 of Farm de Molen 5 and Portion 7 of Hamelkraal 16 – Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							
143.	Abraham & Belia	Muller	Portion 6 of Hamelkraal 16 – Project Landowner (Sutherland, Sutherland 2, and Rietrug EGI BA Projects)		X	X							

Appendix E.5 Copies of Comments Received and Minutes of Meetings

1. Copies of Comments Received from I&APs Prior to the Release of the BA Report (i.e. during the 30-day Project Initiation Phase)

From: Adri La Meyer <Adri.LaMeyer@westerncape.gov.za>
Subject: RE: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 12:09:39 PM SAST
To: ShawnJohnston <swjohnston@mweb.co.za>
Cc: Danie Swanepoel <Danie.Swanepoel@westerncape.gov.za>, Malcolm Fredericks <Malcolm.Fredericks@westerncape.gov.za>, Francois Naude <Francois.Naude@westerncape.gov.za>, Floresca Julius <Floresca.Julius@westerncape.gov.za>

1 Attachment, 8 KB

Hallo Shaun,

Thank you for your e-mail notification of the BA and EA amendment processes. Kindly note that the Department will only comment on those applications falling within the boundaries of the Western Cape. Kindly confirm whether my understanding is correct that we therefore have to comment on the following applications:

- Amendment Application (Nr. 2) for the Sutherland (1) WEF to change the turbine and hub specifications; and
- BA process for electrical infrastructure for Alternative 2: Connection to the proposed Eskom Nuwerust Substation located on Farm Hamelkraal in the Western Cape (I assume this is for all 3 WEFs?)

Please note that only the Directorate: Development Management (Region 3) will be commenting on the applications and as such, it would be appreciated if you could provide them with hard copies of the relevant reports (Amendment Application Report for the Sutherland WEF and the BARs) once it is available for comment. Please submit the reports to the details below:

Department of Environmental Affairs and Development Planning
Attention: Directorate: Development Management (Region 3)
Private Bag X6509
George
6530

Registry Office
4th Floor, York Park Building
93 York Street
George
6530

Please do not hesitate to contact me if you have any queries.

Kind regards,
Adri

Adri La Meyer
Directorate: Development Facilitation
Department of Environmental Affairs and Development Planning
Western Cape Government

11th Floor, Utilitas Building, 1 Dorp Street, Cape Town

Tel: (021) 483 2887
Fax: (021) 483 4185
E-mail: Adri.LaMeyer@westerncape.gov.za
Website: www.westerncape.gov.za/eadp

From: ShawnJohnston [mailto:swjohnston@mweb.co.za]
Sent: 09 December 2016 09:51 AM
To: Shawn Johnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,
Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel:++27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

From: Colin Fordham <landuseadvicesouth@capenature.co.za>
Subject: RE: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 10:40:38 AM SAST
To: ShawnJohnston <swjohnston@mweb.co.za>

3 Attachments, 567 KB

Dear Shawn,

Thank you for notification of this process.

Attached find our 2016 requirements for development applications document, please send a hard copy as well as cd with electronic copies of all relevant documentation to me here in George, as I will be providing comment.

Regards,

Colin Fordham
Scientist: Land Use Advice | Scientific Services
CapeNature
tel +27 44 802 5329 | fax +27 44 802 5313| cell +27 79 521 1911
email cfordham@capenature.co.za | postal Private Bag X6546, George, 6530
physical 4th Floor, York Park Building, York Street, George, 6530
www.capenature.co.za

From: ShawnJohnston [mailto:swjohnston@mweb.co.za]
Sent: 09 December 2016 09:51 AM
To: Shawn Johnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,

Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel:++27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Requiremen...pdf (554 KB)

CapeNature

SCIENTIFIC SERVICES

postal	Private Bag X5014 Stellenbosch 7599
physical	Assegaaibosch Nature Reserve Jonkershoek
website	www.capenature.co.za
enquiries	Garth Mortimer
telephone	+27 21 866 8000 fax +27 21 866 1523
email	gmortimer@capenature.co.za
reference	SSD 14/2/6/1/1/1_Procedures
date	June 2016

To Whom It May Concern:

CAPENATURE'S REQUIREMENTS FOR PROVIDING COMMENTS ON AGRICULTURAL, ENVIRONMENTAL, MINING, PLANNING AND WATER-USE RELATED APPLICATIONS

CapeNature is the statutory custodian of biodiversity in the Western Cape[1] and commenting authority concerning potential impacts on biodiversity. This letter outlines the minimum requirements for submission of applications to CapeNature for the consideration, investigation and reporting on the biodiversity aspects of proposed changes to land use that may require an official decision.

In order to ensure that biodiversity and ecological issues are addressed as early as possible in the development application process and as comprehensively as required, please take note of the following information. This is applicable to any application that requires comment from CapeNature and complying with these recommendations should assist in avoiding unnecessary delays in the process.

Minimizing negative impacts on biodiversity

1. As part of the commenting process, CapeNature's involvement will relate specifically to the impact of the proposed development activities on the biodiversity and ecological aspects of the receiving environment. CapeNature expects that a precautionary and risk-averse approach be adopted towards those projects which may result in substantial detrimental impacts on biodiversity and ecosystems, especially the irreversible loss of habitat and ecological functioning in threatened ecosystems (as identified by the National Biodiversity Assessment, 2011)[2] or designated sensitive areas: i.e. Critical Biodiversity Areas (as identified by systematic conservation plans, Biodiversity Sector Plans or Bioregional Plans) and Freshwater Ecosystem Priority Areas.

2. All reports must firmly demonstrate how the proponent intends complying with the principles contained in section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended (NEMA), which, amongst other things, indicates that environmental management should:

    - In order of priority aim to: avoid, minimise or remedy disturbance of ecosystems and loss of biodiversity;
    - Avoid degradation of the environment;
    - Avoid jeopardising ecosystem integrity;
    - Pursue the best practicable environmental option by means of integrated environmental management;

[1] Section 9, Western Cape Nature Conservation Board Act 15 of 1998
[2] Formerly the National Spatial Biodiversity Assessment of 2004

- Protect the environment as the people's common heritage;
- Control and minimise environmental damage; and
- Pay specific attention to management and planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.

These principles serve as guidelines for all decision-making concerning matters that may affect the environment. As such, it is incumbent upon the proponent to show how proposed activities would comply with these principles and thereby contribute towards the achievement of sustainable development as defined by the NEMA.

Guidelines and biodiversity plans

3. The Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) has produced a series of guideline documents that provide clear guidance on the EIA process[3]. Specifically, they aim to improve the capacity of environmental assessment practitioners (EAPs) to draft appropriate terms of reference that meet the information requirements for informed environmental decision-making. In addition the Fynbos Forum Ecosystems Guidelines for Environmental Assessment in the Western Cape (see point 3b below) provides appropriate terms of reference for Botanical Assessments. By meeting the requirements for submission of accurate and relevant information, EAP's can support efficient and accountable decision-making.

    With a view to adequately assessing impacts on biodiversity, we request that your environmental assessment is informed by the following documents. The implementation of relevant recommendations and/or actions as stipulated in these documents should be critically considered, regardless of whether a Basic Assessment, Scoping & EIA or any other authorisation process is to be undertaken.

    a. Brownlie S (2005) *Guideline for involving biodiversity specialists in EIA processes: Edition 1.* CSIR Report No ENV-S-C 2005 053 C. Republic of South Africa, Provincial Government Western Cape, Department of Environmental Affairs and Development Planning, Cape Town[4].

    b. De Villiers C, Driver A, Clark B, Euston-Brown D, Day L, Job N, Helme N, Holmes P, Brownlie S and Rebelo T (2005) *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape,* Fynbos Forum and Botanical Society of South Africa, Kirstenbosch, Cape Town[4]

    c. The latest National Biodiversity Assessment (2011)[5] which provides information about ecosystem threat status. More up-to-date ecosystem threat status information is, however, periodically available from CapeNature and posted on SANBI's Biodiversity GIS website.

    d. Pence, Genevieve Q.K. 2014. Western Cape Biodiversity Framework (2014) Status Update: Critical Biodiversity Areas of the Western Cape. Unpublished CapeNature project report. Cape Town, South Africa. The latest provincial biodiversity framework (conservation plan) which reflects identified Critical Biodiversity Areas; currently this is the Western Cape Biodiversity Framework 2014, available on SANBI's Biodiversity GIS website. The most recent conservation plans and their associated reports and guidelines are available at the SANBI Biodiversity GIS Unit website[6]. The mapping tools can be useful, but please note that while these tools can help to identify potential issues, the use thereof does not constitute a biodiversity assessment.

    e. Biodiversity Sector Plans for municipalities, where available[7].

    f. The Western Cape Provincial Spatial Development Framework (2014) (Department of Environmental Affairs & Development Planning)[8].

[3] http://eadp.westerncape.gov.za/our-services-to-you/submitting-a-development-application-in-terms-of-relevant-legislation
[4] Contact the Botanical Society on 021 797 2090 or email info@fynbosforum.org.za or download at http://biodiversityadvisor.sanbi.org/
[5] http://bgis.sanbi.org/nba/project.asp
[6] http://bgis.sanbi.org or email BGISHelp@sanbi.org
[7] Biodiversity Sector Plans include Critical Biodiversity Areas Maps, Municipal Biodiversity Profiles and Land and Resource Use Guidelines.
[8] http:// www.westerncape.gov.za/eadp/your-resource-library/western-cape-provincial-spatial-development-framework

g. The Department of Water and Sanitation's Guideline: assessment of activities/developments affecting wetlands.

Biodiversity 'red flags' in the Western Cape

4. The following factors must be taken into account during project planning and assessment:

   a. CapeNature *does not support* activities that may negatively impact on the following habitats and their ecological functioning:
      i. Rivers, wetlands, groundwater-dependent communities or ecosystems, flood plains and estuaries, tidal flats or salt marshes.
      ii. Viable and/or connected habitat in Critically Endangered and Endangered ecosystems.
      iii. Any area that has been identified as a Critical Biodiversity Area or Ecological Support Areas as identified by the most recent systematic conservation planning initiative.
      iv. Any other special habitats that may contain a unique assemblage of species. This could include *inter alia,* dolomite outcrops, quartz or ferricrete patches.
      v. Any habitat that may contain rare, threatened or range-restricted floral or faunal species (species of conservation concern).
      vi. Natural habitat in an ecological corridor or along a vegetation boundary (including frontal dune systems).
      vii. Formally declared Mountain Catchment Areas.

      Appropriate buffers must be determined by a suitably qualified specialist to avoid impacting on these habitats and particular attention should be paid to avoiding the loss of intact habitat, maximizing connectivity at a landscape scale, maximizing habitat heterogeneity and reducing fragmentation at a local and regional scale. Please also note that an infestation by alien plants does not necessarily mean that an area is not important for biodiversity conservation.

   b. The Cape Floristic Region is largely a fire-dependent system and natural fire regimes must be maintained and managed in the landscape. The exclusion of fire from certain habitats will be considered unacceptable as this may ultimately cause the loss of species. Where appropriate, the location of fire-breaks should be indicated and these fire-breaks may be considered part of the development footprint. Fire-breaks must be brush-cut and vegetation must not be completely removed. Brush-cutting under power lines must occur as infrequently as possible as brush-cutting will lead to loss of species diversity over time. A fire-risk assessment can help inform an appropriate layout for developments adjacent to fire-prone vegetation.

   c. Water is a limited resource in the Western Cape. Water requirements for proposed activities and the potential impact on broader surface and ground water resources must be rigorously assessed and considered by an aquatic/freshwater specialist and/or ground water specialist, including the cumulative impact if other developments are also taking place in an area. Cumulative impacts on infrastructure such as Waste Water Treatment Works must also be considered.

      Groundwater use for bulk supply purposes and irrigation must be assessed rigorously with specific reference to the possible groundwater-surface water interfaces. Groundwater use assessments must include the identification of possible groundwater dependent ecosystems and/or possible interfaces with surface resources. Aquifers need to be described in terms of: aquifer type, aquifer characteristics, aquifer condition, as well as aquifer recharge and yield[9].

   Specialist assessment(s) should be undertaken if any of the above-mentioned circumstances prevail or if there is any doubt about the biodiversity value of the potentially impacted areas. The opportunities and constraints of the receiving environment should be used to inform the desirability and layout of any development proposal so as to ensure that developments do not compromise the biodiversity value of the area.

[9] For groundwater-related assessments, consult: Saayman, I (2005) Guideline for involving hydrogeologists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 D. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Commissioning of biodiversity specialists

5. A suitably qualified and experienced specialist is often critical to ensuring that the necessary information is provided for informed decision-making. Please take note of the following recommendations from the *Guideline for involving biodiversity specialists in EIA processes (DEA&DP 2005).*

   Biodiversity specialists should:

   a. Be competent at interpreting and evaluating information and able to explain the direct and indirect consequences of an activity to biodiversity;
   b. Have appropriate formal training in his/her field of expertise;
   c. Have sufficient practical experience working in the specific ecosystems of the affected region;
   d. Be able to trace impact pathways and identify indirect or cumulative impacts and consider ecosystem goods and services;
   e. Have good knowledge relating to assessment techniques and to relevant legislation, policies and guidelines;
   f. Be independent; and
   g. Be registered with South African Council for Natural Scientific Professions (SACNASP).

   CapeNature also requests that specialists be asked to review the information in the report to be submitted for decision-making to confirm that their opinion has been adequately reflected.

Permit requirements

6. Please note that according to Section 63(1) of the Western Cape Nature Western Cape Nature Conservation Laws Amendment Act No. 3 of 2000:

   No person shall—

   (a) uproot the plant in the process of picking the flower of any flora;
   (b) without a permit—
      (i) pick any endangered or protected flora, or
      (ii) pick any flora on a public road or on the land on either side of such road within a distance of ninety metres from the centre of such road, or
   (c) pick any protected or indigenous unprotected flora on land of which he or she is not the owner, without the permission of the owner of such land
      or of any person authorised by such owner to grant such permission

   If these activities will be involved in the application make sure that you also apply for a CapeNature permit to carry out these activities.

Format of reports

7. Please help us provide you with a timely response by supplying all information in a readily accessible format:
   a. The main report must be submitted, and include: locality maps, all alternative layout plans and all biodiversity related specialist reports. All reports longer than 50 pages must be submitted in hardcopy, shorter reports can be submitted on disc. The hardcopy should be accompanied by a digital copy of the complete application on disc.
   b. Electronic reports must be submitted on cd/dvd – we will not accept reports sent via email or ftp or website links.
   c. We also encourage you to reduce the amount of paper used by printing both sides of a page.
   d. Please supply all maps and alternative layouts in colour.
   e. To facilitate assessment of potential impacts, we request that maps of proposed development layouts be overlaid with identified environmental features of a site. If provided separately, maps should be produced at the same scale.

f. Where available, GIS shape-files of the proposed development footprint, particularly for linear features or for combined applications with numerous sites, would be appreciated.
g. If here are no substantive changes, final reports for Scoping and EIA stages may be provided on dvd/cd with a printed cover letter, executive summary and comments and response report.
h. Please allow sufficient time for post or courier services to deliver the documents at the beginning of the commenting period. We receive a large number of reports and need to treat applicants and consultants fairly therefore applications will be processed from date of receipt within the required number of days as stipulated by the DEA&DP, the DMR or other competent authority.
i. For spatial planning reports or Environmental Management Frameworks however, electronic reports submitted via ftp sites will be accepted.

Mining and Prospecting Applications

8. Please note that the Department of Mineral Resources no longer sends copies of applications to commenting authorities. It is now the responsibility of the consultant working for the applicant to ensure that all commenting authorities receive the relevant documents. Therefore point 7 above applies to mining and prospecting applications as well.

Status of CapeNature's comment

9. Please note that CapeNature does not consider verbal discussions regarding any aspect of a proposed development as adequate or complete comment. Please ensure that you obtain written comment once all the necessary information is made available for review. We reserve the right to amend our position based on any new information that may be received.

10. Applications requiring comment from CapeNature should be sent to the following addresses:

City of Cape Town, Theewaterskloof, Overstrand & Stellenbosch Municipalities:

CapeNature
Scientific Services: Land Use Advice
P/Bag X5014
STELLENBOSCH
7599
Attention: Rhett Smart

Email: rsmart@capenature.co.za
Tel: 021 866 8000
Fax: 021 866 1523 / 086 529 4992

Matzikamma (including DMA01), Cederberg, Berg River, Saldanha, Swartland, Drakenstein, Breede Valley, Langeberg, Witzenberg (incl. DMA02) Municipalities:

CapeNature
Scientific Services: Land Use Advice
P/Bag X5014
STELLENBOSCH
7599
Attention: Alana Duffell-Canham

Email: aduffell-canham@capenature.co.za
Tel: 021 866 8000
Fax: 021 866 1523 / 086 529 3475

George, Knysna, Oudtshoorn, Uniondale, Beaufort West (incl. DMA05), Prince Albert (incl. DMA04) & Bitou Municipalities:

CapeNature
Scientific Services: Land Use Advice
P/Bag X6546
GEORGE
6530
Attention: Benjamin Walton

Email: landusegeorge@capenature.co.za
Tel: 044 802 5328
Fax: 086 645 2546

Hessequa, Mossel Bay, Kannaland, Swellendam, Agulhas & Laingsburg Municipalities:

CapeNature
Scientific Services: Land Use Advice
P/Bag X6546
GEORGE
6530
Attention: Colin Fordham

Email: cfordham@capenature.co.za
Tel: 044 802 5329
Fax: 086 554 4165

Forward Planning Documents and Environmental Management Frameworks for all regions in the Western Cape

CapeNature
Scientific Services
Private Bag X5014
Stellenbosch
7599
Attention: Dr Ruida Stanvliet

Email: rstanvliet@capenature.co.za
Tel: 021 866 8020
Fax: 021 866 1523

A map (Figure 1) illustrating the officials responsible for each municipality is provided below.

Thank you in advance for your co-operation in this regard.

Yours sincerely,

Garth Mortimer
Protected Area Expansion Manager

Figure 1. Map illustrating the officials responsible for each municipality.

From: "Karen de Bruyn" <karen@g7energies.com>
Subject: RE: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 09 December 2016 9:57:33 AM SAST
To: "'ShawnJohnston" <swjohnston@mweb.co.za>

1 Attachment, 157 KB

Dear Shawn,
Please find attached the request to be registered.
Kind regards,

Karen de Bruyn | Project Manager
G7 Renewable Energies (Pty) Ltd

5th Floor, 125 Buitengracht Street
Cape Town 8001, South Africa
+27 83 822 9629 (Mobile)
+27 21 300 0610 (Office)
+27 21 300 0616 (direct Extension)
+27 86 514 1735 (Fax)
www.g7energies.com

From: ShawnJohnston [mailto:swjohnston@mweb.co.za]
Sent: 09 December 2016 10:03 AM
To: Shawn Johnston <swjohnston@mweb.co.za>
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,

Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel:++27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

G7 Renewab...lsx (157 KB)

From: Ralph Damonse <damo@iafrica.com>
Subject: Request for Registration as I & AP for DEA 12/12/20/1782/1, DEA 12/12/20/1782/2 & 12/12/20/1782/3
Date: 12 December 2016 10:33:51 AM SAST
To: swjohnston@mweb.co.za

Dear Mr. Shawn Johnson

Please register the following landowner in the vicinity of your projects on your interested and affected parties database.

The Managing Trustee
Rietpoort Trust
Attention: Mr. Ralph Damonse
PO box 16099
Panorama
7506

Please mail relevant background information.

Thank you.

Ralph Damonse
Mobile: 082 344 5911
Fax: 086 672 6096

From: Janine Brasington <j.brasington@buildingenergy.it>
Subject: I&AP Sutherland, Sutherland 2 and Rietrug WEF.
Date: 12 December 2016 8:48:24 AM SAST
To: "swjohnston@mweb.co.za" <swjohnston@mweb.co.za>
Cc: Sharief Harris <s.harris@buildingenergy.it>, Paolo Fagnoli <p.fagnoli@buildingenergy.it>
1 Attachment, 157 KB

Dear Shawn,

Building Energy would like to be registered as an Interested and Affected Party for the Sutherland, Sutherland 2, and Rietrug Wind Energy Facilities.

Please see attached our complete registration form.

Best regards,

Janine Brasington – Junior Developer
Skype: janine.brasington1
Office: +27 21 418 3940
Fax: +27 86 297 5902
Building Energy South Africa (PTY) LTD

The Piazza, Unit B103a
72 Waterkant Street
Cape Town
8001
SOUTH AFRICA
www.buildingenergy.it

SUSTAINABLE FUTURES ZA

COMBINED BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES
AND
ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

PUBLIC PARTICIPATION INTERESTED AND AFFECTED PARTY REGISTRATION AND REPLY FORM

Complete and return this form to: Shawn Johnston of SustainableFutures2A

Telephone: 083 325 9965 **Fax:** 086 510 2537 **E-mail:** swjohnston@mweb.co.za

Postal Address: P.O. Box 748 Rondebosch 7701 Cape Town

Provide us with your correct contact details:

Name:	Paolo
Surname:	Fagnoli
Organisation & Portfolio:	Head of Development, Building Energy SA
Postal Address:	Suite 103, Dixon Street, Cape Town, 8001
Telephone:	Telephone: 021 418 3940
Cellphone:	Cellphone: 076 254 9224
Fax:	Fax: 086 297 5902
E-mail:	p.fagnoli@buildingenergy.it

Are you an interested and affected party?
Please tick the relevant box.

YES	
NO	X

Would you like to register as an interested and affected party and receive the BA and EA Amendment correspondence?
Please tick the relevant box.

YES by e-mail	X
YES by post	X
NO	

If you are a farmer/landowner of the area on which the proposed WEF's and/or Electrical Grid Infrastructure will be constructed, please provide us with your:

Current farm name:	
Historical farm name:	
Erf number/farm number:	

Name of nearest farmer or home owners association:	
Name of chairperson:	
Contact details of farmers or home owners association:	

Please clarify your interest in this project & list your questions (feel free to add additional pages to this form)

Building Energy has renewable energy projects in this area.

Language choice:

English	X
Afrikaans	

Rohaida Abed - RE: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

From: "Nteta, Onkemetse" <onteta@wwf.org.za>
To: Rohaida Abed <RAbed@csir.co.za>
Date: 14/12/2016 16:00
Subject: RE: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Cc: ShawnJohnston <swjohnston@mweb.co.za>, "Laurie, Surina" <SLaurie@csir.co...

Dear Rohaida

Thanks for the map.

Regards,

Onkemetse

From: Rohaida Abed [RAbed@csir.co.za]
Sent: 14 December 2016 02:24 PM
To: Nteta, Onkemetse
Cc: ShawnJohnston; Laurie, Surina; Dludla, Andile
Subject: Fwd: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

Dear Onkemetse

Thank you for your email below regarding the Mainstream Sutherland, Sutherland 2 and Rietrug WEFs EA Amendment and BA Projects.

Please see attached a KMZ file which shows the project extent and property descriptions. Please confirm if this is suitable?

Kind Regards,
Rohaida

CSIR - Environmental Management Services
P. O. Box 17001, Congella, Durban, 4013
Tel: 031 242 2318
Cell: 072 204 6224
Fax: 031 261 2509
Email: RAbed@csir.co.za

>>> ShawnJohnston swjohnston@mweb.co.za> 13/12/2016 07:46 >>>

Begin forwarded message:

From: "Nteta, Onkemetse" <onteta@wwf.org.za>
Subject: FW: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 12 December 2016 12:44:37 PM SAST
To: "swjohnston@mweb.co.za" <swjohnston@mweb.co.za>

Dear Shawn

We would like to determine the location and footprint of this development. Could you kindly forward me the GIS shapefiles of the development footprint and the full property descriptions.

Kind regards,

Onkemetse Nteta
: Programme Coordinator: WWF Land Programme ::
Boundary Terraces, Bridge House 1st Floor
Mariendahl Lane, Newlands, 7700, Cape Town.
PO Box 23273, Claremont, 7735
Tel: (+27 21) 657 6600 Mobile: (+27) 83 471 6080
Skype: Onkemetse.nteta Email: onteta@wwf.org.za
Web: www.wwf.org.za

From: ShawnJohnston [mailto:swjohnston@mweb.co.za]
Sent: 09 December 2016 09:58 AM
To: Shawn Johnston
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
See attached registration form and background information document.

Please note you are hereby notified of the release of the background information document for the proposed projects for a 30-day review period, which will extend from 09 December 2016 to 1 February 2017 (excluding public holidays in terms of Regulation 3(2) of the 2014 EIA Regulations).

This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,
Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel:++27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

From: <wessanc@yahoo.com>
Subject: Re: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment
Date: 13 December 2016 12:22:16 PM SAST
To: ShawnJohnston <swjohnston@mweb.co.za>
Reply-To: <wessanc@yahoo.com>

The Northern Cape Regional Office of WESSA is not dealing with EIA and development matters.
Please address letters, registered letters, faxes or hard copies of documents to
Morgan Griffiths, Environmental Governance Programme Manager.

His contact details are:

WESSA PE Office
Tel: +27 (0)41 585 9606
Fax: +27 (0)86 6149701
Cell: +27 (0)72 4175793
Email: morgan.griffiths@wessa.co.za
URL: www.wessa.org.za
Street: 2 Lawrence Street, Central Hill, Port Elizabeth, 6001
Post: PO Box 12444, Centrahil, Port Elizabeth, 6006, South Africa

From: ShawnJohnston <swjohnston@mweb.co.za>
To: Shawn Johnston <swjohnston@mweb.co.za>
Sent: Friday, 9 December 2016, 10:12
Subject: Mainstream Sutherland, Sutherland 2 and Rietrug WEF EA Amendment & Basic Assessment (BA) Amendment

COMBINED NOTICE OF BASIC ASSESSMENT AND ENVIRONMENTAL AUTHORISATION AMENDMENT PUBLIC PARTICIPATION PROCESS
PROPOSED DEVELOPMENT OF SUPPORTING ELECTRICAL GRID INFRASTRUCTURE TO THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

AND

ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION FOR THE SUTHERLAND, SUTHERLAND 2 AND RIETRUG WIND ENERGY FACILITIES, SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

Dear Stakeholder,

Find attached our notice clarifying the combined basic assessment and environmental authorisation amendment for the proposed Sutherland, Sutherland 2 and Rietrug Wind Energy Facilities.
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This is a call for interested and affected parties to register and provide any comments on the background information document.

Sincerely,
Shawn Johnston
Process Specialist
Sustainable Futures ZA
P.O. Box 749 Rondebosch 7701
Cape Town, South Africa
Tel:++27 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Gmail **Andile Dludla <andyledludla@gmail.com>**

SAHRIS Case ID 10493, 10494 and 10495

1 message

Natasha Higgitt <nhiggitt@sahra.org.za> Mon, Jan 9, 2017 at 12:40 I
To: andyledludla@gmail.com

Good afternoon,

Please note that comments have been issued on SAHRIS Case ID 10493, 10494 and 10495. Please see links below:

http://sahra.org.za/sahris/cases/ba-process-proposed-construction-electrical-grid-infrastructure-support-sutherland-wind-energy
http://sahra.org.za/sahris/cases/ba-process-proposed-construction-electrical-grid-infrastructure-support-rietrug-wind-energy
http://sahra.org.za/sahris/cases/ba-process-proposed-construction-electrical-grid-infrastructure-support-sutherland-2-wind

Kind Regards,

Natasha Higgitt
Heritage Officer: Archaeology, Palaeontology and Meteorites Unit

South African Heritage Resources Agency
- A nation united through heritage -

T: +27 21 462 4502 | F: +27 21 462 4509
E: nhiggitt@sahra.org.za | 111 Harrington Street | Cape Town

www.sahra.org.za

Natasha Higgitt
Heritage Officer: Archaeology, Palaeontology and Meteorites Unit

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- A nation united through heritage -

T: +27 21 462 4502| C:+27 82 507 0378| F:+27 21 462 4509
E: nhiggitt@sahra.org.za | 111 Harrington Street | Cape Town | 8001

www.sahra.org.za

an agency of the
Department of Arts and Culture

BA Process for the Proposed Construction of Electrical Grid Infrastructure to support the Sutherland 2 Wind Energy Facility (WEF), Northern and Western Cape Provinces (Sutherland 2 WEF – Electrical Grid Infrastructure)
Our Ref:

an agency of the Department of Arts and Culture

South African Heritage Resources Agency | 111 | Harrington Street | Cape Town
PO Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 10495

Date: Monday January 09, 2017
Page No: 1

Response to NID (Notification of Intent to Develop)

In terms of Section 38(2) of the National Heritage Resources Act (Act 25 of 1999)

Attention: South Africa Mainstream Renewable Power Developments (Pty) Ltd
P.O. Box 45063
Claremont
7753

South Africa Mainstream Renewable Power Developments (Pty) Ltd (Mainstream) received three Amended Environmental Authorisations (EAs), dated 10 November 2016 (DEA Reference Numbers: 12/12/20/1782/1; 12/12/20/1782/2; and 12/12/20/1782/3), from the National Department of Environmental Affairs (DEA) to construct and operate the Sutherland Wind Energy Facility (WEF), Sutherland 2 WEF, and Rietrug WEF, each with a generation capacity of 140 MW. Mainstream is now proposing to amend the turbine and hub specifications of each of the separately authorised WEFs (dated 10 November 2016). Three separate EA Amendment Applications will be submitted to the DEA accordingly. Mainstream is also proposing to construct electrical infrastructure (including three on-site substations, Operational and Maintenance Buildings, laydown areas, service roads, 132 kV distribution lines, and connection to a proposed third party collector hub or to the proposed Eskom Nuwerust Substation) to support the three separately authorised WEF projects. Three separate Basic Assessment (BA) Processes are being undertaken for each Electrical Infrastructure project. An integrated Public Participation Process will be undertaken for the proposed projects. This specific application is for the BA Electrical Infrastructure project and is referred to as "Sutherland 2 WEF – Electrical Infrastructure". The proposed project will take place approximately 23 km south of Sutherland and 50 km north of Laingsburg, within the Northern and Western Cape Provinces.

Thank you for notifying SAHRA of the proposed Electrical Infrastructure Grid to support the authorised Sutherland 2 Wind Energy Facility (WEF), near Sutherland, Northern Cape Province.

It must be noted that sections of the development are located within the Western Cape Province. SAHRA cannot provide comments for developments within the Western Cape Province. Comments must be sought from Heritage Western Cape for those sections of the development.

In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer to ensure that a **Heritage Impact Assessment** (HIA) is done as per Section 38(8) of the NHRA. This must include the

BA Process for the Proposed Construction of Electrical Grid Infrastructure to support the Sutherland 2 Wind Energy Facility (WEF), Northern and Western Cape Provinces (Sutherland 2 WEF – Electrical Grid Infrastructure)
Our Ref:

South African Heritage Resources Agency | 111 Harrington Street | Cape Town
PO Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 10495

Date: Monday January 09, 2017
Page No: 2

archaeological component (Phase 1) any other applicable heritage components. The HIA must be conducted as part of the Environmental Impact Assessment (EIA) phase of the Environmental Authorisation Application in terms of the National Environmental Management Act, No 107 of 1998 (NEMA) and the NEMA EIA Regulations 2014.

The quickest process to follow for the archaeological component would be to contract a specialist (see www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites. If the property is very small or disturbed and there is no significant site the specialist may choose to send a letter to the heritage authority to indicate that there is no necessity for any further assessment.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary (see www.palaeontologicalsocitey.co.za for qualified paleontologists).

Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed.

Please note that all Environmental Reports (Scoping Report and EIA) with all appendices must be submitted to the SAHRIS Case file in order for an informed comment to be issued.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

BA Process for the Proposed Construction of Electrical Grid Infrastructure to support the Sutherland 2 Wind Energy Facility (WEF), Northern and Western Cape Provinces (Sutherland 2 WEF – Electrical Grid Infrastructure)
Our Ref:

an agency of the Department of Arts and Culture

South African Heritage Resources Agency | 111 Harrington Street | Cape Town
PO Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 10495

Date: Monday January 09, 2017
Page No: 3

Natasha Higgitt
Heritage Officer
South African Heritage Resources Agency

John Gribble
Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

ADMIN:
Direct URL to case: http://www.sahra.org.za/node/383532
(DEA, Ref:)

BASIC ASSESSMENT REPORT

APPENDIX F: IMPACT ASSESSMENT

contents

Alternative 1 (Preferred Alternative) and Alternative 2– Planning/Design Phase Direct Impacts

Note: No indirect and cumulative impacts have been identified for the Planning and Design Phase

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Impact on existing infrastructure (roads, nearby farm structures and fences, stormwater pipelines, sewers, and electrical infrastructure and cables etc.).	Negative	Site Specific	Medium Term	Substantial	Likely	High	Low	Moderate	Low	4	Medium

Alternative 1 (Preferred Alternative) and Alternative 2 – Construction Phase Direct, Indirect and Cumulative Impacts

Note that the following two alternatives have been assessed as part of the BA Process by the specialists and EAP:

- Alternative 1: Distribution Line Routing and Connection to the Proposed Collector Hub in the Northern Cape; and
- Alternative 2: Distribution Line Routing and Connection to the Proposed Eskom Nuwerust Substation in the Western Cape.

Therefore, in these sections, the impacts described are applicable to both Alternatives 1 and 2. The impacts are the same for both Alternative 1 and 2, except for the Visual Impacts, as these have been differentiated between Alternatives 1 and 2.

DIRECT IMPACTS – CONSTRUCTION PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Change in ecological processes and habitat form and alteration of biophysical factors at a localised level as a result of the removal of indigenous vegetation, site clearance and levelling for the establishment of the proposed laydown area, on-site substation, O&M Building, service road, pylons, and stringing of the power line, as well as earthworks.	Negative	Site Specific	Medium to Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	High
Localised extinction or ousting of species with concomitant change in ecosystem function and loss, disturbance or alteration of botanical communities at a localised level,	Negative	Site Specific	Long term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
particularly geophytes and uncommon to rare species as a result of site clearance, as well as destruction of localised vegetation communities.											
Alteration of lithic structures and clearance of rock and minor features (resulting in change in ecological processes and habitat form) due to the construction of the proposed infrastructure; and site levelling (including areas that are eco-geomorphologically important) for the proposed construction of towers and the on-site substation. The service road will also traverse level to steeper ground and require some level of clearance of vegetation and disturbance along the powerline route.	Negative	Site Specific	Long Term	Severe	Very Likely	Low	High	High	Low	4	High
Loss of refugia particularly in respect of fauna associated with lithic habitats (e.g. *Homopus spp*). Rock ledges and other geological structures are intrinsic habitat for species such as padlopers (tortoises), and removal of these features (as a result of site clearance and levelling) will result in the loss of this habitat (i.e. localised	Negative	Site Specific	Long Term	Substantial	Very Likely	Low	Low	Moderate	Moderate	3	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
ousting of species and change in ecosystem function).											
Local extinction of species leading to ecosystem change due to direct faunal mortalities as a result of construction activities such as traffic movement and general disturbance on site.	Negative	Local	Short to Long Term	Substantial	Likely	Low	Low	Moderate	Low	4	Moderate
Change in habitat form and structure as a result of alteration of surface hydrology due to hardpanning of the upper soil horizon (i.e. soil compaction) due to traffic movement within and around the construction area, as well as use of materials to establish a sound working platform (including site levelling and site earthworks).	Negative	Site Specific	Short to Medium Term	Moderate	Very Likely	High	Low	Low	Very Low	5	High
Change in habitat form and structure as a result of general activities and disturbance on site, and import of earth materials during the construction phase, giving rise to prevalence of exotic vegetation. Indigenous vegetation may also serve to alter habitat form and structure.	Negative	Local to Regional	Medium to Long Term	Moderate	Likely	Moderate	Low	Low	Very low	5	Moderate
Change in habitat structure due to general erosion primarily as a result of the movement of construction	Negative	Site Specific to Local	Medium Term	Moderate	Likely	High	Low	Low	Very low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
traffic, earth and plant operations, which causes compaction and surface disturbance. Erosion may occur particularly on steeper slopes where the trampling and compaction of vegetation occurs.											
Impact of solid waste generation on fauna with possible mortalities as a result of potential ingestion or ensnarement. Solid waste (e.g. small bolts, wires etc.) has the potential to harm or kill animals through ingestion or ensnarement.	Negative	Site specific to Local	Short to Medium-Term	Moderate	Likely	High	Low	Low	Very low	5	High
Changes in ecological processes and vegetation and habitat alteration through the introduction of nutrients and other materials which may impact directly or indirectly on flora and faunal components of region.	Negative	Site Specific	Medium to Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	High
Ousting and behavioural change in fauna through effects such as altering corridors associated with movement, herbivory and predation. Certain species will benefit from the various changes in land use, while others will be ousted from areas.	Negative	Local	Long Term	Substantial	Very likely	Moderate	Moderate	Moderate	Low	4	High
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and	Negative	Site	Short term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.		Specific									
Visual Impacts											
Potential visual intrusion of activities associated with the construction of electrical infrastructure along **Alternative 1** on existing views of sensitive visual receptors in the surrounding landscape.	Negative	Local	Short Term	Substantial	Likely	High	Low	Moderate	Low	4	High
Potential visual intrusion of activities associated with the construction of electrical infrastructure along **Alternative 2** on existing views of sensitive visual receptors in the surrounding landscape.	Negative	Local	Short Term	Substantial	Likely	High	Low	Moderate	Low	4	High
Heritage Impacts (Palaeontology, Archaeology and Cultural Landscape)											
Destruction of archaeological remains as a result of the construction of the proposed powerlines, on-site substation and service road. Direct impacts to archaeological resources may also occur when construction	Negative	Site Specific	Permanent	Moderate	Very Likely	Non-reversible	High	Low	Very Low	5	Medium

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
vehicles move through the area and when foundation excavations are made.											
Alteration of the cultural landscape as a result of the construction of the proposed powerlines, on-site substation and service road. The cultural landscape will be impacted through the presence of incompatible structures (i.e. the proposed power line and pylons) and the construction vehicles in the rural landscape.	Negative	Local	Long Term	Moderate	Very Likely	High	Moderate	Low	Low	4	High
Disturbance, damage or destruction of scientifically important fossils at or beneath the ground surface as a result of surface clearance (for access roads, substations and laydown areas etc.) and excavations (for the power line footings and O&M building).	Negative	Site Specific	Permanent	Slight	Unlikely	Non-reversible	Moderate	Very Low	Very Low	5	Medium
Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road.	Negative	Site Specific	Permanent	Moderate	Very unlikely	Non-reversible	High	Low	Very low	5	High
Avifauna Impacts											
Displacement of Red Data avifauna due to permanent habitat transformation associated with the construction activities.	Negative	Site Specific	Long Term	Extreme	Very Unlikely	High	Replaceable	Low	Low	4	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Displacement of Red Data avifauna due to disturbance associated with the construction activities.	Negative	Site Specific	Short Term	Substantial	Likely	High	Replaceable	Moderate	Low	4	High

INDIRECT IMPACTS – CONSTRUCTION PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Local extinction of species leading to ecosystem change due to direct faunal mortalities as a result of construction activities such as traffic movement and general disturbance on site.	Negative	Local	Short to Long Term	Substantial	Likely	Low	Low	Moderate	Very Low	5	Moderate
Changes in ecological processes and vegetation and habitat alteration through the introduction of nutrients and other materials which may impact directly or indirectly on flora and faunal components of region.	Negative	Site Specific	Medium to Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	High
Ousting and behavioural change in fauna through effects such as altering corridors associated with movement, herbivory and predation. Certain species will benefit from the various changes in land use, while others will be ousted from areas.	Negative	Local	Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	High

CUMULATIVE IMPACTS – CONSTRUCTION PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Increased ELP levels as a result of light pollution that may be associated with all built structures of the proposed project and the projects considered within the 50 km radius, including the wind turbines of the various proposed WEFs listed in Section D.1 of the BA Report. The cumulative level of increased lighting in the area will serve to alter the behaviour of a number of nocturnal (and possibly crepuscular and diurnal) species and alter ecological processes in and around these points (i.e. localised change in species composition and ethology with concomitant change in ecosystem function).	Negative	Site Specific	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate
Increased dissection of habitat on account of increasing levels of infrastructure resulting in changes in plant community structure and species composition. Such dissection will have already arisen as a consequence of the establishment of the proposed turbines and road network across the site (as a result of	Negative	Local	Long Term	Substantial	Likely	Low	Moderate	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
the proposed Sutherland, Sutherland 2 and Rietrug WEFs), effectively dividing the properties into numerous dissected habitats.											
Increased presence of exotic and disturbance driven plant species. With increasing levels of anthropogenic activity on site and within the surrounding area, the propensity for plant invasion or the dominance of species that are tolerant of higher levels of disturbance will see such species dominating and perhaps ousting other less tolerant species.	Negative	Site Specific	Long Term	Substantial	Likely	Low	Low	Moderate	Low	4	High
Altered surface hydrology and impact on plant community structure. Increasing levels of areas dominated by built structures will see localised changes in surface hydrology across the subject site. The associated road network will add to this impact. These changes affect habitat structure and form within the terrestrial environment.	Negative	Site Specific	Short to Medium Term	Moderate	Very Likely	High	Low	Low	Very Low	5	High
Increased and expanded anthropogenic influences across the region. The nature of the surrounding proposed WEFs, electrical infrastructure and Solar Energy	Negative	Local	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Facilities (as noted in Section D.1 of the BA Report) suggests that human activity will arise at points that are presently only intermittently visited by a farmer or his staff. With the proposed projects listed in Section D.1 of the BA Report, as well as the proposed Sutherland 2 WEF Electrical Grid Infrastructure (i.e. this project), greater levels of human activity can be anticipated across the area, with the likely influence of ousting particular species of fauna.											
Increased noise pollution levels with concomitant impact on faunal behaviour. Allied to increasing human presence across the site, increase noise levels, together with the other electrical infrastructure proposed by the projects listed in Section D.1 of the BA Report, may influence behaviour in respect of smaller mammals and other fauna that utilise sound in their various behavioural patterns (prey detection, social interaction).	Negative	Site Specific	Long Term	Moderate	Very Likely	Low	Low	Low	Low	4	Moderate
Vegetation and habitat alteration, and change in ecological processes and habitat with reversion to secondary	Negative (with some	Site Specific	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
habitat structure at transformed sites.	potential positive aspects).										
Recruitment and behavioural change in fauna (i.e. change in ecological processes and habitat).	Negative	Local	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	Negative	Site Specific	Short term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium
Heritage Impacts (Palaeontology, Archaeology and Cultural Landscape)											
Destruction of archaeological remains as a result of the construction of the proposed powerlines, on-site substation and service road. Direct impacts to archaeological resources may also occur when construction vehicles move through the area and when foundation excavations are made.	Negative	Local	Permanent	Moderate	Very Likely	Non-reversible	High	Low	Very Low	5	Medium
Alteration of the cultural landscape as a result of the construction of the	Negative	Local	Long Term	Moderate	Very Likely	High	Moderate	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
proposed powerlines, on-site substation and service road. The cultural landscape will be impacted through the presence of incompatible structures (i.e. the proposed power line and pylons) and the construction vehicles in the rural landscape.											
Disturbance, damage or destruction of scientifically important fossils at or beneath the ground surface as a result of surface clearance (for access roads, substations and laydown areas etc.) and excavations (for the power line footings and O&M building).	Negative	Local	Permanent	Substantial	Unlikely	Non-reversible	Moderate	Moderate	Very Low	5	Medium
Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road.	Negative	Site	Permanent	Moderate	Very unlikely	Non-reversible	High	Low	Very low	5	High
Avifauna Impacts											
Temporary displacement of Red Data avifauna due to disturbance associated with the construction of the proposed on-site substation (including the O&M Building and laydown area), service road and powerline; permanent displacement of Red Data avifauna due to habitat transformation associated with the construction of the proposed power	Negative	Local	Long Term	Substantial	Very Likely	High	Replaceable	Moderate	Moderate	3	Low

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
line, service road and on-site substation (including the O&M Building and laydown area), and mortality of Red Data avifauna due to collisions with the powerline, and electrocutions in the substation yard. The incremental impact of the proposed on-site substation (including the O&M Building and laydown area), service road and powerline on Red Data avifauna added to the impacts of other past, present or reasonably foreseeable future activities.											

Alternative 1 (Preferred Alternative) and Alternative 2 – Operational Phase Direct, Indirect and Cumulative Impacts

Note that the following two alternatives have been assessed as part of the BA Process by the specialists and EAP:

- Alternative 1: Distribution Line Routing and Connection to the Proposed Collector Hub in the Northern Cape; and
- Alternative 2: Distribution Line Routing and Connection to the Proposed Eskom Nuwerust Substation in the Western Cape.

Therefore, in these sections, the impacts described are applicable to both Alternatives 1 and 2. The impacts are the same for both Alternative 1 and 2, except for the Visual Impacts, as these have been differentiated between Alternatives 1 and 2.

DIRECT IMPACTS – OPERATIONAL PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Change in ecological processes and habitat due to disturbance as a result of general activities associated with the operation and maintenance of the proposed on-site substation and O&M Building, which will include replacing of parts and infrastructure, as well as use of materials such as hydrocarbons. Materials such as hydrocarbons and other solid materials that may be utilised on a daily basis are likely to generate potential waste and the spillage of hazardous materials. In addition, ELP and noise will affect faunal behaviour around the proposed on-site substation. Light will alter both	Negative	Site Specific	Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	Medium

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
invertebrate and vertebrate behaviour and activity around the proposed on-site substation, while, should an electric fence be established around the proposed on-site substation, it is possible that there may be an increase in animal mortalities (electrocution). Occasional vehicular traffic may impact on fauna through collision (in particular tortoise).											
Change in ecological processes and habitat, disturbance of emergent and established vegetation, changes in edaphic and other drivers, ousting of fauna in and around the site and particularly adjacent to powerlines, mortalities of species such as tortoise, and changes in biophysical drivers along the proposed powerline route (soil, vegetation cover, surface hydrology etc.), as a result of general activities during the power line and service road maintenance processes. General maintenance of the power line route will include regular inspection of the power line by foot and vehicle (by use of the proposed service road), repairs to structures and lines and possibly aerial cleaning of conductors on an irregular basis.	Negative	Site Specific	Long Term	Substantial	Very Likely	Moderate	Moderate	Moderate	Low	4	Medium
Disturbance of vegetation and alteration	Negative	Site	Long Term	Moderate	Very	Moderate	Moderate	Low	Low	4	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
of vegetation community structure and habitat form as a result of maintenance operations around the proposed on-site substation and O&M building, as well as increased human and vehicle traffic levels.		Specific			Likely						
Disturbance of vegetation and alteration of vegetation community structure and habitat form as a result of maintenance operations of the power line and service road, as well as increased human and vehicle traffic levels.	Negative	Site Specific	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Low	4	High
Increased spread and introduction of exotic vegetation as a result of the movement of vehicles within the study area, particularly along the power line and service road. Exotic plant propagules will tend to be carried by the vehicles using the service road during maintenance and operations, which may change or alter the local ecology.	Negative	Site Specific	Long Term	Substantial	Likely	Low	Low	Moderate	Low	4	High
Increase in terrestrial mortalities through the movement of vehicles along line route (particularly tortoises). Electric fencing also offers a potential threat to some species. This has the potential to inflict lethal consequences on smaller and less mobile species such as tortoises (i.e. localised extinction or ousting of species with concomitant change in ecosystem	Negative	Site Specific	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
function).											
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	Negative	Site Specific	Short Term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium
Visual Impacts											
Potential landscape impact of the proposed electrical infrastructure along **Alternative 1** on a rural agricultural landscape with a strong sense of remoteness and potential for scenic views.	Negative	Local	Long Term	Moderate	Unlikely	High	Low	Low	Low	4	High
Potential visual intrusion of the proposed electrical infrastructure along **Alternative 1** on the views of sensitive visual receptors.	Negative	Local	Long Term	Moderate	Likely	High	Low	Moderate	Moderate	3	High
Potential landscape impact of the proposed electrical infrastructure along **Alternative 2** on a rural agricultural landscape with a strong sense of remoteness and potential for scenic views.	Negative	Local	Long Term	Moderate	Likely	High	Low	Low	Low	4	High
Potential visual intrusion of the proposed electrical infrastructure along **Alternative 2** on the views of sensitive visual receptors.	Negative	Local	Long Term	Moderate	Likely	High	Low	Moderate	Moderate	3	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Heritage Impacts (Palaeontology, Archaeology and Cultural Landscape)											
Destruction of archaeological remains as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road. Direct impacts to archaeological resources are highly unlikely to occur during this phase because vehicles will use the already established service road and public road.	Negative	Site Specific	Permanent	Slight	Extremely Unlikely	Non-reversible	High	Very Low	Very Low	5	High
Alteration of the cultural landscape as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road. The cultural landscape will be impacted through the presence of incompatible structures (i.e. the proposed power line and pylons) in the rural landscape.	Negative	Local	Long term	Moderate	Very Likely	High	Moderate	Low	Low	4	High
Destruction of palaeontological material as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road. Direct impacts to palaeontological resources are highly unlikely to occur during this phase because vehicles will use the already established service road and public road (it is important to note that for this reason the Palaeontological Impact Assessment (which is included as an appendix to the Heritage Impact Assessment in Appendix	Negative	Site Specific	Permanent	Slight	Extremely Unlikely	Non-reversible	Moderate	Very Low	Very low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
D.1 of the BA Report) did not specifically address the operational phase. The Palaeontological Impact Assessment explains that significant further adverse impacts on local palaeontological heritage resources are very unlikely and not anticipated during the operational, decommissioning and rehabilitation phases of the proposed project, therefore it has not been separately assessed and no further mitigation or management measures in this respect are proposed.											
Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road.	Negative	Site	Permanent	Slight	Extremely Unlikely	Non-reversible	Moderate	Very low	Very low	5	High
Avifauna Impacts											
Electrocution of Red Data avifauna on the 132kV line and in the on-site substation.	Negative	Local	Long Term	Severe	Extremely Unlikely	High	Replaceable	Very Low	Very Low	5	High
Mortality of Red Data avifauna due to collisions with the earth-wire of the proposed powerline.	Negative	Local	Long Term	Severe	Likely	High	Replaceable	High	Moderate	3	High

INDIRECT IMPACTS – OPERATIONAL PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Change in faunal behaviour due to increased lighting around the proposed on-site substation and O&M Building (ELP), which will be lit at night. In particular, invertebrate species may be attracted to lights which have concomitant influences on the behavioural patterns of other species in the area. Alternatively, hunting and other behaviours may alter as a consequence of additional lighting within an area previously devoid of such factor.	Negative	Site Specific	Long Term	Moderate	Very Likely	Low	Low	Low	Low	4	Moderate
Change in faunal community structure as a consequence of increased perching points for raptors due to the powerline, which will afford some birds of prey that hunt from perched positions improved opportunities for the detection and capture of prey. Such increases in predation pressures on potential prey species (e.g. *Mastomys coucha*) in and around the proposed powerline may have consequences for localised ecological processes and for example, small mammal populations.	Negative	Local	Long Term	Moderate	Very Likely	Low	Low	Low	Low	4	Moderate

CUMULATIVE IMPACTS – OPERATIONAL PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Increased ELP levels as a result of light pollution that may be associated with all built structures of the proposed project and the projects considered within the 50 km radius, including the wind turbines of the various proposed WEFs listed in Section D.1 of the BA Report. The cumulative level of increased lighting in the area will serve to alter the behaviour of a number of nocturnal (and possibly crepuscular and diurnal) species and alter ecological processes in and around these points (i.e. localised change in species composition and ethology with concomitant change in ecosystem function).	Negative	Site Specific	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate
Increased dissection of habitat on account of increasing levels of infrastructure resulting in changes in plant community structure and species composition. The proposed	Negative	Local	Long Term	Substantial	Likely	Low	Moderate	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
powerline and associated service road, as well as the on-site substation will give rise to the further dissection of habitat within the study area. Such dissection will have already arisen as a consequence of the establishment of the proposed turbines and road network across the site (as a result of the proposed Sutherland, Sutherland 2 and Rietrug WEFs), effectively dividing the properties into numerous dissected habitats.											
Increased presence of exotic and disturbance driven plant species. With increasing levels of anthropogenic activity on site and within the surrounding area, the propensity for plant invasion or the dominance of species that are tolerant of higher levels of disturbance will see such species dominating and perhaps ousting other less tolerant species.	Negative	Site Specific	Long Term	Substantial	Likely	Low	Low	Moderate	Low	4	High
Altered surface hydrology and impact on plant community structure. Increasing levels of areas dominated by built	Negative	Site Specific	Short to Medium Term	Moderate	Very Likely	High	Low	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
structures will see localised changes in surface hydrology across the subject site. The associated road network will add to this impact. These changes affect habitat structure and form within the terrestrial environment.											
Increased and expanded anthropogenic influences across the region. The nature of the surrounding proposed WEFs, electrical infrastructure and Solar Energy Facilities (as noted in Section D.1 of the BA Report) suggests that human activity will arise at points that are presently only intermittently visited by a farmer or his staff. With the proposed projects listed in Section D.1 of the BA Report, as well as the proposed Sutherland 2 WEF Electrical Grid Infrastructure (i.e. this project), greater levels of human activity can be anticipated across the area, with the likely influence of ousting particular species of fauna.	Negative	Local	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Increased noise pollution levels with concomitant impact on faunal behaviour. Allied to increasing human presence across the site, increase noise levels, in particular the low level sound emanating from buzz bars and the proposed on-site substation, together with the other electrical infrastructure proposed by the projects listed in Section D.1 of the BA Report, may influence behaviour in respect of smaller mammals and other fauna that utilise sound in their various behavioural patterns (prey detection, social interaction).	Negative	Site Specific	Long Term	Moderate	Very Likely	Low	Low	Low	Low	4	Moderate
Vegetation and habitat alteration, and change in ecological processes and habitat with reversion to secondary habitat structure at transformed sites.	Negative with some potential positive aspects	Site Specific	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High
Recruitment and behavioural change in fauna (i.e. change in ecological processes and habitat).	Negative	Local	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	Negative	Site Specific	Short term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium
Visual Impacts											
Cumulative impact of renewable energy generation projects and large scale electrical infrastructure on the existing rural-agricultural landscape (applicable to Alternative 1 and 2).	Negative	Regional	Long Term	Slight	Unlikely	High	Low	Very Low	Very Low	5	High
Cumulative visual impact of renewable energy generation projects and large scale electrical infrastructure on existing views of sensitive visual receptors in the surrounding landscape (applicable to Alternative 1 and 2).	Negative	Regional	Long Term	Slight to Moderate	Likely	High	Low	Low	Low	4	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Avifauna Impacts											
Temporary displacement of Red Data avifauna due to disturbance associated with the proposed on-site substation (including the O&M Building and laydown area), service road and powerline; permanent displacement of Red Data avifauna due to habitat transformation associated with the proposed power line, service road and on-site substation (including the O&M Building and laydown area), and mortality of Red Data avifauna due to collisions with the powerline, and electrocutions in the substation yard. The incremental impact of the proposed on-site substation (including the O&M Building and laydown area), service road and powerline on Red Data avifauna added to the impacts of other past, present or reasonably foreseeable future activities.	Negative	Local	Long Term	Substantial	Very Likely	High	Replaceable	Moderate	Moderate	3	Low

Alternative 1 (Preferred Alternative) and Alternative 2 – Decommissioning Phase Direct and Cumulative Impacts

Note that the following two alternatives have been assessed as part of the BA Process by the specialists and EAP:

- Alternative 1: Distribution Line Routing and Connection to the Proposed Collector Hub in the Northern Cape; and
- Alternative 2: Distribution Line Routing and Connection to the Proposed Eskom Nuwerust Substation in the Western Cape.

Therefore, in these sections, the impacts described are applicable to both Alternatives 1 and 2. The impacts are the same for both Alternative 1 and 2, except for the Visual Impacts, as these have been differentiated between Alternatives 1 and 2.

DIRECT IMPACTS – DECOMMISSIONING PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Vegetation and habitat alteration and reversion to secondary habitat structure at transformed sites. Removal of the proposed power line and related infrastructure will alter the localised topography at points, which may prevent successional processes establishing at these points on account of intrinsic changes in edaphics, lithic or other factors. Following the decommissioning of structures, the emergence of	Negative	Site Specific	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
habitat that prevailed prior to construction may not arise and differing vegetation structures may establish, which may have consequences for the more expansive habitat (e.g. bush encroachment may be a consequential outcome of disturbance). Furthermore, the decommissioning of the construction laydown area around the proposed on-site substation will result in a cleared and altered biophysical environment (including edaphics and vegetation), which will give rise to differing surface and subsurface ecological drivers. Such a state is likely to give rise to altered surface hydrology, erosion, differing percolation and edaphic nature comparative to the prevailing environment; and exotic weed invasion or changes to emergent vegetation communities.											

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Recruitment and behavioural change in fauna resulting in change in ecological processes and habitat.	Negative	Local	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High
Impact of solid waste generation on fauna as a result of potential ingestion or ensnarement. Solid waste (e.g. small bolts, wires etc.), and solid and derelict structures left on site following the demolition and removal of structures has the potential to harm or kill animals (local fauna) through ingestion or ensnarement.	Negative	Local	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	Moderate
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	Negative	Site Specific	Short Term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Visual Impacts											
Potential visual intrusion of decommissioning activities associated with electrical infrastructure along **Alternative 1** on views of sensitive visual receptors.	Negative	Local	Short Term	Substantial	Likely	High	Low	Moderate	Low	4	High
Potential visual intrusion of decommissioning activities associated with electrical infrastructure along **Alternative 2** on views of sensitive visual receptors.	Negative	Local	Short Term	Substantial	Likely	High	Low	Moderate	Low	4	High
Heritage Impacts (Palaeontology, Archaeology and Cultural Landscape)											
Destruction of archaeological remains as a result of the removal of the proposed powerlines, on-site substation and rehabilitation of the service road. Direct impacts to archaeological resources are highly unlikely to occur during this phase because vehicles will use the already established service road and public road.	Negative	Site Specific	Permanent	Slight	Extremely Unlikely	Non-reversible	High	Very Low	Very Low	5	High
Alteration of the cultural landscape as a result of the	Negative	Local	Short term	Slight	Very	High	Moderate	Very Low	Very Low	4	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
removal of the proposed powerlines, on-site substation and rehabilitation of the service road. The cultural landscape will be impacted through the presence of vehicles in the rural landscape when the proposed power lines are removed.					Likely						
Destruction of palaeontological material as a result of the removal of the proposed powerlines, on-site substation and rehabilitation of the service road. Direct impacts to palaeontological resources are highly unlikely to occur during this phase because vehicles will use the already established service road and public road (it is important to note that for this reason the Palaeontological Impact Assessment (which is included as an appendix to the Heritage Impact Assessment in Appendix D.1 of the BA Report) did not specifically address the decommissioning	Negative	Site Specific	Permanent	Slight	Extremely Unlikely	Non-reversible	Moderate	Very Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
phase. The Palaeontological Impact Assessment explains that significant further adverse impacts on local palaeontological heritage resources are very unlikely and not anticipated during the operational, decommissioning and rehabilitation phases of the proposed project, therefore it has not been separately assessed and no further mitigation or management measures in this respect are proposed.											
Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road.	Negative	Site Specific	Permanent	Moderate	Very Unlikely	Non-reversible	High	Low	Very Low	5	High
Avifauna Impacts											
Displacement of Red Data avifauna due to disturbance associated with the decommissioning activities.	Negative	Site Specific	Short Term	Substantial	Likely	High	Replaceable	Moderate	Low	4	Medium

CUMULATIVE IMPACTS – DECOMMISSIONING PHASE

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
Terrestrial Ecology Impacts											
Increased ELP levels as a result of light pollution that may be associated with all built structures of the proposed project and the projects considered within the 50 km radius, including the wind turbines of the various proposed WEFs listed in Section D.1 of the BA Report. The cumulative level of increased lighting in the area will serve to alter the behaviour of a number of nocturnal (and possibly crepuscular and diurnal) species and alter ecological processes in and around these points (i.e. localised change in species composition and ethology with concomitant change in ecosystem function).	Negative	Site Specific	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate
Increased dissection of habitat on account of increasing levels of infrastructure resulting in changes in plant community structure and species composition. The proposed powerline and associated service road, as well as	Negative	Local	Long Term	Substantial	Likely	Low	Moderate	Moderate	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
the on-site substation will give rise to the further dissection of habitat within the study area. Such dissection will have already arisen as a consequence of the establishment of the proposed turbines and road network across the site (as a result of the proposed Sutherland, Sutherland 2 and Rietrug WEFs), effectively dividing the properties into numerous dissected habitats.											
Increased presence of exotic and disturbance driven plant species. With increasing levels of anthropogenic activity on site and within the surrounding area, the propensity for plant invasion or the dominance of species that are tolerant of higher levels of disturbance will see such species dominating and perhaps ousting other less tolerant species.	Negative	Site Specific	Long Term	Substantial	Likely	Low	Low	Moderate	Low	4	High
Altered surface hydrology and impact on plant community structure. Increasing levels of areas dominated by built structures will see localised changes in surface hydrology	Negative	Site Specific	Short to Medium Term	Moderate	Very Likely	High	Low	Low	Very Low	5	High

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
across the subject site. The associated road network will add to this impact. These changes affect habitat structure and form within the terrestrial environment.											
Increased and expanded anthropogenic influences across the region. The nature of the surrounding proposed WEFs, electrical infrastructure and Solar Energy Facilities (as noted in Section D.1 of the BA Report) suggests that human activity will arise at points that are presently only intermittently visited by a farmer or his staff. With the proposed projects listed in Section D.1 of the BA Report, as well as the proposed Sutherland 2 WEF Electrical Grid Infrastructure (i.e. this project), greater levels of human activity can be anticipated across the area, with the likely influence of ousting particular species of fauna.	Negative	Local	Long Term	Substantial	Very Likely	Low	Low	Moderate	Low	4	Moderate
Increased noise pollution levels with concomitant impact on faunal behaviour. Allied to	Negative	Site Specific	Long Term	Moderate	Very Likely	Low	Low	Low	Low	4	Moderate

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
increasing human presence across the site, increase noise levels, in particular the low level sound emanating from buzz bars and the proposed on-site substation, together with the other electrical infrastructure proposed by the projects listed in Section D.1 of the BA Report, may influence behaviour in respect of smaller mammals and other fauna that utilise sound in their various behavioural patterns (prey detection, social interaction).											
Vegetation and habitat alteration, and change in ecological processes and habitat with reversion to secondary habitat structure at transformed sites.	Negative with some potential positive aspects	Site Specific	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High
Recruitment and behavioural change in fauna (i.e. change in ecological processes and habitat).	Negative	Local	Long Term	Moderate	Very Likely	Moderate	Moderate	Low	Very Low	5	High
Aquatic Ecology (Freshwater) Impacts											
Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural	Negative	Site	Short Term	Moderate	Likely	Moderate	Low	Low	Very Low	5	Medium

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.											
Avifauna Impacts											
Temporary displacement of Red Data avifauna due to disturbance associated with the decommissioning of the proposed on-site substation (including the O&M Building and laydown area), service road and powerline; permanent displacement of Red Data avifauna due to habitat transformation associated with the decommissioning of the proposed power line, service road and on-site substation (including the O&M Building and laydown area), and mortality of Red Data avifauna due to collisions and electrocutions. The incremental impact of the proposed on-site substation (including the O&M Building and laydown area), service road and powerline on Red Data avifauna added to the	Negative	Local	Long Term	Substantial	Very Likely	High	Replaceable	Moderate	Moderate	3	Low

Nature of impact	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility	Irreplaceability	Significance of Impact		Ranking of Impact/ Risk	Confidence Level
								Without Mitigation	With Mitigation		
impacts of other past, present or reasonably foreseeable future activities.											

BASIC ASSESSMENT REPORT

Basic Assessment for the Proposed Construction of Electrical Grid Infrastructure to support the Sutherland 2 Wind Energy Facility (WEF), Northern and Western Cape Provinces (Sutherland 2 WEF – Electrical Grid Infrastructure)

APPENDIX G: ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

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1 INTRODUCTION

This Environmental Management Programme (EMPr) is prepared as part of the requirements of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations promulgated on 8 December 2014 and thereafter amended on 7 April 2017 and published in Government Gazette 40772 and Government Notice (GN) R326, R327, R325 and R324. This EMPr is being submitted to the National Department of Environmental Affairs (DEA) as part of the Application for Environmental Authorisation (EA) for the proposed construction of electrical grid infrastructure to the support the proposed and authorised Sutherland 2 Wind Energy Facility (WEF), near Sutherland within the Karoo Hoogland and Laingsburg Local Municipalities, within Northern Cape and Western Cape Provinces, respectively.

The proposed project is referred to as the Sutherland 2 WEF – Electrical Grid Infrastructure project. The Project Applicant for this proposed project is South Africa Mainstream Renewable Power Developments (PTY) Ltd (hereinafter referred to as Mainstream). Mainstream intends to construct two other electrical grid infrastructure projects to support the proposed and authorised Sutherland and Rietrug WEFs, which lie adjacent to the Sutherland 2 WEF. Separate Basic Assessment (BA) Processes, with compilation of separate BA Reports, have been undertaken for these electrical grid infrastructure projects, which are referred to as Sutherland WEF – Electrical Grid Infrastructure and Rietrug WEF - Electrical Grid Infrastructure.

As noted in the BA Report, Mainstream originally received EA on 22 February 2012 (DEA Reference Number: 12/12/20/1782) for the proposed construction and operation of the Sutherland Renewable Energy Facility (REF), consisting of a Solar Energy Facility and a WEF, with a collective generation capacity (i.e. for wind and solar) of 747 MW to 1137 MW. Following this, an amended EA, dated 6 October 2015 (DEA Reference Number: 12/12/20/1782/AM1) was issued to Mainstream (with non-substantive amendments to certain project details, the details of the Applicant, and extension of the validity period of the EA). In addition, in 2016, a substantive EA Amendment Application was undertaken in order to split the existing EA into three separate projects so that Mainstream is able to potentially bid these projects in a tender round of the Department of Energy's (DOE) Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). The three split WEFs are referred to as the Sutherland WEF; Sutherland 2 WEF; and Rietrug WEF. In line with this, on 10 November 2016, the National DEA granted separate EAs for the Sutherland, Sutherland 2, and Rietrug WEFs (DEA Reference Numbers: 12/12/20/1782/2; 12/12/20/1782/3; and 12/12/20/1782/1). A second amendment (i.e. Amendment 2) is currently underway to apply to change the turbine and hub specifications of the split and authorised WEFs. This process is running separate to the abovementioned BA Processes.

Therefore, the proposed electrical grid infrastructure projects are required in order to ensure that the authorised Sutherland, Sutherland 2 and Rietrug WEFs are equipped with the necessary infrastructure in order to connect to the National Grid.

This EMPr is being made available to Interested and Affected Parties (I&APs), stakeholders and Organs of State, as part of the BA Report that is currently being circulated for a 30-day review period. Comments received from stakeholders during this aforementioned review period will be incorporated into this EMPr, where applicable. Following the incorporation of comments from I&APs, stakeholders and Organs of State, this EMPr is intended as a "living" document and should continue to be updated regularly, as needed.

1.1 PROJECT DESCRIPTION

The following proposed electrical grid infrastructure will be constructed for the Sutherland 2 WEF – Electrical Grid Infrastructure project:

- An on-site substation (including an Operational and Maintenance (O&M) building and laydown area);
- Fencing of the proposed on-site substation;
- A 132 kV distribution line from the proposed Sutherland 2 WEF on-site substation to a proposed third party substation (including tower/pylon infrastructure and foundations);
- Connection to the third party substation; and
- A service road below the line.

The following two alternatives of the proposed third party substation and associated 132 kV distribution line routing have been considered in this BA Process:

- Alternative 1 is the proposed 132 kV Suurplaat on-site substation, which is referred to as the proposed collector hub for the BA Projects. The proposed collector hub is located on the Remaining Extent of Hartebeeste Fontein Farm 147 in the Northern Cape.
- Alternative 2 is the proposed 400 kV Eskom Main Transmission Substation, which is also known as the proposed Eskom Nuwerust Substation. The proposed Eskom Nuwerust Substation is located on Portion 7 of Farm Hamelkraal 16 in the Western Cape.

The proposed third party substations, which are expected to have multiple users and service many projects, have not been constructed yet and will be constructed by a separate developer. Therefore, the proposed construction of the actual third party substations are not considered as part of these BA Processes.

Alternative 1 of the proposed distribution line routing to the proposed collector hub will extend approximately 37 km long, while Alternative 2 to the proposed Eskom Nuwerust Substation will extend approximately 64 km long. The proposed gravel service road will follow the same route as that of the proposed 132 kV distribution line for both Alternatives 1 and 2. However, specifically relating to Alternative 2, the proposed gravel service road routing deviates from the proposed distribution line routing in one small section to avoid an ecologically sensitive scarp, and it will alternatively follow the route of an existing, unused farm road to avoid impacts of the service road traversing the sensitive scarp. This deviation is approximately 1.7 km in length and is located on Portion 2 of Farm De Molen 5 and Portion 6 of Farm Hamelkraal 16. Therefore, the length of the proposed service road will be approximately 37 km and 66 km for Alternative 1 and Alternative 2, respectively. The proposed service road will range between 4 m and 6 m wide for both routing alternatives.

The proposed project will take place in the Northern Cape, approximately 23 km south of Sutherland and 50 km north of Laingsburg, under the jurisdiction of the Namakwa District Municipality and the Karoo Hoogland Local Municipality. However, if Alternative 2 is approved, the proposed project will also extend into the Western Cape, under the jurisdiction of the Central Karoo District Municipality and the Laingsburg Local Municipality. Figure 1 shows the overall locality of the proposed Sutherland 2 WEF – Electrical Grid Infrastructure project and the farm portions over which the proposed infrastructure will be constructed. Figure 2 shows the proposed routing of the distribution line (Alternatives 1 and 2) over the farm portions and the assessed development envelope for the placement of the proposed on-site substation (including the O&M building and laydown area). Figure 2 also indicates the proposed gravel service road routing deviation for Alternative 2 (as discussed above).

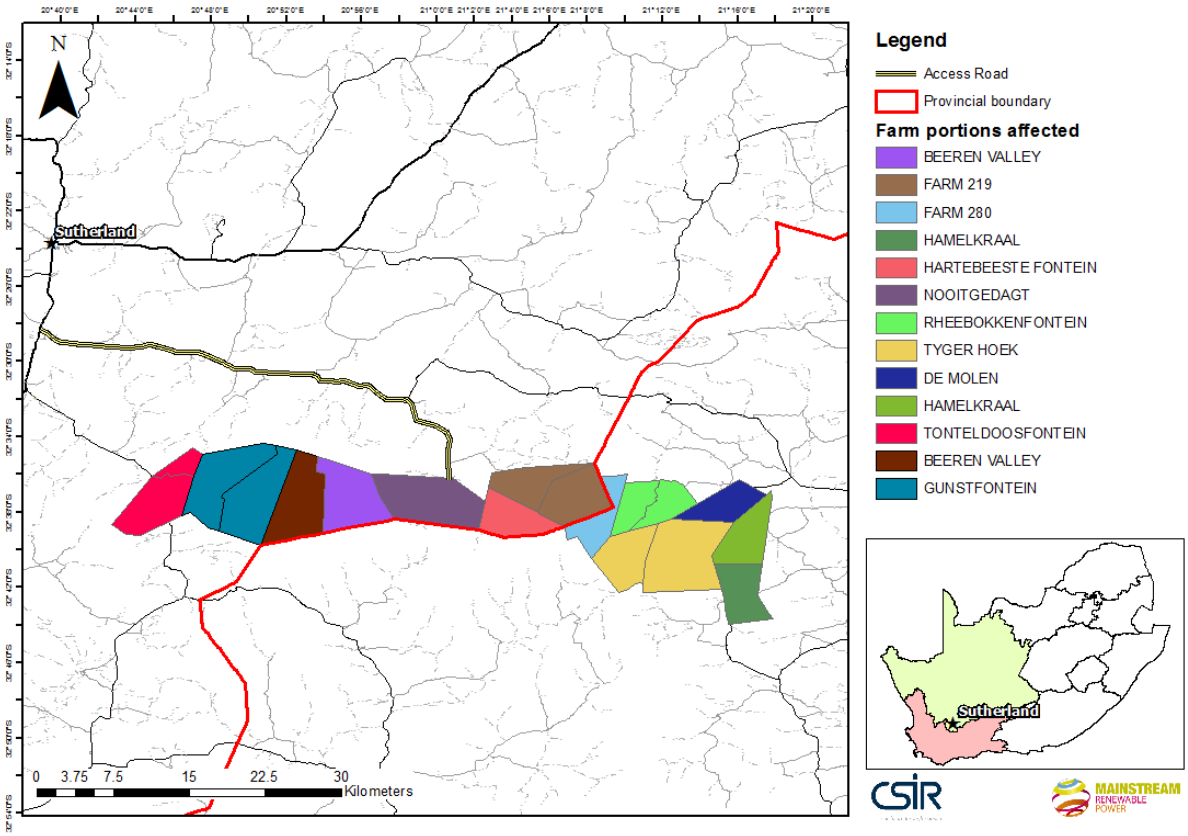


Figure 1: Locality of the proposed Sutherland 2 WEF – Electrical Grid Infrastructure Project

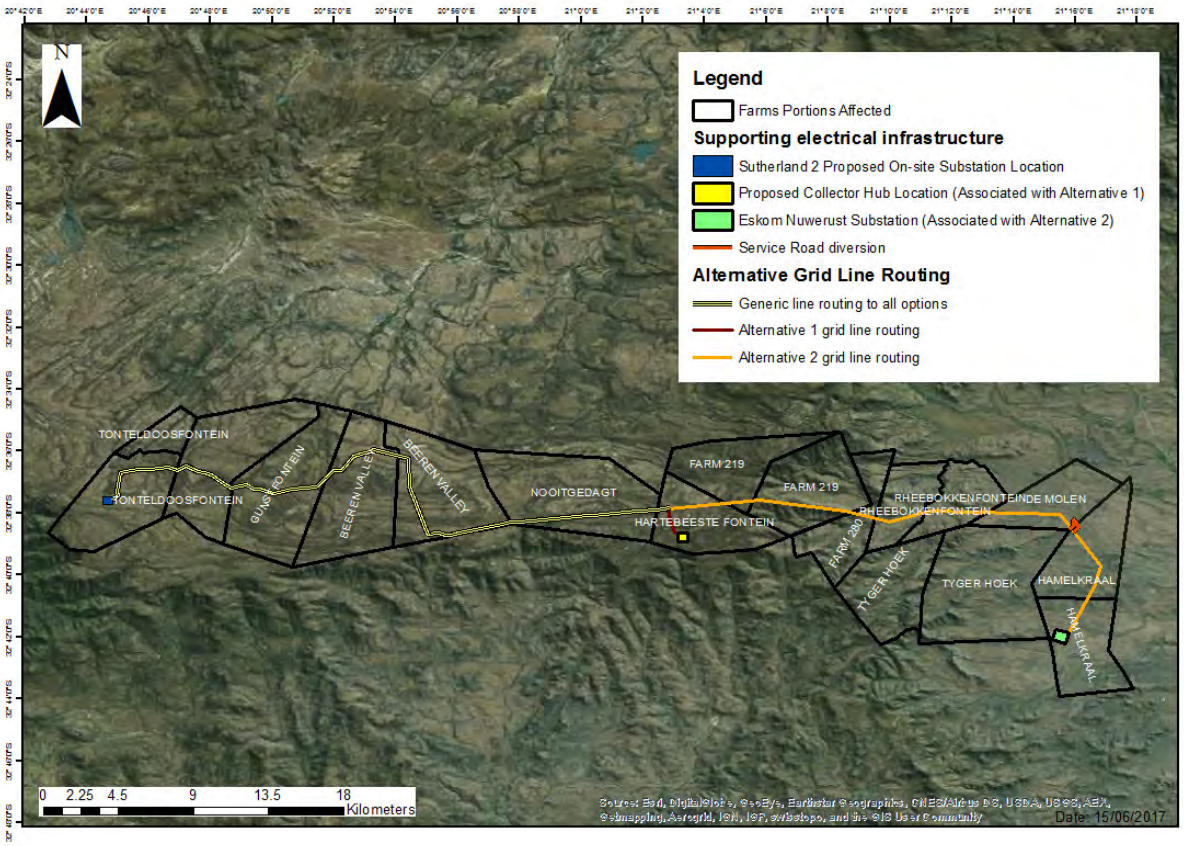


Figure 2: Proposed routing of Alternatives 1 and 2 of the distribution line, service road deviation routing (Alternative 2), assessed development envelope for the proposed Sutherland 2 on-site substation (including O&M Building and laydown area) and proposed locality of the third party substations.

In terms of general site access, the proposed Sutherland WEF, Sutherland 2 WEF and the Rietrug WEF are located approximately 25 km east of the junction between the R354 and the District Road DR02256 (ERM, 2011). In terms of access, the proposed Sutherland 2 WEF and Grid Electrical Infrastructure sites can be accessed by a secondary road off the R354 and via secondary gravel roads and a network of farm tracks (ERM, 2011). The site can also be accessed via public road OG07 towards the east and District Road DR02256 towards the north.

The proposed project can be divided into the following three main phases:

- Construction Phase;
- Operational Phase; and
- Decommissioning Phase.

Each activity undertaken as part of the above phases may have environmental impacts and has therefore been assessed by the specialist studies (Appendix D of the BA Report).

It is proposed that the local municipality will provide services in terms of water, waste removal, sewage and electricity for the construction phase of the proposed project. However, should the municipality not have adequate capacity available for the handling of waste and sewage, and the provision of water; then the Applicant will make use of private contractors to

ensure that the services are provided. The Applicant will also ensure that adequate waste disposal measures are implemented by obtaining waste disposal dockets of waste and sewage that is removed from site. It is important to note that for the operational phase, requirements for water, sewage management and waste disposal do not apply.

The construction phase will take place subsequent to the issuing of an EA from the DEA and a successful BID in terms of the REIPPPP (i.e. the issuing of a Power Purchase Agreement (PPA) from the DOE). The construction phase is expected to extend 12 to 14 months.

The main activities that will form part of the construction phase are:

- Removal of vegetation for the proposed infrastructure;
- Excavations for infrastructure and associated infrastructure;
- Establishment of a laydown area for equipment;
- Stockpiling of topsoil and cleared vegetation;
- Transportation of material and equipment to site, and personnel to and from site; and
- Construction of the 132 kV distribution line and additional infrastructure.

The following main activities will occur during the operational phase:

- The transmission of electricity generated from the proposed Sutherland 2 WEF to the proposed third party substation; and
- Maintenance of the distribution line servitude including the gravel service road.

In the event of decommissioning, the main aim would be to return the land to its original, pre-construction condition. Should the unlikely need for decommissioning arise (i.e. if the actual WEF becomes outdated or the land needs to be used for other purposes), the decommissioning procedures will be undertaken in line with the EMPr and the site will be rehabilitated and returned to its pre-construction state. Possible decommissioning activities will include removing the infrastructure, and covering the concrete footings with soil to a depth sufficient for the re-growth of natural vegetation. Any other supporting infrastructure no longer in use will be removed from the site and either disposed of at a registered disposal facility or recycled if possible.

It should be noted that a detailed project description (based on the conceptual design) is provided in Section A (4) of the BA Report.

1.2 ENVIRONMENTAL SENSITIVITIES

As part of the BA Process, the large 25 ha development envelope (noted above and indicated in Figure 2) was considered and assessed by the specialists at the location of the proposed on-site substation (and associated infrastructure), laydown area, and O&M Building. In addition, where applicable the specialists have studied the general area and an estimated 500 m buffer area on either side of the proposed distribution line (for both Alternatives 1 and 2). This was undertaken in order to identify any development constraints or environmental sensitivities within the larger development envelope and investigation area, which can be avoided in the final siting and location of the proposed on-site substation (and associated infrastructure),

laydown area, O&M Building, distribution line and service road. Due to the large extent of the linear development, some specialists adopted a slightly different field work methodology, and only focused on areas that were identified as a concern during the desktop survey (which preceded the field work). The relevant and significant environmental features and no-go areas that were identified in the specialist studies have been mapped and included in Appendix A.3 of the BA Report and Appendix B of this EMPr. Based on this and the findings of the specialist studies, an environmental sensitivity map has also been produced, and included in Appendix A.4 of the BA Report, as well as Appendix B of this EMPr. These maps show the relevant environmental features and sensitivities found on site (in terms of terrestrial, aquatic, visual, heritage and avifaunal features) within the development envelope, 500 m buffer area and the general specialist investigation area. Table 1 provides a description of the environmental features and sensitive areas that were identified by the specialists for consideration in the layout and location.

Table 1: Environmental Features and Sensitive Areas that were identified by the Specialists

Specialist Study	Key Environmental Features and Sensitive Areas
Terrestrial Ecology Impact Assessment (Appendix D.1 of the BA Report)	▪ Areas of ecological sensitivity or value lie primarily below the 1600 m above mean sea level (amsl) contour, and include steep lithic scarp areas. Alternative 1 of the proposed distribution line routing and connection to the proposed collector hub maintains all infrastructure above the 1600 m amsl contour. However, Alternative 2 of the proposed distribution line routing and connection to the proposed Eskom Nuwerust Substation traverses points below this contour as it progresses in an easterly direction. While the establishment of towers and the manner in which the lines are strung between towers may ensure that impacts on the ground are avoided, given the intrusion of such a structure into and across the escarpment, it is clear that Alternative 2 indicates a greater risk to the prevailing habitat than that of Alternative 1. However, despite Alternative 2 having a longer route than Alternative 1, it effectively avoids traversing steeper ridges and scarps. ▪ The development envelope area allocated for the siting of the proposed on-site substation (including the O&M Building and laydown area) is of limited ecological sensitivity, showing little topographic variation. ▪ No areas within the study site were considered to show a “very high” or “high” ecological sensitivity.
Aquatic Ecology (Freshwater) Impact Assessment (Appendix D.2 of the BA Report)	▪ The Riet, Portugal’s, Vanwyks and Juk Rivers were the four main rivers, along with their associated tributaries and their applicable riparian zones, identified within the investigation area. ▪ The Portugal’s River and two tributaries of the Portugal’s River traverse the western portion of both distribution line alternatives. ▪ The Riet River as well as an unnamed tributary of the Riet River traverses both alternatives of the distribution line (central portion), with the Riet River also located within the proposed collector hub development envelope. ▪ The Vanwyks River and the Juk River traverses the Alternative 2 distribution line routing (east). ▪ The Beerfontein se Laagte River is located within the central portion of the investigation area, however analyses of digital satellite imagery indicates that this river is located approximately 300 m south of the investigation area. ▪ All of these rivers are considered to be in an unmodified, natural or largely natural with few modification ecological condition (RIVCON AB), with the exception of the Riet River and Portugal’s River which is considered to be in a largely natural with few modification ecological condition (RIVCON B). ▪ In addition, a large depression-type feature associated with the floodplain of an unnamed tributary of the Riet River was identified approximately 200 m west of Alternative 1 of the distribution line. ▪ A 32 m regulated zone is prescribed to all the freshwater features identified within the Aquatic Ecology (Freshwater) Impact Assessment as stipulated by the

Specialist Study	Key Environmental Features and Sensitive Areas
	2014 NEMA EIA Regulations (as amended). Should any infrastructure need to be placed directly within the active channel of any freshwater resource, a Water Use Licence (WUL) will be required and must be applied for by the proponent. Whilst it is not practical to implement a buffer around the freshwater resources during construction of linear developments such as the distribution lines or service roads, as much as feasible, construction activities should be excluded from the 32 m zone of regulation, and where feasible, the layout of the distribution lines and service roads should be routed so as to avoid sensitive watercourse crossings and minimise disturbances.
Visual Impact Assessment (Appendix D.3 of the BA Report)	▪ Areas of high, moderate and low visibility were identified in the landscape. Ridges are often moderately to highly visible in the landscape, and areas within 100 m of farm buildings are considered as highly sensitive, whereas areas within 200 m are considered as moderately sensitive. ▪ The route common to both alternatives pass within 100 m of several farm buildings. There are no high trees around most of these buildings which could screen the power lines from views. It is likely that for at least some of them the overhead lines and towers will be exposed against the sky. The proposed on-site substation site falls within an area of low sensitivity.
Heritage (Palaeontology, Archaeology and Cultural Landscape) (Appendix D.4 of the BA Report)	<u>Palaeontology:</u> ▪ Most of the fossil occurrences found during the specialist site visit were found to be of limited palaeontological value and lie well away from the proposed electrical infrastructure footprint and do not warrant mitigation. ▪ Only two highly-sensitive "no-go" area was identified within the study area, however it lies outside of the proposed development footprint, approximately 500 m away from the Alternative 2 distribution line routing. This specifically includes an extensive surface scatter of petrified wood blocks, some of which are well-preserved, and occasional bone fragments, which was found on Farm Hamel Kraal 16 on either side of a farm track. A 30 m wide peripheral buffer zone is required around the fossil scatter. ▪ The second site that is of heritage significance is a partially embedded, articulated post-cranial skeleton of a large tetrapod located on Farm Beeren Valley 150, approximately 1.7 km to the east of Alternatives 1 and 2 of the distribution line routing. However, impacts on this site from the proposed electrical grid infrastructure are not anticipated. ▪ No significant fossil remains were recorded at the proposed on-site substation and third-party substation sites. ▪ The overall palaeontological sensitivity of the electrical grid infrastructure study area is rated as low. <u>Archaeology:</u> The following significant archaeological sites (with waypoints included) were found on site during the specialist site visit and they should be identified on project maps and regarded as no-go zones with buffers of at least 30 m around all associated features: ▪ Waypoint 573 includes a graveyard in the middle of agricultural lands. It is located well away from the proposed distribution line but is close to a current farm road. ▪ Waypoint 575 comprises a small piled stone structure of approximately 1.5 m by 3 m built along the edge of a small scarp. ▪ Waypoint 576 includes a small piled stone oval structure (historical ruin) of about 1.5 m by 3 m, standing in the open away from any landscape features. Two unburnt and one burnt bone fragments were the only associated materials present. This site is located within the development envelope of the proposed Sutherland on-site substation (assessed as part of a separate BA), and it is not significant enough to warrant mitigation but should be avoided if possible. ▪ Waypoint 524 includes a small stone structure in a small, steep-sided river

Specialist Study	Key Environmental Features and Sensitive Areas
	valley. This point does not lie within the proposed distribution line alignments. ▪ Waypoint 546 is a pre-colonial kraal complex with numerous enclosures and stone-walled features (about 27 or 29 in total) scattered around and on top of a low rocky outcrop. A few Stone Age artefacts were found as well as a number of fragments of ostrich eggshell. It should be noted that waypoints 528 to 553 inclusive were all at this kraal complex but waypoint 546 is taken as an approximately central location for the site. This complex does not lie along the proposed distribution line alignment but, importantly, is bisected by one of the farm access roads in the area. This road (passing through the kraal complex) may not be widened towards the east and should preferably not be widened at all. Special care should be taken within the bounds of this site to ensure that no damage is done. ▪ Waypoint 527 is a stone house ruin. The house ruin is not occupied and does not lie within the proposed distribution line alignment. ▪ Waypoint 614 is part of a single historical farm complex (2.5 m x 5 m), comprising a small, rectangular stone one-roomed house of blocks, with a door, window and a small 'muurkas' (more of a shelf) in each end wall. There is a cleared area around the house with stones pushed loosely to the edge. There are various loose piles of stones or 'features' around the edge of the cleared area. This complex is noted as a sensitive historical ruin lying approximately 310 m from Alternative 2 of the distribution line alignment. ▪ Waypoint 498 includes a small one-roomed stone house complex. This complex is noted as a sensitive historical ruin lying approximately 150 m from Alternative 2 of the distribution line alignment. ▪ Waypoint 492 includes a geometric rock art site with eight finger-painted vertical stripes applied to three different 'canvases' (small faces on a very irregular surface). No associated artefacts were seen and no proper rock shelter exists. It is important to note that the proposed service road diversion lies within 20 m of this rock art site, and therefore the 30 m buffer does not need to be applied in this specific section, as the service road uses an existing farm track. ▪ The Gunstfontein and Beeren Valley farm complexes were also noted and will not be completely avoidable because the proposed distribution line passes through these farm complexes. However, special care should be taken within the bounds of these sites to ensure that no damage is done.
Avifauna Impact Assessment (Appendix D.5 of the BA Report)	▪ No-go areas: These are areas in close proximity to known active Verreaux's Eagle nests, where the construction of the proposed distribution line and associated infrastructure will constitute a disturbance risk. No such areas are expected to be impacted by any of the proposed alignments. ▪ High sensitivity: These include areas within 300 m of small waterbodies, and within 500 m of large waterbodies (both artificial dams and natural pans), where the proposed distribution line will constitute a collision risk. These high sensitivity areas should ideally be avoided, or if this is not possible, there should be adequate mitigation implemented to reduce the risks materially. Ephemeral drainage lines and their immediate environments are also included in this category. When these ephemeral drainage lines contain water they serve as flyways for waterbirds, and may temporarily attract Red Data species such as Black Stork, while standing pools of water could attract raptors for purposes of drinking and bathing, e.g. Red Data Martial Eagle and Verreaux's Eagle as well as non-Red Data raptors. These areas should likewise ideally be avoided, or if this is not possible, there should be adequate mitigation implemented to reduce the risks materially, e.g. marking with anti-collision devices. Only a few of these high sensitivity buffered areas are traversed as a result of the proposed electrical grid infrastructure; however this is not considered a fatal flaw, and it is important to note that the recommended mitigation measures will be adhered to by the Applicant to ensure that the risks to avifauna are reduced. ▪ Medium sensitivity: The entire study area can be classified as medium-sensitive. The area is largely untransformed and the natural habitat supports a number of Red Data powerline sensitive species, notably Ludwig's Bustard and Karoo Korhaan. Ludwig's Bustard in particular is known to be highly susceptible to powerline collisions.

Based on the boundaries of the development envelope and the specialist investigation area, and the constraints of the environmental sensitivities as noted above, the preferred location for the proposed on-site substation (including the O&M Building and laydown area), will be determined by Mainstream. However, micro-siting of the final location of these structures can only be undertaken during the detailed engineering phase, if preferred bidder status is obtained by Mainstream. However, it must be re-iterated that the proposed on-site substation (including the O&M Building and laydown area) will only be constructed within the boundaries of the assessed development envelope. In addition, the proposed specific locations of the pylon structures will be confirmed and determined by Mainstream during the detailed engineering phase, taking into consideration the environmental sensitivities and features identified as part of this BA Process, as described above.

As noted above, Appendix B of this EMPr includes an environmental sensitivity map which indicates the environmental sensitive areas and features identified during the BA Process (as described above). Appendix C of this EMPr includes a map combining the site layout and the environmental sensitivity map.

1.3 AUTHORS OF THE EMPr

This EMPr has been compiled by the Environmental Assessment Practitioners (Paul Lochner, Surina Laurie, Rohaida Abed and Andile Dludla) and the various specialists on the team (as indicated in Table 2). The details and expertise (including the Curriculum Vitae) of the Environmental Assessment Practitioners and the specialists are respectively provided in Appendix H and Appendix D of the BA Report.

Surina Laurie has a Masters degree in Environmental Management, a Certificate in Environmental Economics from the University of London, and more than six years of experience in environmental assessment and management. She has experience in undertaking BAs and Scoping and EIAs for various sectors, including renewable energy, industry and tourism. She is a registered Professional Natural Scientist (Registration Number: 400033/15) with the South African Council for Natural Scientific Professions (SACNASP).

Rohaida Abed has a Masters degree in Environmental Science and is a registered Professional Natural Scientist (Registration Number: 400247/14) with the SACNASP. She has experience in conducting BAs and Scoping and EIAs for various sectors, including Port infrastructure and Bulk Liquid Storage facilities, and she has been involved in various transport infrastructure related projects as an Environmental Control Officer. Andile Dludla has a BSc Honours degree, and is currently undertaking his MPhil in Environmental Management at the University of Stellenbosch. He has more than two years of experience in the Environmental Management field, and has been involved in various Coastal Management, Renewable Energy and Gas related projects as an Environmental Officer.

Table 2: The BA Management Team

NAME	ORGANISATION	ROLE/ SPECIALIST STUDY UNDERTAKEN	EXPERTISE TO PREPARE AN EMPR
Environmental Assessment Practitioners			
Paul Lochner	CSIR	Technical Advisor and Quality Assurance (EAPSA) Certified	BSc Civil Engineering MPhil Environmental Science
Surina Laurie	CSIR	Project Leader (*Pr. Sci. Nat.)*	MPhil Environmental Management
Rohaida Abed	CSIR	Project Manager (*Pr. Sci. Nat.)*	MSc Environmental Science
Andile Dludla	CSIR	Project Assistant	BSc (Hons) Environmental Science
Specialists			
Simon Bundy	Sustainable Development Projects cc	Ecological Impact Assessment (including Terrestrial Ecology)	MSc Ecology
Stephen van Staden and Amanda Mileson	Scientific Aquatic Services (SAS Environmental)	Aquatic Ecology (Freshwater) Impact Assessment	MSc Environmental Management N.Dip Nature Conservation (UNISA)
Henry Holland	Private	Visual Impact Assessment	MSc Geology/GIS
Dr. Jayson Orton	ASHA Consulting (Pty) Ltd	Heritage Impact Assessment (Archaeology and Cultural Landscape)	DPhil Archaeology
Dr. John Almond	Natura Viva cc	Heritage Impact Assessment (Palaeontology)	DPhil Palaeontology
Chris van Rooyen	Chris van Rooyen Consulting	Avifauna Impact Assessment	Bachelor of Law (LLB)

1.4 IMPACTS IDENTIFIED DURING THE BA PROCESS

Based on the specialist studies (as shown in Table 2), the following main direct potential impacts, as indicated in Table 3, have been identified and appropriate management and mitigation measures included within the EMPr (where required) as per the recommendations made in the specialist studies to ensure the potential impacts are suitably addressed and managed during all phases of the project. Indirect and cumulative impacts are noted in Sections 4 to 12 of this EMPr. It should be noted that other impacts for which specialist studies were not undertaken but where mitigation or management actions may be required, are also included in the EMPr.

Table 3: Impacts Identified in the BA

KEY IMPACT	IMPACTS IDENTIFIED
Terrestrial Ecology	**Construction Phase:** ▪ Removal of indigenous vegetation and site clearance. ▪ Loss, disturbance or alteration of botanical communities at a localised level, particularly geophytes and uncommon to rare species as a result of site clearance, as well as destruction of localised vegetation communities. ▪ Alteration of lithic structures and clearance of minor features. ▪ Loss of refugia, particularly in respect of fauna associated with lithic habitats (e.g. *Homopus* spp). Rock ledges and other geological structures are intrinsic habitat for species such as padlopers (tortoises). The removal of these features will see the loss of such habitat. ▪ Faunal mortalities as a result of the construction activities. ▪ Hardpanning of the upper soil horizon, thereby altering surface hydrology, as a result of the movement of traffic across site and around the construction areas, as well as intentional use of materials to establish a sound working platform. ▪ Invasion and a prevalence of exotic vegetation as a result of the import of earth materials and the general disturbance of the site. ▪ General erosion through, primarily the movement of construction traffic. ▪ Solid waste and its impact on fauna through ingestion or ensnarement. ▪ General change in faunal behaviour as a result of construction activities. ▪ Vegetation and habitat alteration through the introduction of nutrients and other materials. **Operational Phase:** ▪ Disturbance as a result of general activities associated with the operation and maintenance of the proposed on-site substation and O&M Building. ▪ Disturbance as a result of general activities during the power line and service road maintenance processes. ▪ Alteration of vegetation community structure through maintenance operations around the on-site substation, O&M building, service road and powerline. ▪ Introduction of exotic vegetation through movement of vehicles within the study area. ▪ Increase in terrestrial mortalities through the movement of vehicles along line route (particular tortoises). Electric fencing also offers a potential threat to some species. ▪ Change in faunal behaviour on account of increased lighting around the proposed on-site substation (Electrical Light Pollution (ELP)). ▪ Change in faunal community structure as a consequence of increased perching points for raptors (i.e. the proposed powerlines). **Decommissioning Phase:** ▪ Vegetation and habitat alteration as result of the removal of the proposed infrastructure (i.e. alteration of the localised topography at points, which may prevent successional processes establishing at these points on account of intrinsic changes in edaphics, lithic or other factors). ▪ Recruitment and behavioural change in fauna. ▪ Solid waste and the impact on fauna through ingestion or ensnarement.
Aquatic Ecology (Freshwater)	**Construction, Operational and Decommissioning Phases:** ▪ Loss of freshwater habitat and ecological structure. ▪ Changes to the freshwater resource ecological and sociocultural service provision. ▪ Impacts on the freshwater resources hydrological function and sediment balance. ▪ Potential impacts on water quality.
Visual	**Construction Phase:** ▪ Potential visual intrusion of construction activities on existing views of sensitive visual receptors in the surrounding landscape. **Operational Phase:** ▪ Potential landscape impact of the proposed electrical infrastructure on a rural agricultural landscape with a strong sense of remoteness and potential for scenic views; and

KEY IMPACT	IMPACTS IDENTIFIED
	▪ Potential visual intrusion of the proposed electrical infrastructure on the views of sensitive visual receptors. **Decommissioning Phase:** ▪ Potential visual intrusion of decommissioning activities on existing views of sensitive visual receptors.
Heritage (Archaeology and Cultural Landscape)	**Construction Phase:** ▪ Destruction of archaeological resources as a result of the construction of the proposed powerlines, on-site substation and service road; ▪ Destruction of palaeontological material as a result of the construction of the proposed powerlines, on-site substation and service road; ▪ Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road; and ▪ Alteration of the cultural and natural landscape as a result of the construction of the proposed powerlines, on-site substation and service road. **Operational Phase:** ▪ Destruction of archaeological resources as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road; ▪ Destruction of palaeontological material as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road; ▪ Damage to historical buildings as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road; and ▪ Alteration of the cultural and natural landscape as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road. **Decommissioning Phase:** ▪ Destruction of archaeological resources as a result of the removal of the proposed powerlines and on-site substation and rehabilitation of the service road; ▪ Destruction of palaeontological material as a result of the removal of the proposed powerlines and on-site substation and rehabilitation of the service road; ▪ Damage to historical buildings as a result of the removal of the proposed powerlines and on-site substation and rehabilitation of the service road; and ▪ Alteration of the cultural and natural landscape as a result of the removal of the proposed powerlines and on-site substation and rehabilitation of the service road.
Heritage (Palaeontology)	**Construction Phase:** ▪ Potential loss of palaeontological heritage resources through disturbance, damage or destruction of fossils and fossil sites (including associated geological contextual data) through surface clearance and excavation activities during the construction phase.
Avifauna Impact Assessment	**Construction Phase:** ▪ Displacement of Red Data avifauna due to disturbance associated with the construction activities. ▪ Displacement of Red Data avifauna due to habitat transformation associated with the construction activities. **Operational Phase:** ▪ Mortality of Red Data avifauna due to collisions with the earth wire of the proposed 132kV line. ▪ Electrocution of Red Data avifauna on the proposed 132kV line and in the on-site substation yard. **Decommissioning Phase:** ▪ Displacement of Red Data avifauna due to disturbance associated with the decommissioning activities.

2 APPROACH TO PREPARING THE EMPr

2.1 COMPLIANCE WITH RELEVANT LEGISLATION

In terms of legal requirements, a crucial objective of the EMPr is to satisfy the requirements of Appendix 4 of the 2014 NEMA EIA Regulations (as amended) promulgated in Government Gazette 40772 and GN R326 on 7 April 2017, and Section 24N of the NEMA. These regulations regulate and prescribe the content of the EMPr and specify the type of supporting information that must accompany the submission of the report to the authorities. An overview of where the requirements are addressed in this EMPr is presented in Tables 4 and 5.

Table 4: Compliance with Section 24N of NEMA

Requirements of Section 24N of NEMA	Where it is included in this EMPr?
2) The environmental management programme must contain- a) information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified in a report contemplated in subsection 24(1A), including environmental impacts or objectives in respect of: (i) planning and design; (ii) pre-construction and construction activities; (iii) the operation or undertaking of the activity in question; (iv) the rehabilitation of the environment; and (v) closure, if applicable;	Section 1.4 and the columns detailing the impact description, mitigation and management objectives, and mitigation and management actions in Sections 4 to 12 of this EMPr.
b) details of- (i) the person who prepared the environmental management programme; and (ii) the expertise of that person to prepare an environmental management programme;	Section 1.3 of this EMPr and Appendices D and H of the BA Report
c) a detailed description of the aspects of the activity that are covered by the environmental management programme;	Section 1 and Section 1.1
d) information identifying the persons who will be responsible for the implementation of the measures contemplated in paragraph (a);	Columns in Section 4 to 12 of the EMPr regarding the monitoring responsibility, including the requirements for monitoring and reporting on compliance and the responsible parties noted in Section 3.
e) information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme and for reporting on the compliance;	The columns detailing the mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 4 to 12 of this EMPr.
f) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and	Sections 4 to 12 of this EMPr, as applicable to the post-construction, rehabilitation phase and the decommissioning phase.
g) a description of the manner in which it intends to- (i) modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; (ii) remedy the cause of pollution or degradation and migration of pollutants; and (iii) comply with any prescribed environmental management standards or practices.	The columns detailing the mitigation and management objectives, mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 4 to 12 of this EMPr.
3) The environmental management programme must, where appropriate- a) set out time periods within which the measures contemplated in the environmental management programme must be implemented; b) contain measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of polluted or	The columns detailing the mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 4 to 12 of this EMPr. Section 11 of this EMPr includes an Environmental Awareness Plan.

Requirements of Section 24N of NEMA	Where it is included in this EMPr?
extraneous water or ecological degradation which may occur inside and outside the boundaries of the operations in question; and c) develop an environmental awareness plan describing the manner in which- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment.	
5) The Minister, the Minister responsible for mineral resources or an MEC may call for additional information and may direct that the environmental management programme in question must be adjusted in such a way as the Minister, the Minister responsible for mineral resources or the MEC may require.	Not applicable at this stage.
6) The Minister, the Minister responsible for mineral resources or an MEC may at any time after he or she has approved an application for an environmental authorisation approve an amended environmental management programme.	Not applicable at this stage.
7) The holder and any person issued with an environmental authorisation- a) must at all times give effect to the general objectives of integrated environmental management laid down in section 23; b) must consider, investigate, assess and communicate the impact of his or her prospecting or mining on the environment; c) must manage all environmental impacts (i) in accordance with his or her approved environmental management programme, where appropriate; and (ii) as an integral part of the prospecting or mining, exploration or production operation, unless the Minister responsible for mineral resources directs otherwise; d) must monitor and audit compliance with the requirements of the environmental management programme; e) must, as far as is reasonably practicable, rehabilitate the environment affected by the prospecting or mining operations to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and f) is responsible for any environmental damage, pollution, pumping and treatment of polluted or extraneous water or ecological degradation as a result of his or her operations to which such right, permit or environmental authorisation relates.	Throughout the EMPr
8) Notwithstanding the Companies Act, 2008 (Act No. 71 of 2008), or the Close Corporations Act, 1984 (Act No. 69 of 1984), the directors of a company or members of a close corporation are jointly and severally liable for any negative impact on the environment, whether advertently or inadvertently caused by the company or close corporation which they represent, including damage, degradation or pollution.	Section 3 details the responsibility of the Project Applicant.

Table 5: Compliance with Appendix 4 of the 2014 NEMA EIA Regulations (as amended on 7 April 2017)

Requirements of Appendix 4 of the 2014 NEMA EIA Regulations (as amended on 7 April 2017 in GN R326)	Where it is included in this EMPr?
1. (1) An EMPr must comply with section 24N of the Act and include: a) details of: (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;	Section 1.3 of this EMPr and Appendices D and H of the **BA Report**. Appendices D and H of the **BA Report** include the Curriculum Vitae of the specialists and the Environmental Assessment Practitioners respectively.
b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Section 1 and Section 1.1
c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Appendix A, Appendix B and Appendix C of this EMPr.

Requirements of Appendix 4 of the 2014 NEMA EIA Regulations (as amended on 7 April 2017 in GN R326)	Where it is included in this EMPr?
d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including: (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and where applicable post closure; and (v) where relevant, operation activities;	Section 1.4 and the columns detailing the impact description, mitigation and management objectives, and mitigation and management actions in Sections 4 to 12 of this EMPr.
e) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraphs (d) will be achieved, and must, where applicable, include actions to: (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; (ii) comply with any prescribed environmental management standards or practices; (iii) comply with any applicable provisions of the Act regarding closure, where applicable; and (iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;	The columns detailing the mitigation and management actions in Sections 4 to 12 of this EMPr.
f) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	The columns detailing the monitoring methodology in Sections 4 to 12 of this EMPr.
g) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	The columns detailing the monitoring frequency in Sections 4 to 12 of this EMPr.
h) an indication of the persons who will be responsible for the implementation of the impact management actions;	The columns detailing the monitoring responsibility in Sections 4 to 12 of this EMPr.
i) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	The columns detailing the mitigation and management actions, and the monitoring methodology and frequency in Sections 4 to 12 of this EMPr.
j) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	The columns detailing the mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 4 to 12 of this EMPr.
k) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	Section 4 to 12 of the EMPr, including the requirements for monitoring and reporting on compliance and the responsible parties noted in Section 3.
l) an environmental awareness plan describing the manner in which: (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Section 11 of this EMPr.
m) any specific information that may be required by the competent authority.	Section 2.2 and the management objectives and management actions in Sections 4 to 11. It should be noted that this is based on previous renewable energy projects and corresponding feedback from the DEA.
(2) Where a government notice *gazetted* by the Minister provides for a generic EMPr, such generic EMPr as indicated in such notice will apply.	Not Applicable

2.2 COMPLIANCE WITH DEA REQUIREMENTS

The EMPr is structured in such a way to comply with the requirements of the DEA (that were issued for previous Renewable Energy and Electrical Grid Infrastructure projects) and to ensure that the mitigation and management measures that have been identified during the BA Process are included in the respective plans. These requirements are detailed in Table 6 below. It is important to note that other project specific aspects (such as the findings and recommendations of the specialist studies), in addition to those covered by the plans normally required by the DEA, have been included in Section 12 of the EMPr.

Table 6: DEA Requirements for the EMPr

DEA Requirements	Relevant Section in the EMPr
All recommendations and mitigation measures recorded in the BA Report and the specialist studies conducted.	Recommended mitigation measures and monitoring actions as noted in the BA Report and specialist studies have been included in this EMPr, where relevant.
The final site layout map	Refer to Appendix A of this EMPr for the site layout map. Refer to Section 1.1 of this EMPr for a description of the proposed project infrastructure.
Measures as dictated by the final site layout map and micro-siting.	Refer to Appendix A of this EMPr for the site layout map. Refer to Section 1.1 of this EMPr for a description of the proposed project infrastructure and Section 1.2 of this EMPr for information regarding the final siting of the proposed infrastructure, which will take place during the detailed engineering phase (taking into consideration the findings of the specialists in terms of environmental sensitivity)..
An environmental sensitivity map indicating environmental sensitive areas and features identified during the BA Process.	Refer to Appendix B of this EMPr for an environmental sensitivity map. Refer to Section 1.2 of this EMPr for a description of the approach followed to identify the environmental sensitivities.
A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.	Refer to Appendix C of this EMPr for a combined environmental sensitivity and layout map. Refer to Sections 1.1 and 1.2 of this EMPr for a description of the approach followed to identify the environmental sensitivities.
An alien invasive management plan to be implemented during the 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.	Refer to Section 4 of this EMPr.
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.	Refer to Section 5 of this EMPr. It should be noted that faunal protection and habitat rehabilitation has also been included in this section.
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.	Refer to Section 5 of this EMPr. It should be noted that faunal protection and habitat rehabilitation has also been included in this section.
An open space management plan to be implemented during the construction and operation of the facility.	Refer to Section 6 of this EMPr.
A traffic management plan for the site access roads to ensure that	Refer to Section 7 of this EMPr.

DEA Requirements	Relevant Section in the EMPr
no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimise 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.	
A transportation plan for the transport of components, main assembly cranes and other large pieces of equipment.	Refer to Section 7 of this EMPr.
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.	Refer to Section 8 of this EMPr.
A fire management plan to be implemented during the construction and operation of the facility.	Refer to Section 11 of this EMPr. It should be noted that this has been combined with an Environmental Awareness Plan.
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.	Refer to Section 9 of this EMPr.
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	Refer to Section 10 of this EMPr.
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.	Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments have been included throughout the EMPr.

2.3 CONTENTS OF THE EMPr

Where applicable, each section of the EMPr is divided into the following four phases of the project cycle:

- Design Phase;
- Construction Phase;
- Operational Phase; and
- Decommissioning Phase.

The EMPr includes the findings and recommendations of the BA Process and specialists studies. However, as noted above, the EMPr is considered a "living" document and must be updated with additional information or actions during the design, construction, operational and decommissioning phases if applicable.

The EMPr follows an approach of identifying an over-arching goal and objectives, accompanied by management actions that are aimed at achieving these objectives. The management actions are presented in a table format in order to show the links between the goal and associated objectives, actions, responsibilities, and monitoring requirements and targets.

The management plans for the design, construction, operational and decommissioning phases consist of the following components:

- **Impact:** The potential positive or negative impact of the development that needs to be enhanced, mitigated or eliminated.
- **Objectives:** The objectives necessary in order to meet the goal; these take into account the findings of the specialist studies.
- **Mitigation/Management Actions**: The actions needed to achieve the objectives of enhancing, mitigating or eliminating impacts; taking into consideration factors such as responsibility, methods, frequency, resources required and prioritisation.
- **Monitoring**: The key monitoring actions required to check whether the objectives are being achieved, taking into consideration methodology, frequency and responsibility.

2.4 GOAL FOR ENVIRONMENTAL MANAGEMENT

The overall goal for environmental management for the proposed Sutherland 2 WEF Electrical Grid Infrastructure project is to construct and operate the project in a manner that:

- Minimises the ecological footprint of the project on the local environment;
- Minimises impacts on fauna, flora and freshwater ecosystems;
- Facilitates harmonious co-existence between the project and other land uses in the area; and
- Contributes to the environmental baseline and understanding of environmental impacts of WEFs and associated supporting electrical grid infrastructure in a South African context.

3 ROLES AND RESPONSIBILITIES

For the purposes of the EMPr, the generic roles that need to be defined are those of the:

- Project Developer;
- Environmental Control Officer; and
- Construction Manager (Lead Contractor).

It is acknowledged that the specific titles for these functions will vary from project to project. The intent of this section is to give a generic outline of what these roles typically require. It is expected that this will be appropriately defined at a later stage.

3.1 PROJECT DEVELOPER

The Project Developer (i.e. Mainstream) is the 'owner' of the project and, as such, is responsible for ensuring that the conditions of the EA issued in terms of NEMA (should the project receive such authorisation) are fully adhered to, as well as ensuring that any other necessary permits or licenses are obtained and complied with. It is expected that the Project Developer will appoint the Environmental Control Officer and the Lead Contractor.

3.2 ENVIRONMENTAL CONTROL OFFICER

An independent Environmental Control Officer (ECO) must be appointed to monitor the compliance of the proposed project with the conditions of EA (should such authorisation be granted by the DEA) during the construction and decommissioning phases (and possibly the operational phase, depending on the requirements of the DEA). The ECO must also monitor compliance of the proposed project with environmental legislation and recommendations of the EMPr, as well as oversee the implementation of the EMPr during the phases of the project, monitor environmental impacts, undertake record-keeping.

The ECO will be responsible for updating the EMPr as and when necessary, and compiling a monitoring checklist based on the EMPr. The roles and responsibilities of the ECO should include the following:

- The ECO must undertake periodic environmental audits during the relevant phases of the proposed project in order to monitor and record environmental impacts and non-conformances, and to monitor site activities to ensure adherence to the specifications contained in the EMPr, using a monitoring checklist. The timeframes for environmental audits will be indicated in the EA (should such authorisation be granted by the DEA).
- Environmental compliance/audit reports must be compiled and submitted by the ECO to the Competent Authority (i.e. DEA and/or the relevant provincial environmental departments) on a regular basis (i.e. at intervals as indicated in the EA (should such authorisation be granted by the DEA)).
- The ECO must maintain a diary of site visits and audits, a copy of the EA (should such authorisation be granted by the DEA) and relevant permits for reference purposes, a non-conformance register, a public complaint register, and a copy of previous environmental audits undertaken.
- Prior to the commencement of construction, the ECO must meet on site with the Contractor to confirm the construction procedure and designated construction areas and work activity zones.
- Reporting of any non-conformances within 48 hours of identification of such non-conformance to the relevant agents.
- Conducting an environmental inspection on completion of the construction period and 'signing off' the construction process with the Contractor.
- Ensure that records are kept of all monitoring activities and results.
- Conducting an environmental inspection on completion of decommissioning and 'signing off' the site rehabilitation process.

The Lead Contractor and sub-contractors may have their own Environmental Officers, or designate Environmental Officer functions to certain personnel.

3.3 LEAD CONTRACTOR

The Lead Contractor will be responsible for the following:

- Ensure that all appointed contractors and sub-contractors are aware of the EMPr and their respective responsibilities;
- Prior to the commencement of construction, the Lead Contractor must meet on site with the ECO in order to confirm the construction procedure and designated construction areas and work activity zones.
- Ensure that each sub-contractor employs an Environmental Officer (or employs a designated suitably qualified individual to fulfil the role of an Environmental Officer) to monitor and report on the daily activities on-site during the construction period;
- Implementation of the overall construction programme, project delivery and quality control for the construction for the proposed electrical grid infrastructure project;
- Overseeing compliance with the Health, Safety and Environmental Responsibilities specific to the project management related to project construction;
- Promoting total job safety and environmental awareness by employees, contractors and sub-contractors and stress to all employees and contractors and sub-contractors the importance that the project proponent attaches to safety and the environment;
- Ensuring that safe, environmentally acceptable working methods and practices are implemented and that sufficient plant and equipment is made available properly operated and maintained, to facilitate proper access and enable any operational to be carried out safely;
- Ensuring that all appointed contractors and sub-contractors repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in the EMPr, to the satisfaction of the Project Developer's ECO;
- Implement the Traffic Management Plan (Section 7), Transportation Plan (Section 7) and Storm Water Management Plan (Section 8).

4 ALIEN INVASIVE VEGETATION MANAGEMENT PLAN

Impact	Mitigation/ Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
4.1. Impacts due to establishment and increases in the prevalence of exotic and invasive plants	Reduce proliferation of alien and invasive species, which is expected within any disturbed areas particularly as there is a degree of alien and invasive species within the study area at present.	4.1.1. Ensure compliance with relevant Environmental Specifications (amendments to the regulations under the Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA) and Section 28 of the NEMA) for the control and removal of alien invasive plant species. 4.1.2. Seek guidance from a suitably qualified specialist or contact relevant authorities on the removal of the alien vegetation on site. 4.1.3. Compile exotic weed, and alien and invasive control plan for the proposed project site to ensure that these species are eradicated and controlled to prevent their spread beyond the project footprint. Alien plant seed dispersal within the top layers of the soil within footprint areas, that will have an impact on future rehabilitation, has to be controlled.	▪ Appoint a suitable specialist/ Contractor or contact the relevant authorities to seek guidance on the removal of the planted alien invasive species. ▪ Appoint a suitable specialist to compile an alien invasive vegetation eradication plan. Identify dominant weed species within the region and compile approach and management plan for exotic weed control during and post construction. ▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during the design phase. ▪ Once-off during the design phase (i.e. prior to commencement). ▪ Once-off during the design phase.	▪ Project Developer (Mainstream) ▪ Project Developer (Mainstream) and ECO ▪ ECO
B. CONSTRUCTION PHASE					
4.2. Change in habitat form and structure as a result of general activities and disturbance on site, and import of earth materials during the construction phase, giving rise to prevalence of exotic vegetation. Indigenous vegetation may also serve to alter habitat	Reduce the opportunity for invasive plant material to establish on site, primarily arising through the import of fill and related materials.	4.2.1. Undertake exotic weed control, vegetation control and broader vegetation management of source materials and the construction site through monitoring during the construction phase and identifying the source of fill materials. 4.2.2. Identify any exotic plant material in the fill material and remove and dispose. Monitor the point of infilling and address any emergent exotic plant material.	▪ Monitor the source of fill material, the importing of such material to the construction site, the presence of alien invasive plants in the fill material, as well as recurrence of these species in the area of infilling during the construction phase via visual inspections and take action to remove and control these species.	▪ Ongoing during the construction phase.	▪ ECO and Contractor

Impact	Mitigation/ Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
form and structure.					
4.3. Increased presence of exotic and disturbance driven plant species. With increasing levels of anthropogenic activity on site and within the surrounding area (50 km radius), the propensity for plant invasion or the dominance of species that are tolerant of higher levels of disturbance will see such species dominating and perhaps ousting other less tolerant species. This is a cumulative impact.	Reduce the opportunity for invasive plant material to establish on site as a result of increased anthropogenic activity.	4.3.1. Implement vegetation management and conservation initiatives, such as control of exotic vegetation, and avoid unnecessary disturbance to the ground which promotes exotic weed invasion and vegetation change.	▪ Undertake site and visual inspections and report any non-compliance.	▪ Daily	▪ ECO and Contractor
4.4. Increases in the prevalence of alien and invasive plants	Ensure the appropriate removal of alien invasive vegetation from the proposed project area and prevent the establishment and spread of alien invasive plants due to the project activities.	4.4.1. Ensure compliance with relevant Environmental Specifications (amendments to the regulations under the CARA and Section 28 of the NEMA for the control and removal of alien invasive plant species. Implement correct choice of herbicide to ensure that no additional impact and loss of indigenous plant species occurs due to the herbicide used. 4.4.2. Implement the exotic weed, and alien and invasive control plan. Undertake regular visual monitoring and redress of exotic weeds in and around site, particularly during construction. Ensure that alien invasive vegetation found on site, within the proposed project footprint, is immediately controlled and removed promptly, in a scheduled manner throughout the construction phase. 4.4.3. Ensure footprint areas are kept as small as possible when removing alien plant species.	▪ Undertake pre-construction and post-construction weed eradication measures. Appoint a suitable vegetation contractor to inspect the site, and select a suitable herbicide and remove any exotic weeds. ▪ Undertake site and visual inspections and report any non-compliance. ▪ Carry out visual inspections and site visits to ensure that the footprint of the area associated with alien plant species removal is kept as small as possible. Monitor and manage vegetation clearing by undertaking visual inspections to ensure minimal disturbance and to restrict activities to within demarcated areas. ▪ Demarcate sensitive drainage and	▪ Twice during construction period ▪ Ongoing during the construction phase ▪ Ongoing during the construction phase ▪ Prior to construction and during construction phase following monitoring. ▪ Prior to the commencement of construction ▪ As necessary during the construction phase.	▪ Project Developer (Mainstream), ECO and Weed Eradication Contractor/ Specialist ▪ Contractors and ECO ▪ Contractors and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream), ECO and Specialist Contractor

Impact	Mitigation/ Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		Keep clearance and disturbance of indigenous vegetation to a minimum. The entire width of the distribution line servitude should not be cleared of vegetation and should be cleared below the distribution line and from either side of the centre line based on the requirements of Eskom and standard operating procedures. 4.4.4. No vehicles should be allowed to drive through designated sensitive drainage line and riparian areas during the eradication of alien and weed species. 4.4.5. All alien vegetation identified should be removed from rehabilitated areas and reseeded with indigenous vegetation as specified by a suitably qualified specialist (ecologist). 4.4.6. The removed alien invasive vegetation should be immediately disposed at a suitable waste disposal facility and should not be kept on site for prolonged periods of time, as this will enhance the spread of these species. 4.4.7. All soils compacted as a result of construction activities falling outside of the project footprint areas should be ripped and profiled. Special attention should be paid to alien and invasive control within these areas. Alien and invasive vegetation control should take place throughout all construction and rehabilitation phases to prevent loss of floral habitat. 4.4.8. Ensure that the footprint required for the proposed project activities (such as temporary stockpiling, earthworks, storage areas, site establishment etc.) is kept at a minimum. 4.4.9. All construction machinery and plant equipment delivered to site for use during the construction phase should be cleaned in order to limit the introduction of alien species.	riparian areas during eradication to restrict vehicle access. ▪ Ensure that a suitably qualified specialist is contacted with regards to the re-seeding process. ECO to ensure that this is taken into consideration and implemented. ▪ Monitor the removal of the alien vegetation found on site via visual inspections. ▪ Monitor the presence of alien invasive plants via visual inspections and take action to remove, control, and rehabilitate these species. ▪ Verify that the proposed project area is determined and outlined prior to the commencement of the construction phase by undertaking visual inspections. ▪ ECO to conduct visual inspections to verify that machinery and equipment are cleaned, and report any non-compliance.	▪ On-going ▪ Once-off prior to construction and as required during the construction process. ▪ As necessary during the construction phase.	▪ ECO ▪ Contractors and ECO ▪ Contractors and ECO ▪ Contractors and ECO

Impact	Mitigation/ Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
C. OPERATIONAL PHASE					
4.5. Increased spread and introduction of exotic vegetation as a result of the movement of vehicles within the study area, particularly along the power line and service road, which may change or alter the local ecology.	To prevent the excessive growth and propagation of exotic weeds on disturbed lands that form part of the power line. Reduce the establishment and spread of alien invasive plants. To remove exotic weeds as and when they may arise and thereby prevent alteration of local and adjacent habitat forms.	4.5.1. Implement vegetation management and conservation operations such as control of exotic vegetation along roads and the powerline, and avoid unnecessary disturbance to the ground which promotes exotic weed invasion and vegetation change. 4.5.2. Review the vegetation composition around the project site. 4.5.3. Undertake removal of exotic vegetation using approved and appropriate herbicides. 4.5.4. Implement management actions in Section 4.4 above as applicable.	▪ Carry out inspections to monitor the presence of exotic vegetation, and the level of disturbance, as well as the implementation of interventions. ▪ Undertake annual routine weed control. ▪ Monitor the use of herbicide sprays for removal of alien vegetation by undertaking visual inspections and reporting any non-compliance. ▪ Maintain register of weed spraying activities and ensure that herbicide use is recorded.	▪ Monthly	▪ Project Developer (Mainstream)
D. DECOMMISSIONING PHASE					
4.6. Exotic weed invasion of the decommissioned site resulting in ecological change	To prevent the excessive growth and propagation of exotic weeds on disturbed lands that formed a portion of the proposed electrical infrastructure.	4.6.1. All natural areas must be rehabilitated with species indigenous to the area. Re-seed with locally-sourced seed of indigenous grass species that were recorded on site pre-construction.	▪ Final external audit of area to confirm that area is rehabilitated to an acceptable level.	▪ Once off	▪ Lead Contractor with advice from specialist
		4.6.2. Exotic weed control measures to be instituted through weed control programme. Regular redress of exotic weed through the use of herbicides. 4.6.3. Ensure the stabilization of site, once decommissioning and removal of infrastructure has arisen. 4.6.4. Implement management actions in Section 4.4 above for the decommissioning phase, as applicable.	▪ Undertake weed eradication along disturbance sites following dismantling of structures. ▪ Appoint contractor to undertake weed eradication programme. ▪ Monitor newly disturbed areas where infrastructure has been removed to detect and quantify any aliens that may become established after decommissioning and rehabilitation. ▪ Monitor the condition of the distribution line route via site inspections throughout the decommissioning phase and at the end to verify that the site is	▪ Once-off ▪ During the decommissioning phase ▪ During the decommissioning phase ▪ During the decommissioning phase ▪ Implement monitoring frequency in Section 4.4 above for the	▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream)/ Contractor ▪ ECO ▪ Implement monitoring responsibility in Section 4.4 above

Impact	Mitigation/ Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
			stabilized and all infrastructure has been removed. Record non-compliance and incidents. ▪ Implement monitoring methodology in Section 4.4 above for the decommissioning phase, as applicable.	decommissioning phase, as applicable.	for the decommissioning phase, as applicable.

5 PLANT RESCUE AND PROTECTION PLAN INCLUDING RE-VEGETATION AND HABITAT REHABILITATION PLAN (INCLUDING AQUATIC ECOLOGY, FRESHWATER RESOURCES, AND TERRESTRIAL AND AQUATIC FAUNA AND FLORA)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
5.1. Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	To reduce the potential of loss of freshwater habitat and ecological structure and associated impacts. To ensure that as far as possible all infrastructure is placed outside of freshwater resource areas and their respective buffer zones.	5.1.1. Ensure that as far as possible all infrastructure is placed outside of freshwater resource areas and their respective buffer zones. If these measures cannot be adhered to, strict mitigation measures will be required to minimize the impact on the receiving watercourses. The sensitivity maps that have been developed for the study area, indicating the freshwater environments, and the applicable 32 m regulatory zones in accordance with the NEMA, should be considered during all phases of the development and with special mention of the planning of infrastructure layout, to aid in the conservation of the freshwater habitats within the study area. Appendices B and C of this EMPr includes the sensitivity maps that need to be considered. 5.1.2. Special mention is made of the need to ensure that careful planning of the placement of the monopoles takes place in order to minimise the risk of placing infrastructure unnecessarily within riparian zones. Wherever possible, it is highly recommended that the linear development (i.e. powerlines) spans the relevant watercourse, and every effort should be made to prevent/avoid placement of monopoles within the riparian zone/habitat or applicable zones of regulation in terms of NEMA	▪ Ensure that the 32 m zone of regulation is taken into consideration in the final layout of the proposed electrical infrastructure. Ensure that this is taken into account, where possible and as feasible (as recommended by the Aquatic Ecology Specialist), and that the recommended mitigation measures are implemented as required. Record and report non-compliance through an audit. ▪ Monitor the placement of the monopoles to ensure minimal interference with riparian habitat. ▪ Monitor the placement of the substation to be 32 m away from freshwater resources.	▪ Once-off prior to the commencement of construction.	▪ Project Developer (Mainstream) and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		and/or GN509. If this is not avoidable, the monopoles should be placed as far from the active channel of the watercourse as possible. If at all practicable, all monopoles should be developed above the applicable zone of regulation in terms of Regulation GN509 of the NWA. 5.1.3. Careful planning of the location of the substations. The applicable zone of regulation around the freshwater resources in terms of NEMA is 32m, and this must be adhered to, in order to assist in minimising impacts on the freshwater resources in close proximity to the proposed substations.			
B. CONSTRUCTION PHASE					
5.2. Change in ecological processes and habitat form and alteration of biophysical factors at a localised level as a result of the removal of indigenous vegetation, site clearance and levelling for the establishment of the proposed laydown area, on-site substation, O&M Building, service road, pylons, and stringing of the power line, as well as earthworks.	Reduce points of vegetation clearance and unnecessary clearance of vegetation.	5.2.1. Conduct a site survey, habitat identification and relocation prior to construction. Carry out a survey of all the proposed power line tower points at the final survey stage prior to the construction phase, taking measures to avoid more sensitive terrain, while meeting stringing distance between towers, together with a plant and fauna rescue programme. 5.2.2. Undertake a site review and fauna and plant search and rescue prior to the commencement of the construction phase, and possible removal/relocation of flora and fauna of value within the affected site (i.e. such specimens may be relocated/removed or avoided (with the relevant permits and approvals in place)). 5.2.3. Ensure the necessary permits or licences are identified and applied for as applicable for removal of protected, indigenous vegetation. Await response and provision of permit (as required) from the relevant Authorities prior to the removal of the indigenous species (if required). Once these permits are obtained, search and rescue must be undertaken for the	▪ Appoint a suitably qualified Ecologist to conduct a pre-construction survey of the final site and development footprint. ▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Appoint a suitable contractor to complete the search and rescue. Identify the plants that may need to be relocated or rescued. ▪ Contact the relevant Authorities if any protected species are found during the search and rescue. Review permits prior to undertaking search and rescue. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Ensure that a suitable specialist is appointed to compile a Vegetation Rehabilitation Plan. Review signed	▪ Once-off, prior to construction. ▪ Once-off, prior to construction. ▪ At commencement ▪ Prior to commencement of construction and search and rescue. ▪ Once-off prior to construction. ▪ Once-off prior to construction and implementation during construction. ▪ Once-off prior to construction. ▪ Once-off prior to construction.	▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist ▪ Project Developer (Mainstream), Search and Rescue Contractor, and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ ECO ▪ Project Developer (Mainstream), Construction Manager, ECO and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		indigenous species. Efforts should be made to minimise impacts on protected trees (if any) by avoiding areas where such species may occur. 5.2.4. Compile and implement a Vegetation Rehabilitation Plan for the construction phase. 5.2.5. Ensure that demarcation of the construction area is undertaken prior to the commencement of construction and that it is maintained throughout (i.e. containment of construction and laydown areas). Fencing of the site is an option for containment. In this regard, conduct a survey of the work space around the proposed on-site substation site and laydown area (i.e. in order to ensure delimiting through demarcation of the construction area). 5.2.6. Ensure that access roads are adequately routed and identified prior to the construction phase, and ensure that they are clearly demarcated for use throughout the construction phase. Access roads should be surveyed prior to the construction of the proposed power line towers and follow routes that avoid unnecessary large scale clearance of vegetation and avoid sensitive habitats. 5.2.7. Ensure that lithic environments are incorporated or avoided during the construction phase. 5.2.8. Stringing of towers may be performed using aerial methods (e.g. helicopter) if and where possible, to avoid undue disturbance to habitat.	minutes of meetings or signed reports. ▪ Verify that the proposed project construction area is determined and outlined prior to the commencement of the construction phase by reviewing signed minutes of meetings or signed reports. ▪ Verify that the proposed access routes are determined and outlined prior to the commencement of the construction phase by reviewing signed minutes of meetings or signed reports. Ensure that vegetation removal is kept to a minimum by reviewing and contributing to the approved site plan. ▪ Ensure that significant lithic environments and features, in proximity to the proposed project area, are demarcated as no-go areas so that they can be avoided. ▪ Ensure that suitable methods for the stringing of the power line are taken into consideration and adopted as required.	▪ Once-off prior to construction. ▪ Once-off prior to construction.	Ecologist ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO
5.3. Localised extinction or ousting of species with concomitant change in ecosystem function and loss, disturbance or alteration of botanical communities at a localised level, particularly geophytes	Identify affected points of lithic or eco-geomorphological importance within the development footprint or adjacent to the development footprint.	5.3.1. Undertake survey of sites prior to construction Carry out a survey of all the proposed power line tower points and development footprint prior to the construction phase, taking measures to avoid more sensitive terrain, while meeting stringing distance between towers. 5.3.2. Undertake plant search and rescue operations within the affected site, where such specimens	▪ Appoint a suitably qualified Ecologist to conduct a pre-construction survey of the final site and development footprint. ▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Appoint a suitable contractor to	▪ Once-off, prior to construction. ▪ Once-off, prior to construction. ▪ At commencement ▪ Prior to commencement of	▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist ▪ Project Developer (Mainstream), Search and Rescue

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
and uncommon to rare species as a result of site clearance, as well as destruction of localised vegetation communities. Alteration of lithic structures and clearance of rock and minor features (resulting in change in ecological processes and habitat form) due to the construction of the proposed infrastructure; and site levelling (including areas that are eco-geomorphologically important) for the proposed construction of towers and the on-site substation. The service road will also traverse level to steeper ground and require some level of clearance of vegetation and disturbance along the powerline route.		may be relocated/removed or avoided (with the relevant permits and approvals in place). 5.3.3. Ensure that demarcation of the construction area is undertaken prior to the commencement of construction and that it is maintained throughout (i.e. containment of construction and laydown areas). 5.3.4. Ensure that lithic environments are incorporated or avoided during the construction phase. Ensure that these features are cordoned off or demarcated, if required.	complete the search and rescue. Identify the plants that may need to be relocated or rescued. ▪ Contact the relevant Authorities if any protected species are found during the search and rescue. Review permits prior to undertaking search and rescue. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Verify that the proposed project construction area is determined and outlined prior to the commencement of the construction phase by reviewing signed minutes of meetings or signed reports. ▪ Ensure that significant lithic environments and features, in proximity to the proposed project area, are demarcated as no-go areas so that they can be avoided.	construction and search and rescue. ▪ Once-off, prior to construction. ▪ Once-off, prior to construction.	Contractor, and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO
5.4. Loss of refugia particularly in respect of fauna associated with lithic habitats (e.g. *Homopus* spp). Rock ledges and other geological structures are intrinsic habitat for species such as padlopers (tortoises),	Identify affected points of lithic or eco-geomorphological importance within the development footprint or adjacent to the development footprint.	5.4.1. Undertake survey of sites prior to construction Carry out a survey of all the proposed power line tower points and development footprint prior to the construction phase, taking measures to avoid more sensitive terrain, while meeting stringing distance between towers. 5.4.2. Undertake plant search and rescue operations within the affected site, where such specimens may be relocated/removed or avoided (with the	▪ Appoint a suitably qualified Ecologist to conduct a pre-construction survey of the final site and development footprint. ▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Appoint a suitable contractor to complete the search and rescue.	▪ Once-off, prior to construction. ▪ Once-off, prior to construction. ▪ At commencement ▪ Prior to commencement of construction and	▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist ▪ Project Developer (Mainstream), Search and Rescue Contractor, and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
and removal of these features (as a result of site clearance and levelling) will result in the loss of this habitat (i.e. localised ousting of species and change in ecosystem function).		relevant permits and approvals in place). 5.4.3. Ensure that demarcation of the construction area is undertaken prior to the commencement of construction and that it is maintained throughout (i.e. containment of construction and laydown areas). 5.4.4. Ensure that lithic environments are incorporated or avoided during the construction phase. Ensure that these features are cordoned off or demarcated, if required. 5.4.5. Postpone construction activities (in the affected specific area) and consult with a suitably qualified Ecologist, where refugia are utilised by gravid or rearing of juveniles.	Identify the plants that may need to be relocated or rescued. ▪ Contact the relevant Authorities if any protected species are found during the search and rescue. Review permits prior to undertaking search and rescue. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Verify that the proposed project construction area is determined and outlined prior to the commencement of the construction phase by reviewing signed minutes of meetings or signed reports. ▪ Ensure that significant lithic environments and features, in proximity to the proposed project area, are demarcated as no-go areas so that they can be avoided. ▪ Consult with a suitably qualified Ecologist where refugia are utilised by gravid or rearing of juveniles within the development footprint.	search and rescue. ▪ Once-off, prior to construction. ▪ Once-off, prior to construction.	ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist
5.5. Local extinction of species leading to ecosystem change due to direct faunal mortalities as a result of construction activities such as traffic movement and general disturbance on site.	To reduce the risk to fauna in respect of activities within construction footprints and activities that may arise in and around construction areas.	5.5.1. Ensure proper management of traffic movement and construction labour conduct is implemented. The construction personnel and staff should be made aware of the presence of fauna within the proposed project area. The construction personnel and staff must also be made aware of the general speed limits on site and must be alert at all times for potential crossings. 5.5.2. Develop protocols in respect of management of wildlife within and adjacent to construction sites. 5.5.3. Undertake daily (pre operations) assessment of	▪ Carry out Environmental Awareness Training with a discussion on the management of terrestrial fauna and flora on site, and traffic movement in this regard. Place signage to inform and educate the construction staff regarding this. ▪ Conduct audits of the signed attendance registers. ▪ Place signage to inform and educate the construction staff regarding the management of terrestrial fauna and flora on site.	▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly ▪ Intermittent during the construction phase ▪ Daily	▪ Contractor/ECO ▪ ECO ▪ Project Developer (Mainstream), Contractor and ECO ▪ Contractor and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		the construction site to identify the presence of fauna within work areas. Address and relocate any fauna identified. Establish a recording method in order to monitor the construction activities, including species presence within site, mortalities and sitings.	▪ Undertake inspections of the construction site to verify the presence of fauna, monitor mortalities and identify the cause if encountered, as well as to relocate the identified fauna (if applicable).		
5.6. Change in habitat form and structure as a result of alteration of surface hydrology due to hardpanning of the upper soil horizon (i.e. soil compaction) due to traffic movement within and around the construction area, as well as use of materials to establish a sound working platform (including site levelling and site earthworks). This is also linked to a cumulative impact as a result of increased levels of areas dominated by built structures (within a 50 km radius).	Reduce changes in surface hydrology associated with construction activities	5.6.1. Implement ripping of disturbed areas and compacted soils, and create a managed environment. 5.6.2. Implement measures to attenuate or decelerate surface flow, where required.	▪ Identify areas of compaction and rip or remediate. ▪ Identify changes in surface topography and implement deceleration mechanisms if and where required. Ensure that this is taken into consideration in the Method Statement for Stormwater Management during the construction phase.	▪ Ongoing during the construction phase, with a weekly evaluation in response to the commencement and progression of construction work. ▪ As required during the construction phase	▪ ECO and Contractor ▪ ECO and Contractor
5.7. Change in habitat structure due to general erosion primarily as a result of the movement of construction traffic, earth and plant operations, which causes compaction and surface disturbance. Erosion may occur particularly on	Reduce the likelihood of excessive erosion arising from construction traffic and plant operations.	5.7.1. Ensure site management and timeous redress of evident wind and water erosion. Identify points of rilling and address through ripping or infilling. 5.7.2. Identify alteration in surface topography and address through sculpting or remediation of surface flow.	▪ Undertake monitoring of the construction site and access routes to the construction site. Identify points of rilling and implement mechanisms to rectify it, if and where required. Ensure that this is taken into consideration in the Method Statement for Erosion Management during the construction phase. ▪ Identify changes in surface topography	▪ Weekly	▪ Project Developer (Mainstream), ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
steeper slopes where the trampling and compaction of vegetation occurs.			and implement sculpting or remediation of surface flow, if and where required. Ensure that this is taken into consideration in the Method Statement for Stormwater Management during the construction phase.		
5.8. Impact of solid waste generation on fauna with possible mortalities as a result of potential ingestion or ensnarement. Solid waste (e.g. small bolts, wires etc.) has the potential to harm or kill animals through ingestion or ensnarement.	To reduce the impact of solid waste materials on particular fauna. The containment and disposal of solid waste is required in order to avert behavioural change in local fauna as well as general pollution impacts on terrestrial habitat.	5.8.1. Reduce the amount of material packaging imported to sites. Monitor site for materials (small metallic objects, off cuts, wire etc.) that may be within and around the construction area. 5.8.2. Ensure that waste disposal systems are present on site. 5.8.3. Ensure that waste generated on site is contained in order to prevent access by terrestrial fauna and avifauna. 5.8.4. Remove waste from site on a regular basis, following by safe disposal at a licensed waste disposal facility.	▪ Conduct audits to ensure that a waste disposal system is compiled and abided by, and updated as required. ▪ Conduct audits to ensure that receptacles for waste are available at all sites of operation and that these are sealed off and contained. Record and report any non-compliance. ▪ Conduct audits and site inspections to ensure that regular cleaning operations are undertaken on site, and that this includes the clearance of waste materials. Record and report any non-compliance.	▪ Daily	▪ Project Developer (Mainstream) and ECO ▪ Contractor and ECO ▪ Contractor and ECO
5.9. Changes in ecological processes and vegetation and habitat alteration through the introduction of nutrients and other materials which may impact directly or indirectly on flora and faunal components of region.	Identify points where surface run off and related disposals may arise and reduce potential for change in habitat by identifying habitat form and nature and taking avoidance actions.	5.9.1. Compile and implement a Vegetation Rehabilitation Plan for the construction phase. 5.9.2. Conduct a site survey of the final development footprint prior to construction and identify points of significance or the overall significance of the site. 5.9.3. Containment and demarcation of the construction area, labour workforce and related activities. Construction activities should be confined to the laydown area and construction footprints. 5.9.4. Cordon off any significant features if required, or take remedial measures to avoid area if required. 5.9.5. Implementation of control measures relating to	▪ Ensure that a suitable specialist is appointed to compile a Vegetation Rehabilitation Plan. Review signed minutes of meetings or signed reports. ▪ Appoint a suitably qualified Ecologist to conduct a pre-construction survey of the final site and development footprint. ▪ Verify that the proposed project construction area is determined and outlined prior to the commencement of the construction phase by reviewing signed minutes of meetings or signed reports. ▪ Ensure that significant lithic environments and features, in	▪ Prior to the commencement of construction. ▪ Prior to construction ▪ Once-off, prior to the commencement of construction ▪ Once-off, prior to the commencement of construction ▪ Once-off, prior to the	▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist ▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
		the conduct of construction staff and contractors on site and in relation to the prevailing natural environment. Construction staff should be managed and maintained within construction areas, and educated on waste management and conduct on site. 5.9.6. Control of all imported materials including concrete and hazardous materials to ensure that materials are managed on site and within the construction footprint. Control of all waste materials to ensure that all materials are removed from site, including sewage, for disposal at an appropriate point (i.e. a licenced facility). 5.9.7. Ensure a well-managed and timeous construction schedule to avoid prolonged period of construction and disturbance. 5.9.8. Use of appropriate lumen within all lighting and appropriate establishment of lighting will prevent undue ELP.	proximity to the proposed project area, are demarcated as no-go areas so that they can be avoided. ▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers. ▪ Conduct audits to ensure that a waste disposal system is compiled and abided by, and updated as required. ▪ Carry out audits to verify if the construction process is being managed efficiently with the aim of avoiding unnecessary delays, which may have an impact on the surrounding environment. ▪ Ensure that these lighting requirements are taken into consideration and included in the contract specifications. Verify this by undertaking site audits and recording and reporting any non-compliance.	commencement of construction ▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly ▪ Daily ▪ Weekly ▪ Once-off, prior to the commencement of construction	ECO ▪ Contractor/ECO ▪ ECO ▪ ECO ▪ ECO and Contractor ▪ ECO and Contractor ▪ ECO and Contractor
5.10. Ousting and behavioural change in fauna through effects such as altering corridors associated with movement, herbivory and predation. Certain species will benefit from the various changes in land use, while others will be ousted from areas.	Changes in factors around the proposed on-site substation and powerline areas (e.g. noise, human presence etc.), changes to the localized ecology and through extension affects corridors and the broader ecology of the region.	5.10.1. Refer to management measures in Sections 5.9.1 to 5.9.8 above and implement them for this potential impact, along with the associated monitoring methodology, frequency, and responsibility. 5.10.2. Identify areas that may show increased faunal presence (streams, rivers, pans etc.). 5.10.3. Identify mitigation measures to reduce impacts on faunal movement, access to water points etc.	▪ Consider site topography and nature using ecological assessment techniques. Ensure that a suitable specialist is appointed in this regard. ▪ Identify the proposed project site in relation to the broader habitat. ▪ Introduce specific management measures to mitigate against noise, light and human presence.	▪ Prior to and during construction	▪ Construction Manager and ECO (and Ecologist once-off)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
5.11. Increased ELP levels as a result of light pollution that may be associated with all built structures of the proposed project and the projects considered within the 50 km radius (cumulative impact). The cumulative level of increased lighting in the area will serve to alter the behaviour of a number of nocturnal (and possibly crepuscular and diurnal) species and alter ecological processes in and around these points (i.e. localised change in species composition and ethology with concomitant change in ecosystem function).	To reduce the impact of increased ELP on nocturnal species, resulting in alteration of ecological processes.	5.11.1. The direction of lighting should not be focused outside of the subject area, while the level of lumens should be such that the necessary lighting to achieve its objective is achieved (security, operations etc.).	▪ Ensure that these lighting requirements are taken into consideration and included in the contract specifications. Verify this by undertaking site audits and recording and reporting any non-compliance.	▪ Once-off, prior to the commencement of construction	▪ Contractor and ECO
5.12. Increased and expanded anthropogenic influences across the region (within a 50 km radius), with the likely influence of ousting particular species of fauna. Increased noise pollution levels with concomitant impact on faunal behaviour in respect of smaller mammals and other fauna that utilise sound in their various	To reduce the likelihood of ousting of fauna and impact on faunal behaviour as a result of increased and expanded anthropogenic influences and noise pollution.	5.12.1. Control and management procedures relating to construction activities in and around the powerlines and associated infrastructure to be implemented (i.e. management relating to disturbance of flora and fauna).	▪ Carry out visual inspections to ensure strict control over the disturbance of flora and fauna.	▪ Weekly	▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
behavioural patterns (prey detection, social interaction). These are cumulative impacts.					
5.13. Vegetation and habitat alteration, and change in ecological processes and habitat with reversion to secondary habitat structure at transformed sites. Recruitment and behavioural change in fauna (i.e. change in ecological processes and habitat). These are cumulative impacts.	To reduce the impact of vegetation and habitat alteration and the likelihood of recruitment and behavioural change in fauna.	5.13.1. Compile and implement a Vegetation Rehabilitation Plan in order to improve habitat diversity and maintenance of improved habitat within areas subject to change as a consequence of the proposed development.	▪ Ensure that a suitable specialist is appointed to compile a Vegetation Rehabilitation Plan. Review signed minutes of meetings or signed reports.	▪ Once-off prior to construction and implementation during construction.	▪ Project Developer (Mainstream), Construction Manager, ECO and Ecologist
5.14. Increased dissection of habitat on account of increasing levels of infrastructure resulting in changes in plant community structure and species composition. This is a cumulative impact.	Reduce dissection of habitat.	5.14.1. Implementation of control measures relating to conduct of staff and contractors on site and in relation to the prevailing natural environment.	▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ Contractor and ECO ▪ ECO
5.15. Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on	To reduce the potential of loss of freshwater habitat and ecological structure and associated impacts.	5.15.1. All areas of increased ecological sensitivity should be marked as such and be off limits to all unauthorised construction vehicles and personnel. 5.15.2. Where it is impossible to avoid placing infrastructure within riparian habitat, flow connectivity must be retained by preventing	▪ Ensure that the 32 m zone of regulation is taken into consideration in the final layout of the proposed electrical infrastructure. Ensure that this is taken into account, where possible and as feasible (as recommended by the Aquatic Ecology	▪ Once-off prior to the commencement of construction. ▪ Weekly ▪ Once-off prior to	▪ Project Developer (Mainstream) and ECO ▪ ECO and Contractor ▪ ECO and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.		fragmentation of the riparian habitat. Fragmentation of the riparian habitat can be avoided by (for example) ensuring that the disturbance footprint remains as small as possible, that no solid strips are excavated within the riparian habitat, that structures (such as culverts or monopoles) placed within the active channel do not cause increased turbulence, which will result in erosion. It must also be ensured that no canalization or incision of the riparian resource takes place as a result of the construction activities. 5.15.3. Ensure that vegetation clearing and indiscriminate vehicle driving does not occur within demarcated sensitive areas, including the identified freshwater resources, their associated riparian zones and the applicable 32m NEMA zone of regulation. 5.15.4. Contractor laydown areas must not be permitted within the 32m NEMA zone of regulation around the identified freshwater resources. 5.15.5. Minimize construction footprints and edge effects of construction activities. Edge effects of activities, particularly erosion and alien/weed control need to be strictly managed. 5.15.6. Clearing of vegetation at all impact sites must be kept to an absolute minimum, and growth of indigenous vegetation must be promoted to protect soils. 5.15.7. All development footprint areas should remain as small as possible and should not encroach onto surrounding more sensitive areas. It must be ensured that the freshwater resources, and their associated regulatory zones are off-limits to construction vehicles and personnel. The boundaries of footprint areas are to be clearly defined and it should be ensured that all activities remain within defined footprint areas.	Specialist), and that the recommended mitigation measures are implemented as required. ▪ Ensure that flow connectivity is retained if it is not avoidable to place infrastructure within riparian habitat, and that fragmentation is prevented. Ensure that these measures are implemented by undertaking site audits and reporting any non-compliance. ▪ Undertake site audits and inspections to ensure that vegetation removal and vehicle driving occurs on demarcated routes and that all sensitive areas are regarded as no-go areas. Ensure that the contractor demarcates sensitive areas and dedicated access routes for construction personnel. Monitor and report any non-compliance. ▪ Ensure that the limits of the construction boundary and temporary access roads are confirmed and that the construction area and vegetation removal is kept to a minimum. Conduct site audits and inspections to verify if this is undertaken and record and report any non-compliance.	construction for demarcation and weekly to ensure these demarcated areas are respected. ▪ Weekly	Contractor ▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		5.15.8. Planning of temporary roads and access routes should take the site sensitivity plan into consideration, and wherever possible, existing roads should be utilised. If additional roads are required, then wherever feasible such roads should be constructed a distance from the more sensitive riparian areas and not directly adjacent thereto. If crossings are required they should cross the system at right angles, as far as possible to minimise impacts in the receiving environment, and any areas where bank failure is observed due to the effects of such crossings should be immediately repaired by reducing the gradient of the banks to a maximum of a 1:3 slope and where needed necessary, installing support structures. This should only be necessary if existing access roads are not utilized. Bridge designs should prevent flow interruption, should not cause turbulent flow, and preferably span rivers, so as to avoid placement of support structures within active channels.			
		5.15.9. Implement alien vegetation control program; and promote indigenous vegetation growth to protect soils. 5.15.10. Construction activities should occur in the low flow season/ dry season to avoid sedimentation and minimize disturbance to hydraulic function. The duration of possible impacts on the riverine system should be minimised as far as possible by ensuring that the duration of time in which possible flow alteration and sedimentation will take place is minimised. 5.15.11. Use construction techniques to support the hydrology and sediment control functions of the freshwater resource. A suitably qualified engineer should be consulted for guidance in this regard, and these techniques should be incorporated into the EMPr and stormwater	▪ Ensure that these management actions are taken into consideration during the construction phase via site audits and inspections, and record and report any non-compliance.	▪ Weekly	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		management plan. 5.15.12. Limit excavations to ensure that drainage patterns return to normal after construction. 5.15.13. No disposal of waste within/in the vicinity of the freshwater resources. Correct waste management principles must be implemented on site and adequate waste disposal facilities must be provided. 5.15.14. Rehabilitate disturbed areas following completion of construction activities through reprofiling and revegetation. 5.15.15. Desilt the freshwater resource areas affected by construction activities, in the vicinity of construction activities. Desilting should preferably be undertaken by hand, and not using heavy machinery to avoid further impacts on the freshwater resources. 5.15.16. Strict erosion control and soil management measures must be implemented during the construction and operational phases, particularly in areas where vegetation has been removed. 5.15.17. Stockpiled soil must be levelled as required during construction and post-construction to avoid sedimentation from runoff, and revegetated with indigenous vegetation. 5.15.18. Compacted soil should be ripped, reprofiled and reseeded with indigenous vegetation following completion of construction activities.			
5.16. Disturbance of terrestrial fauna and flora on site due to construction workers and activities.	To advise construction staff of the requirements in respect of management of flora and fauna on site during the construction phase.	5.16.1. Conduct an Environmental Awareness Training and induction for all construction staff and personnel.	▪ Carry out Environmental Awareness Training with a discussion on the management of terrestrial fauna and flora on site. ▪ Conduct audits of the signed attendance registers.	▪ Prior to construction and as required by the ECO. Ensure that all new staff are inducted. ▪ Monthly	▪ ECO and Contractor ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
C. OPERATIONAL PHASE					
5.17. Change in ecological processes and habitat due to disturbance as a result of general activities associated with the operation and maintenance of the proposed on-site substation and O&M Building, which will include replacing of parts and infrastructure, as well as use of materials such as hydrocarbons.	Reduce impacts on terrestrial fauna and flora as a result of the operation of the proposed on-site substation.	5.17.1. Implement sound and appropriate management of the proposed project (i.e. electrical infrastructure) site including storm water management, vegetation management and related aspects around the site. 5.17.2. Ensure that containment of maintenance activities is achieved to within the on-site substation and O&M Building site to avoid unnecessary disturbance outside of the footprint. 5.17.3. Implementation of control measures relating to the conduct of maintenance staff and contractors on site and in relation to the prevailing natural environment. Operational staff should be educated on correct procedures to be used in waste disposal, conduct on site and operations of vehicles and machinery. 5.17.4. Implement control of all imported material (where applicable) to ensure that all materials are managed on site and within the footprint of the proposed on-site substation and O&M Building. 5.17.5. Control of all waste materials to ensure that all materials are removed from site, including sewage, for disposal at an appropriate facility (i.e. a licenced facility). 5.17.6. Appropriate lighting of the O&M Building and on-site substation should be provided in order to avoid unnecessary illumination of the surrounding environment. 5.17.7. Ensure the appropriate establishment of electric fencing around the proposed on-site substation (neutral line lowest). Inter alia, a neutral line	▪ Ensure that these factors are taken into consideration by undertaking site audits and visits and recording any non-compliance.	▪ Ongoing	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		should be established at ground level, while methods to prevent perching of birds on upper stands should be explored. 5.17.8. Monitoring of the fence line on a daily basis will alleviate impacts on smaller fauna, such as tortoise, that may become entrapped by the electric fence.			
5.18. Change in ecological processes and habitat, disturbance of emergent and established vegetation, changes in edaphic and other drivers, ousting of fauna in and around the site and particularly adjacent to powerlines, mortalities of species such as tortoise, and changes in biophysical drivers along the proposed powerline route (soil, vegetation cover, surface hydrology etc.), as a result of general activities during the power line and service road maintenance processes.	Reduce impacts on terrestrial fauna and flora as a result of the operation of the proposed distribution line and service road.	5.18.1. Implement sound and appropriate management of points around the proposed towers including storm water management and vegetation control. 5.18.2. Ensure that containment of maintenance activities is achieved to the proposed powerline servitude and points around towers to avoid unnecessary disturbance outside of the footprint. 5.18.3. Implementation of control measures relating to the conduct of maintenance staff and contractors on site and in relation to the prevailing natural environment. Operational staff should be educated on waste management while on site, adherence to speed limits and general conduct on site. 5.18.4. Implement control of all imported material to ensure that materials are managed during operations along the proposed powerline route. 5.18.5. Control of all waste materials to ensure that all materials are removed from along the proposed powerline route and disposed of correctly at a licenced facility.	▪ Ensure that these factors are taken into consideration by undertaking site audits and visits and recording any non-compliance.	▪ Ongoing	▪ Project Developer (Mainstream)
5.19. Disturbance of vegetation and alteration of vegetation community structure and habitat form as a result of maintenance operations around the	The maintenance of the prevailing habitat form and type in areas subject to disturbance during the operational phase.	5.19.1. Implement vegetation management and conservation initiatives which includes exotic weed control; vegetation management along the power line and service road route; and around fence lines and within the site; and monitoring and maintenance of larger plant associations in	▪ Undertake monitoring via visual inspections of the site, and record and report non-compliance and recommend methods to rectify any areas of concern.	▪ Monthly	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
proposed on-site substation and O&M building, of the power line and service road, as well as increased human and vehicle traffic levels.		proximity to infrastructure. 5.19.2. Undertake regular review of vegetation and habitat in and around the towers and substation. 5.19.3. Specific consideration of habitat change indicated by moribund state, rapid change in structure and composition of vegetation etc.			
5.20. Increase in terrestrial mortalities through the movement of vehicles along the line route (particularly tortoises). Electric fencing also offers a potential threat to some species. This has the potential to inflict lethal consequences on smaller and less mobile species such as tortoises (i.e. localised extinction or ousting of species with concomitant change in ecosystem function).	To reduce the risk to fauna due to activities associated with the operations of the proposed infrastructure.	5.20.1. Develop protocols in respect of management of wildlife within and immediately adjacent to the operational area. 5.20.2. Undertake a regular assessment of the operational site to identify the presence of fauna within work areas. Address and relocate any fauna identified. 5.20.3. Log any identified mortalities and identify the cause of such, along with remedial actions.	▪ Monitor mortalities and identify the associated cause if encountered. Record the number of faunal mortalities and ensure that remedial actions are implemented.	▪ Daily to intermittent	▪ Project Developer (Mainstream)
5.21. Change in faunal behaviour due to increased lighting around the proposed on-site substation and O&M Building (ELP), which will be lit at night. In particular, invertebrate species may be attracted to lights which have concomitant influences on the behavioural patterns of other species in the area. Alternatively, hunting	To manage impacts on faunal behaviour and associated ecological aspects associated with ELP and operations.	5.21.1. Develop protocols in respect of management of wildlife within and immediately adjacent to the operational area. 5.21.2. Undertake a regular assessment of the operational site to identify the presence of fauna within work areas. Address and relocate any fauna identified. 5.21.3. Ensure that nuisance factors, in particular noise and light are mitigated and minimized. 5.21.4. Apply suitable lumens and ensure direction of lighting is within the boundary of the proposed on-site substation. The direction of lighting should not be focused outside of the subject area, while the level of lumens should be such	▪ Identify points of excessive noise or light and consider mitigation measures, if possible; and monitor and log changes and faunal mortalities that are identified from time to time.	▪ Daily to intermittent	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
and other behaviours may alter as a consequence of additional lighting within an area previously devoid of such factor. Increased ELP levels is also listed as a cumulative impact.		that the necessary lighting to achieve its objective is achieved (security, operations etc.).			
5.22. Change in faunal community structure as a consequence of increased perching points for raptors due to the powerline, which will afford some birds of prey that hunt from perched positions improved opportunities for the detection and capture of prey. Such increases in predation pressures on potential prey species in and around the proposed powerline may have consequences for localised ecological processes and for example, small mammal populations.	To manage impacts on faunal behaviour and associated ecological aspects associated with, in particular powerlines and other structures.	5.22.1. Monitor, review, and identify faunal activities in and around the subject site and any change in activities over time (e.g. increased burrowing activities; increased numbers of predator species located in and around sites (e.g. jackal)).	▪ Undertake monitoring via visual inspections of the site, and record and report non-compliance and recommend methods to rectify any areas of concern.	▪ Daily to intermittent	▪ Project Developer (Mainstream)
5.23. Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources	To reduce the potential of loss of freshwater habitat and ecological structure and associated impacts.	5.23.1. Rehabilitate areas where active erosion is identified to re-instate natural topography and hydrological conditions. 5.23.2. Monitor for erosion and incision within affected freshwater resources. 5.23.3. Implement alien vegetation control program and ensure establishment of indigenous species	▪ Carry out visual inspections to identify areas of active erosion within the operational area. Ensure that these areas are rehabilitated adequately by undertaking site visits and recording and reporting any non-compliance. ▪ Carry out visual inspections to monitor	▪ Weekly or as required during the operational phase ▪ Weekly or as required during the operational	▪ Project Developer (Mainstream) ▪ Project Developer (Mainstream) ▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
hydrological function and sediment balance; and potential impacts on water quality.		within areas where alien vegetation was identified. 5.23.4. Vehicles should not be driven indiscriminately within the freshwater resource areas during maintenance activities to prevent soil compaction, disturbances to fauna and destruction of riparian vegetation. 5.23.5. Prudent monitoring of the identified river systems and their respective tributaries associated with the proposed electrical infrastructure development (particularly in the vicinity of the substations) is of utmost importance, as this will ensure a continual flow of data, enabling all parties involved to accurately assess and manage freshwater resources related progress and issues. To ensure the accurate gathering of data, the following techniques and guidelines should be followed: • Fixed point monitoring should be applied as the preferred method of monitoring; • All data gathered should be measurable (qualitative and quantitative); • Monitoring reports should be repeatable; • Data should be auditable; and • General habitat unit overviews should also be undertaken. The table in Appendix D of this EMPr illustrates data capturing for the monitoring plan (relating to fluvial resources).	erosion and incision within the affected freshwater resource areas, and ensure that corrective actions are implemented. ▪ Carry out visual inspections to ensure and verify that the alien vegetation programme is implemented. ▪ Educate operational staff on the boundaries of the operational footprint and driving within demarcated areas. Carry out environmental awareness training in this regard.	phase. ▪ Monthly ▪ Once-off and ensure that all new staff are inducted.	▪ Project Developer (Mainstream)
D. DECOMMISSIONING PHASE					
5.24. Recruitment and behavioural change in fauna resulting in change in ecological processes	To manage impacts on faunal behaviour and associated ecological aspects during decommissioning activities.	5.24.1. Develop protocols in respect of management of wildlife within and adjacent to the site designated for decommissioning. Compile and implement a Vegetation Rehabilitation Plan in order to improve habitat diversity. Improved	▪ Appoint a suitable specialist to undertake a final site evaluation and to complete the search and rescue. Identify the plants that may need to	▪ Prior to demolition and/or decommissioning ▪ Prior to demolition	▪ Project Developer (Mainstream) and ECO ▪ Project Developer

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
and habitat.		habitat complexity will buffer transformation and reduce impacts on faunal behaviour and populations. 5.24.2. Undertake regular assessment of sites to identify the presence of fauna within work areas prior to and post construction. Address and relocate any fauna identified prior to demolition. 5.24.3. Ensure that nuisance factors, in particular noise and light are mitigated and minimised during removal.	be relocated or rescued. ▪ Ensure that a suitable specialist is appointed to compile a Vegetation Rehabilitation Plan. Review signed minutes of meetings or signed reports. ▪ Undertake site audits and record and report any non-compliance.	and/or decommissioning ▪ Daily	(Mainstream), Ecologist and ECO ▪ ECO and Contractor
5.25. Impact of solid waste generation on fauna as a result of potential ingestion or ensnarement. Solid waste (e.g. small bolts, wires etc.), and solid and derelict structures left on site following the demolition and removal of structures has the potential to harm or kill animals (local fauna) through ingestion or ensnarement.	The containment and correct disposal of solid waste is required in order to avert behavioural change in local fauna as well as general pollution impacts on the terrestrial habitat.	5.25.1. Ensure that waste generated on site is contained in order to prevent access by terrestrial fauna and avifauna. 5.25.2. Remove waste from site on a regular basis, following by safe disposal at a licensed waste disposal facility. 5.25.3. Ensure that a thorough survey of the site following clearance and decommissioning is undertaken. All material is to be removed from site at the end of the decommissioning phase.	▪ Conduct audits to ensure that receptacles for waste are available at all sites of operation and that these are sealed off and contained. Record and report any non-compliance. ▪ Conduct audits and site inspections to ensure that regular cleaning operations are undertaken on site, and that this includes the clearance of waste materials. Record and report any non-compliance. ▪ Conduct a final external audit to confirm that area is left in a suitable condition.	▪ Daily ▪ Daily ▪ At the end of the decommissioning phase.	▪ Contractor and ECO ▪ Contractor and ECO ▪ Project Developer (Mainstream) and ECO
5.26. Vegetation and habitat alteration and reversion to secondary habitat structure at transformed sites. Removal of the proposed power line and related infrastructure will alter the localised topography at points, which may prevent successional processes establishing at	Reinstatement of vegetation and habitat following closure of site or decommissioning of operations.	5.26.1. Remove all structures and relocate material off site and dispose of waste materials correctly. 5.26.2. Rip and manage compacted surface soils at areas. Areas that have been subject to compaction should be ripped mechanically, or by hand in order to promote vegetative colonisation of the affected areas. Undertake topographic sculpting of site. If and where required, areas should be sculpted to mimic the prevailing habitat. Ensure that the site is revegetated.	▪ Carry out site inspections and audits to review the site and ensure that all structures are removed from site and correctly disposed (as required and where applicable). ▪ Carry out inspections and site audits to ensure that the site is ripped and sculpted to conform to the prevailing topography, and that the site is re-vegetated, if and where required. Monitor the management measures to verify if they are implemented	▪ Once-off operation ▪ Throughout the decommissioning phase. ▪ Throughout the decommissioning phase. ▪ Once-off prior to decommissioning and implementation	▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream) and ECO ▪ Project Developer (Mainstream),

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
these points on account of intrinsic changes in edaphics, lithic or other factors.		5.26.3. Monitor and address any exotic plant establishment. 5.26.4. Compile and implement a Vegetation Rehabilitation Plan in order to improve habitat diversity. Establish rehabilitation protocols and management interventions for site that would include post construction remediation and rehabilitation. 5.26.5. Undertake management of secondary emergent vegetation communities to ensure that emergent vegetation is aligned to prevailing habitat.	successfully in order to ensure plant re-vegetation. ▪ Carry out visual inspections to verify the removal of exotic plant species and record and report any non-compliance. ▪ Ensure that a suitable specialist is appointed to compile a Vegetation Rehabilitation Plan. Review signed minutes of meetings or signed reports.	during decommissioning.	Decommissioning Manager, ECO and Ecologist
5.27. Rehabilitation of flora on site	Re-vegetation of the disturbed site is aimed at approximating as near as possible the natural vegetative conditions prevailing prior to operation.	5.27.1. All damaged areas shall be rehabilitated upon completion of the contract. 5.27.2. All natural areas must be rehabilitated with species indigenous to the area. Re-seed with locally-sourced seed of indigenous grass species that were recorded on site pre-construction. 5.27.3. Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas.	▪ Conduct a final external audit to confirm that area is rehabilitated to an acceptable level.	▪ Once off	▪ Project Developer (Mainstream) with feedback and input from an appropriate specialist. with advice from specialist
5.28. Loss of freshwater habitat and ecological structure; changes to the freshwater resource ecological and sociocultural service provision; impacts on the freshwater resources hydrological function and sediment balance; and potential impacts on water quality.	To reduce the potential of loss of freshwater habitat and ecological structure and associated impacts.	5.28.1. Refer to the management actions in Section 5.18 of this Section of the EMPr and implement them for the decommissioning phase, as applicable.	▪ Refer to the monitoring methodology in Section 5.18 of this Section of the EMPr and implement them for the decommissioning phase, as applicable.	▪ Ongoing	▪ Project Developer (Mainstream)

6 OPEN SPACE MANAGEMENT PLAN

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
6.1. Loss of vegetation and habitat fragmentation	Keeping the area cleared of vegetation to a minimum	6.1.1. Clearing of vegetation should be kept to a minimum and take into consideration the sensitivities on site shown in Appendices B and C of this EMPr.	▪ Ensure that design and layout is uniform and well-adapted to the surrounding environment and that no unnecessary areas are cleared of vegetation.	▪ Once-off during design	▪ Project Developer (Mainstream)
6.2. Impacts due to establishment of alien invasive plants	Ensure the appropriate removal of alien invasive vegetation from the proposed project area and prevent the establishment and spread of alien invasive plants due to the project activities.	6.2.1. Ensure compliance with relevant Environmental Specifications for the control and removal of alien invasive plant species. 6.2.2. Appoint a specialist or contact relevant authorities to seek guidance on the removal of the alien vegetation on site. 6.2.3. Compile and finalise an alien weed eradication programme.	▪ Appoint a suitable specialist/ Contractor or contact the relevant authorities to seek guidance on the removal of the planted alien invasive species. ▪ Appoint a suitable specialist to compile an alien invasive vegetation eradication plan. ▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during the design phase. ▪ Once-off during the design phase. ▪ Once-off during the design phase.	▪ Project Developer (Mainstream) ▪ Project Developer (Mainstream) ▪ ECO
6.3. Permanent barriers to animal movement and habitat fragmentation	The reduction in the impact that permanent barriers (as a result of construction activities and the proposed infrastructure) will have on animal movement within the area	6.3.1. Fencing should allow for the passage of small and medium sized mammals and all forms of mesh fencing should be avoided.	▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during the planning and design phase	▪ Project Developer (Mainstream)
		6.3.2. All remaining areas that are not impacted upon by the proposed development footprint should remain unfenced to allow for movement corridors between the remainder of the farm.	▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during the planning and design phase	▪ Project Developer (Mainstream)
B. CONSTRUCTION PHASE					
6.4. Permanent barriers to animal movement and habitat fragmentation	The reduction in the impact that permanent barriers (as a result of construction activities will have on animal movement within the area.	6.4.1. Fencing should allow for the passage of small and medium sized mammals and all forms of mesh fencing should be avoided.	▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during the planning and design phase	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
6.5. Loss of vegetation and habitat fragmentation	Keeping the area cleared of vegetation to a minimum	6.5.1. Clearing of vegetation should be kept to a minimum, keeping the width and length of the earthworks to a minimum.	▪ Monitor activities and record and report non-compliance.	▪ Daily	▪ ECO and Contractor
C. OPERATIONAL PHASE					
6.6. Increased risk of alien plant invasion	Ensure that the site is kept free from alien invasive species.	6.6.1. Continuously monitor the site and remove alien invasive species that are found.	▪ Monitor the presence of alien invasive species on the development site.	▪ Reporting frequency depends on legal compliance framework	▪ Project Developer (Mainstream)
6.7. Increased animal road mortality	Minimise loss of fauna as a result of road mortalities.	6.7.1. Create awareness during staff induction programmes. Staff must be made aware of the general speed limits as well as the potential animals that may cross and how to react in these situations.	▪ Conduct staff awareness training programmes.	▪ Once-off training and ensure all new staff are inducted.	▪ Project Developer (Mainstream)
D. DECOMMISSIONING PHASE					
6.8. No specific impacts are associated with the decommissioning phase other than those from the operational phase that will still be relevant for the duration of the decommissioning phase due to on-going occupation of the area.	To manage impacts on the surrounding environment during the operational phase.	6.8.1. Disturbed and transformed areas should be contoured to approximate naturally occurring slopes to avoid lines and forms that will contrast with the existing landscapes	▪ Final external audit of area to confirm that area is rehabilitated to an acceptable level	▪ Once off	▪ Project Developer (Mainstream)
		6.8.2. Stockpiled topsoil should be reapplied to disturbed areas and these areas should be re-vegetated using a mix of native species in such a way that the areas will form as little contrast in form, line, colour and texture with the surrounding undisturbed landscape.	▪ Final external audit of area to confirm that area is rehabilitated to an acceptable level	▪ Once off	▪ Project Developer (Mainstream)
		6.8.3. Edges of re-vegetated areas should be feathered to reduce form and line contrasts with surrounding undisturbed landscape.	▪ Final external audit of area to confirm that area is rehabilitated to an acceptable level	▪ Once off	▪ Project Developer (Mainstream)

7 TRAFFIC MANAGEMENT PLAN INCLUDING TRANSPORTATION PLAN

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
7.1. Increased traffic generation	Manage impact that additional traffic generation will have on road network	7.1.1. If abnormal loads need to be transported by road to the site, a permit needs to be obtained from the relevant provincial government department.	▪ Ensure that the permits are applied for and obtained prior to commencement. ▪ Verify that this has been undertaken by reviewing approved permits.	▪ Once-off during the design phase ▪ Once-off during the design phase.	▪ Contractor ▪ ECO
B. CONSTRUCTION PHASE					
7.2. Increased traffic generation during the construction phase resulting in a reduction of road based level of service	Reduce the amount of road based traffic during the construction phase.	7.2.1. Well maintained vehicles should be used together with well-trained drivers during the construction phase. Vehicle maintenance and driver competency should be monitored. Proof of driver competency as well as the vehicle checks should be verified and undertaken to ensure that vehicles are roadworthy and hence, do not pose a safety risk. The Contractors must ensure that construction vehicles are roadworthy, properly serviced and maintained, and respect the vehicle safety standards implemented by the Project Developer.	▪ Carry out random checks of driver licenses and conduct random visual inspections of construction vehicles for roadworthiness.	▪ Random visual inspection of vehicles weekly.	▪ Contractor
		7.2.2. Plan trips so that it occurs during the day but avoid construction vehicle movement on the regional road during peak time (06:00-10:00 and 16:00-20:00).	▪ Monitor and management of traffic generated and when trips are made.	▪ During construction	▪ Contractor and ECO
		7.2.3. During the construction phase, suitable parking areas should be designated for trucks and vehicles.	▪ Monitor the placement of the designated parking area for trucks and vehicles via visual inspections and record and report any non-compliance.	▪ Once-off prior to construction and as required during the construction phase.	▪ Project Developer (Mainstream) and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		7.2.4. The use of public transport (buses and/or minibus taxis) to convey construction personnel to the site should be encouraged.	▪ Contractor may record arrival and departure times as well as number of workers using minibuses.	▪ Once a month on a randomly selected day.	▪ Appointed Contractor
		7.2.5. It is recommended that vehicles are not overloaded during the construction phase in order to reduce impacts on the road structures, particularly the access roads leading to the site. Random visual inspection of vehicles should be undertaken in order to monitor for overloading. The inspections should also verify if the trucks are covered with appropriate material (such as tarpaulin) if and where possible.	▪ Perform visual inspection of vehicles during the construction phase.	▪ Random visual inspection of vehicles weekly.	▪ Appointed Contractor
7.3. Increased level of road accidents (involving pedestrians, animals, other motorists on the surrounding tarred/ gravel road network) due to increased traffic during construction.	Minimise the impact of the construction activities on the local traffic and avoid accidents with pedestrians, animals and other drivers on the surrounding tarred/ gravel roads. Reduce number of road accidents due to increased traffic during construction.	7.3.1. Well maintained vehicles should be used together with well-trained drivers during the construction phase. Vehicle maintenance and driver competency should be monitored. Proof of driver competency as well as the vehicle checks should be verified and undertaken to ensure that vehicles are roadworthy and hence, do not pose a safety risk. The Contractors must ensure that construction vehicles are roadworthy, properly serviced and maintained, and respect the vehicle safety standards implemented by the Project Developer.	▪ Carry out random checks of driver licenses and conduct random visual inspections of construction vehicles for roadworthiness.	▪ Random visual inspection of vehicles weekly.	▪ Contractor
		7.3.2. Road mortality monitoring programme (inclusive of wildlife collisions record keeping) should be established.	▪ Appropriate monitoring should be undertaken.	▪ Weekly	▪ Contractor and ECO
		7.3.3. Adhere to all speed limits applicable to all roads used.	▪ Ensure that speed limits are adhered to. ▪ Carry out random visual inspections to verify speed limits and general awareness of vehicle drivers.	▪ Daily ▪ Random during the construction phase	▪ Contractor and ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		7.3.4. Implement clear and visible signalisation and signage indicating movement of vehicles within and around site, especially along access roads and intersections with public and private roads.	▪ Implement clear signalisation. ▪ Carry out random inspections to verify whether proper construction signage is being implemented.	▪ On-going ▪ Random during the construction phase	▪ Contractor and ECO ▪ ECO
C. OPERATIONAL PHASE					
7.4. Increased level of road accidents (involving pedestrians, animals, other motorists on the surrounding tarred/ gravel road network) due to traffic on the maintenance road during the operational phase.	Minimise the impact of the operational activities on the local traffic and avoid accidents with pedestrians, animals and other drivers on the surrounding tarred/ gravel roads. Reduce number of road accidents due to traffic during the operational phase.	7.4.1. Adhere to all speed limits applicable to all roads used.	▪ Ensure that speed limits are adhered to. ▪ Carry out random visual inspections to verify speed limits and general awareness of vehicle drivers.	▪ Daily ▪ Random during the operational phase	▪ Project Developer (Mainstream)
		7.4.2. Implement clear and visible signage and signals indicating movement of vehicles at the intersection with the Transnet Service Road to ensure safe entry and exit.	▪ Implement clear signalisation. ▪ Carry out random inspections to verify whether proper operational signage is being implemented.	▪ Ongoing ▪ Random during the operational phase	▪ Project Developer (Mainstream)
D. DECOMMISSIONING PHASE					
7.5. Ensure that the construction mitigation and management measures are adhered to during the decommissioning phase.					

8 STORM WATER MANAGEMENT PLAN

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
8.1. Impact of the project if a detailed storm water management plan is not correctly prepared.	To limit the effect of uncontrolled storm water run-off from developed areas onto natural areas	8.1.1. Prepare a detailed stormwater management plan outlining appropriate treatment measures to address runoff from disturbed portions of the site, such that they do not: ▪ result in concentrated flows into natural watercourses i.e. provision should be made for temporary or permanent measures that allow for attenuation, control of velocities and capturing of sediment upstream of natural water courses; ▪ result in any necessity for concrete or other lining of natural water courses to protect them from concentrated flows of the development; ▪ divert flows out of their natural flow pathways, thus depriving downstream watercourses of water.	▪ Check compliance with specified conditions. ▪ Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.	▪ Once-off during design followed by regular control ▪ During the design phase	▪ Contractor ▪ ECO
B. CONSTRUCTION PHASE					
8.2. Diversion and impedance surface water flows – changes to the hydrological regime and increased potential for erosion.	Prevent interference with natural run-off patterns, diverting flows and increasing the velocity of surface water flows.	8.2.1. The appointed Contractor should compile a Method Statement for Stormwater Management during the construction phase.	▪ Compile a Method Statement for Stormwater Management during the construction phase. ▪ Inspect and verify if a Method Statement for Stormwater Management has been compiled by the Contractor via audits prior to the commencement of the construction phase.	▪ Prior to the construction phase. ▪ Once-off prior to the commencement of the construction phase.	▪ Contractor ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
Diversion and increased velocity of surface water flows – reduction in permeable surfaces		8.2.2. Erosion and sedimentation into water bodies must be minimised through the effective stabilisation (gabions and Reno mattresses or similar) and the re-vegetation of any disturbed riverbanks.	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or Bi-weekly	▪ ECO
		8.2.3. Place energy dissipation structures in a manner that allows the management of flows prior to being discharged into the natural environment, thus not only preventing erosion, but supporting the maintenance of natural base flows within these systems i.e. hydrological regime (water quantity and quality) is maintained.	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or bi-weekly	▪ ECO
		8.2.4. Reinforce soil slopes to minimise erosion during rehabilitation (as needed, and once construction in a specific area has ceased).	▪ Monitor activities and record and report non-compliance.	▪ As needed during the construction phase	▪ ECO
		8.2.5. Drainage along the sides of the roads should be designed so that it does not result in concentrated flows into watercourses.	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or bi-weekly	▪ ECO
		8.2.6. Perform periodic inspections and maintenance of soil erosion measures and stormwater control structures.	▪ Monitor activities and record and report non-compliance.	▪ As needed during the construction phase	▪ ECO
8.3. Pollution of the surrounding environment as a result of the contamination of stormwater. Contamination could result from the spillage of chemicals, oils, fuels, sewage, solid	To prevent contaminated stormwater from entering into and adversely impacting on freshwater ecosystems and reducing the water quality. To reduce sedimentation of nearby water systems.	8.3.1. The appointed Contractor should compile a Method Statement for Stormwater Management during the construction phase.	▪ Compile a Method Statement for Stormwater Management during the construction phase. ▪ Inspect and verify if a Method Statement for Stormwater Management has been compiled by the Contractor via audits prior to the commencement of the construction phase.	▪ Prior to the construction phase. ▪ Once-off prior to the commencement of the construction phase.	▪ Contractor ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
waste, litter etc.	To apply best practice principles in managing risks to storm water pollution.	8.3.2. Provide secure storage for fuel, oil, chemicals and other waste materials to prevent contamination of stormwater runoff. Fuels and chemicals (i.e. any hazardous materials and dangerous goods) used during the construction phase must be stored safely on site and in bunded areas. Fuel and chemical storage containers must be inspected to ensure that any leaks are detected early.	▪ Monitor the storage and handling of dangerous goods and hazardous materials on site via site audits and record non-compliance and incidents. Monitor if spillages have taken place and if they are removed correctly.	▪ Weekly	▪ ECO
		8.3.3. All stockpiles must be protected from erosion and stored on flat areas where run-off will be minimised. Erosion and sedimentation into water bodies must be minimised through effective stabilisation. No stockpiling should take place within a watercourse. 8.3.4. Stockpiles must be located away from river channels i.e. greater than 32 m.	▪ Monitor the excavations and stockpiling process throughout the construction phase via visual site inspections. Record non-compliance and incidents.	▪ Daily	▪ ECO
		8.3.5. Littering and contamination of water resources during construction must be prevented by effective construction camp management.	▪ Monitor via site audits and record non-compliance and incidents (i.e. by implementing walk through inspections).	▪ Weekly	▪ Contractor and ECO
		8.3.6. Emergency plans must be in place to deal with potential spillages (especially those leading to any watercourses).	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or Bi-weekly	▪ ECO
		8.3.7. Erosion and sedimentation into water bodies must be minimised through the effective stabilisation (gabions and Reno mattresses or similar) and the re-vegetation of any disturbed riverbanks.	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or Bi-weekly	▪ ECO
		8.3.8. Ensure that the temporary site camp and ablution facilities are established at least 32 m away from the banks of the major	▪ Monitor the placement of the site camp via visual inspections, and record and report any non-	▪ Once-off prior to construction and as required during the	▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		drainage lines.	compliance.	construction phase.	
		8.3.9. Ensure that there is no ad-hoc crossing of channels by vehicles during the construction phase. Access routes across the site should be strictly demarcated and selected with a view to minimise impacts on drainage lines.	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or Bi-weekly	▪ ECO
		8.3.10. Ensure that no waste materials or sediments are left in the surrounding drainage lines (as a result of the construction).	▪ Check compliance with specified conditions of the Stormwater Management Plan and Method Statement.	▪ Weekly or Bi-weekly	▪ ECO
		8.3.11. Regular inspections of stormwater infrastructure should be undertaken to ensure that it is kept clear of all debris and weeds.	▪ Monitor via site audits and record non-compliance and incidents (i.e. by implementing walk through inspections).	▪ Weekly	▪ Contractor and ECO
C. DECOMMISSIONING PHASE					
8.4. Ensure that the construction mitigation and management measures are adhered to during the decommissioning phase.					

9 EROSION MANAGEMENT PLAN

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. CONSTRUCTION PHASE					
9.1. Increased wind erosion and resultant deposition of dust	Prevent wind erosion and resultant deposition of dust on surrounding indigenous vegetation.	9.1.1. Sand, stone and cement should be stored in demarcated areas, and covered or sealed to prevent wind erosion and resultant deposition of dust on the surrounding indigenous vegetation.	▪ Undertake regular inspections of the via site audits to verify that sand, stone and cement are stored and handled as instructed.	▪ Daily	▪ ECO and Contractor
		9.1.2. During construction, efforts should be made to retain as much natural vegetation as possible on the site, to reduce disturbed areas and maintain plant cover, thus reducing erosion risks.	▪ Monitor activities via site inspections and record and report non-compliance.	▪ Daily	▪ ECO and Contractor
		9.1.3. All stockpiles must be protected from erosion and stored on flat areas where run-off will be minimised. Erosion and sedimentation into water bodies must be minimised through effective stabilisation.	▪ Monitor the stockpiling process throughout the construction phase via visual site inspections. Record non-compliance and incidents.	▪ Daily	▪ ECO
9.2. Increased erosion near freshwater resources.	Prevent erosion near freshwater resources resulting in hydrological change.	9.2.1. To prevent the erosion of soils, management measures may include berms, soil traps, hessian curtains and stormwater diversion away from areas particularly susceptible to erosion. 9.2.2. Install erosion berms during construction to prevent gully formation. Berms every 50m should be installed where any disturbed soils have a slope of less than 2%, every 25m where the track slopes between 2% and 10%, every 20m where the track slopes between 10% and 15% and every 10m where the track slope is greater than 15%. 9.2.3. Sheet runoff from access roads should be slowed down by the strategic placement of	▪ Monitor the erosion occurring on site, and the stockpiling process throughout the construction phase via visual site inspections. Record non-compliance and incidents, and monitor if the management actions are implemented in consultation with the contractor.	▪ Daily	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		berms and sandbags. 9.2.4. Maintain topsoil stockpiles below 5 meters in height. 9.2.5. As far as possible, all construction activities should occur in the low flow season, during the drier summer months. 9.2.6. All soils compacted as a result of construction activities falling outside of the project footprint areas should be ripped and profiled. Special attention should be paid to alien and invasive control within these areas. 9.2.7. Monitor all areas for erosion and incision, particularly any freshwater resource crossings. Any areas where erosion is occurring excessively quickly should be rehabilitated as quickly as possible and in conjunction with other role players in the catchment.			
9.3. Sedimentation of the surrounding drainage lines as a result of stormwater runoff and stockpiling of excavated material during the construction phase. The excavated material could potentially be washed into the drainage lines via stormwater. This could also impact on avifauna.	Reduce sedimentation as a result of erosion caused by stockpiling and stormwater runoff.	9.3.1. All material that is excavated during the construction phase must be stored appropriately on site in order to minimise impacts on the surrounding aquatic environment. 9.3.2. Exposed soil surfaces should be graded to minimise runoff and increase infiltration. 9.3.3. Where possible, sandbags (or similar) should be placed at the bases of the stockpiled material in order to prevent erosion of the material. 9.3.4. Undertake periodic inspections and maintenance of soil erosion measures and stormwater control structures. 9.3.5. Stockpiles must be located at least 32 m away from the drainage lines, on flat areas where run-off will be minimised.	▪ Monitor activities via site inspections and record and report non-compliance.	▪ Daily	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		9.3.6. During periods of strong winds and heavy rain (in line with relevant rainfall patterns), the stockpiles should be covered with appropriate material (e.g. cloth, tarpaulin etc.).			
B. OPERATIONAL PHASE					
9.4. Excessive loss of natural vegetation in the development footprint area and resulting impacts on SSC, faunal habitat and habitat fragmentation.	Prevent loss of natural vegetation and minimise habitat fragmentation and the loss of connectivity as a result of erosion.	9.4.1. To prevent erosion, indigenous grasses that seed themselves should (where possible) be left to form a ground cover and kept short.	▪ ECO to advise on seed to be used.	▪ Prior to re-vegetation.	▪ Project Developer (Mainstream)
		9.4.2. The use of silt fences, sand bags or other suitable methods must be implemented in areas that are susceptible to erosion. Other erosion control measures that can be implemented are as follows: 1) Brush packing with cleared vegetation, 2) Planting of vegetation, 3) Hydro seeding/hand sowing. All erosion control mechanisms need to be regularly maintained.	▪ Monitor efficiency of erosion control measures.	▪ Weekly or monthly	▪ Project Developer (Mainstream)
		9.4.3. Conduct regular monitoring for erosion to ensure that no erosion problems are occurring at the site as a result of the roads and other infrastructure. Ensure that all erosion problems are rectified as soon as possible.	▪ Undertake regular monitoring for erosion to ensure is reduced and rectified as soon as possible.	▪ Monthly	▪ Project Developer (Mainstream)
9.5. Increased wind erosion and resultant deposition of dust.	Prevent wind erosion and resultant deposition of dust on surrounding indigenous vegetation.	9.5.1. Implement an effective system of run-off control, where it is required, that collects and safely disseminates run-off water from all hardened surfaces and prevents potential down slope erosion.	▪ Include periodic site inspections in environmental performance reporting that inspects the effectiveness and integrity of the run-off control system and specifically records occurrence or non-occurrence of any erosion on site or downstream. Corrective action must be implemented to the run-off control system in the event of any erosion occurring.	▪ Quarterly	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
C. DECOMMISSIONING PHASE					
9.6. No specific impacts are associated with the decommissioning phase other than those from the operational phase that will still be relevant for the duration of the decommissioning phase due to on-going occupation of the area. Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas. Monitoring: Final external audit of area to confirm that area is rehabilitated to an acceptable level (once off event to be conducted by ECO).					

10 HAZARDOUS SUBSTANCES LEAKAGE OR SPILLAGE MONITORING SYSTEM

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. CONSTRUCTION PHASE					
10.1. Contamination of soil and risk of damage to vegetation and/or fauna through spillage of concrete and cement.	To control concrete and cement batching activities in order to reduce spillages and resulting contamination of soil, groundwater and the vegetation and/or fauna.	10.1.1. If any concrete mixing takes placed on site, this must be carried out in a clearly marked, designated area at the site camp on an impermeable surface (such as on boards or plastic sheeting and/or within a bunded area with an impermeable surface).	▪ Monitor the handling and storage of sand, stone and cement as instructed.	▪ Daily	▪ Project Developer (Mainstream), Contractor and ECO
		10.1.2. Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, gullies and drains.	▪ Monitor the handling and storage of sand, stone and cement as instructed.	▪ Daily	▪ Project Developer (Mainstream), Contractor and ECO
		10.1.3. A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted.	▪ Monitor the handling and storage of sand, stone and cement as instructed.	▪ Daily	▪ Project Developer (Mainstream), Contractor and ECO
		10.1.4. Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licenced disposal facility. Proof of disposal (i.e. waste disposal slips or waybills) should be retained on file for auditing purposes.	▪ Monitor the handling and storage of sand, stone and cement as instructed. ▪ Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Daily ▪ Monthly	▪ Project Developer (Mainstream), Contractor and ECO ▪ ECO
		10.1.5. Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site. Empty cement bags must be collected from the construction area at the end of every day. Sand and aggregates containing cement must be kept damp to prevent the generation of dust.	▪ Monitor the handling and storage of sand, stone and cement as instructed.	▪ Daily	▪ Project Developer (Mainstream), Contractor and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		10.1.6. Any excess sand, stone and cement must be removed from site at the completion of the construction period and disposed at a licenced waste disposal facility. Proof of disposal (i.e. waste disposal slips or waybills) should be retained on file for auditing purposes.	▪ Monitor the handling and storage of sand, stone and cement as instructed. ▪ Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Daily ▪ Monthly	▪ Project Developer (Mainstream), Contractor and ECO ▪ ECO
10.2. Contamination of soil and risk of damage to vegetation and/or fauna through spillage of fuels and oils.	To control and eliminate fuel and oil spillages which may result in soil contamination and damage to vegetation and/or fauna.	10.2.1. Ensure that adequate containment structures are provided for the temporary storage of liquid dangerous goods and hazardous materials on site (such as chemicals, oil, fuel, hydraulic fluids, lubricating oils etc.). Appropriate bund areas must be provided for the storage of these materials at the site camp. No storage of such chemicals should be permitted within the riparian buffer zones. Bund areas should contain an impervious surface in order to prevent spillages from entering the ground. Bund areas should have a capacity of 110 % of the volume of the largest tank in the bund (tanks include storage of fuel/diesel). It must be ensured that all hazardous storage containers and storage areas comply with the relevant South African Bureau of Standards (SABS) standards to prevent leakage.	▪ Monitor the storage and handling of dangerous goods and hazardous materials on site via site audits and record non-compliance and incidents.	▪ Weekly	▪ Contractor and ECO
		10.2.2. Monitor and inspect construction equipment and vehicles to ensure that no fuel spillage takes place. Ensure that drip trays are provided for construction equipment and vehicles as required.	▪ Monitor the construction equipment and vehicles and monitor the occurrence of spills and the management process thereof. ▪ Record all spills and lessons learnt.	▪ Daily ▪ During spill events	▪ Contractor and ECO ▪ ECO
		10.2.3. Contractor to compile a Method Statement for refuelling activities under normal and emergency situations. If on-site servicing and refuelling is required in emergency situations, a designated area must be created at the construction site camp for this purpose (i.e. refuelling must take place on	▪ Verify if a Method Statement is compiled by reviewing approved and signed off reports. ▪ Monitor the refuelling/	▪ Once-off prior to commencement of construction. ▪ During	▪ ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		a sealed surface area to prevent ingress of hydrocarbons into topsoil). Drip trays or similar impervious materials must be used during these procedures. All vehicles must be regularly inspected for leaks.	servicing process and record the occurrence of any spillages.	emergency refuelling and servicing activities.	
		10.2.4. All spilled fuel, oil or grease (should such spillages occur) must be retrieved and the contaminated soil removed, cleaned and replaced or treated accordingly.	▪ Monitor the handling and storage of fuels and oils via site audits and monitor if spillages have taken place and if so, are removed correctly. Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Daily (or during spills)	▪ Contractor and ECO
		10.2.5. Contaminated soil to be collected by the Contractor (under observation of the ECO) and disposed of at a registered waste facility designated for this purpose. Proof of disposal (i.e. waste disposal slips or waybills) should be retained on file for auditing purposes.	▪ Monitor the correct removal of contaminated soil. Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Daily (or during spills)	▪ Contractor and ECO
		10.2.6. A Spill Response Method Statement must be compiled by the Contractor for the construction phase in order to manage potential spill events.	▪ Compile a Spill Response Method Statement. ▪ Audit signed and approved Spill Response Method Statement.	▪ Once-off (and thereafter updated as required during the construction phase). ▪ Once-off (and thereafter as required during the construction phase).	▪ Contractor and Project Developer (Mainstream) ▪ ECO
		10.2.7. The Contractor must ensure that adequate spill containment and clean-up equipment are provided	▪ Monitor via site audits and record incidents and non-	▪ Daily/Weekly	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		on site for use during spill events.	compliance.		
		10.2.8. Portable bioremediation kit (to remedy chemical spills) is to be held on site and used as required.	▪ Ensure that a well-maintained portable bioremediation kit is available on site and that construction personnel and contractors are aware of its location and instructions	▪ Daily	▪ Contractor and ECO
		10.2.9. In case of a spillage of hazardous chemicals where contamination of soil occurs, depending on the degree and level of contamination, excavation and removal to a hazardous waste disposal facility could be necessary. If the spillage is widespread and the soil is considered to be significantly contaminated, a specialist will need to be immediately appointed to address the spillage. This will usually entail the collection of samples of the contaminated soil followed by analysis in terms of the 2014 National Norms and Standards for the Remediation of Contaminated Land and Soil Quality (i.e. GN 331). If the soil is determined to be significantly contaminated, then compliance with Part 8 of the NEMWA should be achieved by the Applicant, including notifying the Minister of Environmental Affairs of the significant contamination.	▪ Ensure that a suitably qualified specialist is appointed to collect and analyse the contaminated soil samples in terms of the 2014 Norms and Standards (i.e. GN 331) in order to determine if the soil is significantly contaminated or not. ▪ If the contaminated soil is considered to be significantly contaminated, then compliance with Part 8 of the NEMWA should be achieved by the Applicant.	▪ During spill events	▪ Project Developer (Mainstream)
		10.2.10. The Contractor must record and document all significant spill events.	▪ Monitor documentation and records of significant spill events via audits and record non-compliance and incidents.	▪ During spill events	▪ ECO
B. DECOMMISSIONING PHASE					
10.3. No specific impacts are associated with the decommissioning phase other than those from the operational phase that will still be relevant for the duration of the decommissioning phase due to on-going occupation of the area.					

11 ENVIRONMENTAL AWARENESS AND FIRE MANAGEMENT PLAN

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
11.1. Potential impacts resulting from the lack of overall compliance with the conditions of the EA (issued by the DEA).	Ensure compliance with all environmental conditions of approval (issued by DEA as part of the EA).	11.1.1. Audit the implementation of the EMPr requirements.	▪ Audit report on compliance with actions and monitoring requirements.	▪ Weekly	▪ Project Developer (Mainstream)
		11.1.2. Establish clear and transparent reporting of the activities undertaken with regard to all recommendations included in the EMPr.	▪ Audit report on compliance with actions and monitoring requirements.	▪ Weekly	▪ Project Developer (Mainstream)
B. CONSTRUCTION PHASE					
11.2. Potential risk of fire due to construction activities or behaviour of staff on site during the construction phase	Prevent fire on site resulting from workers smoking or starting fires (i.e. cooking, heating purposes).	11.2.1. Designate smoking areas, as well as areas for cooking, where the fire hazard could be regarded as insignificant.	▪ Ad-hoc checks to ensure workers are smoking or cooking in designated areas only.	▪ Daily	▪ ECO and Contractor
		11.2.2. Educate workers on the dangers of open and/or unattended fires.	▪ Ensure fire safety requirements are well understood and respected by construction personnel. ▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Ongoing. ▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ ECO and Contractor ▪ Contractor/ ECO ▪ ECO
		11.2.3. Open fires must be prohibited. No informal fires should be permitted in or near the construction areas. Appropriate fire safety training should also be provided to staff that are to be on the site for the duration of the construction phase.	▪ Ensure fire safety requirements are well understood and respected by construction personnel. Provide basic fire safety training.	▪ On-going	▪ ECO and Contractor
		11.2.4. Ensure that cooking takes place in a designated area shown on the site map. Ensure that no firewood or kindling may be	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		gathered from the site or surrounds.			
		11.2.5. Fire-fighting equipment must be made available at various appropriate locations on the construction site.	▪ Ensure fire safety requirements are well understood and respected by workers. ▪ Assurance of functionality of fire extinguishers via inspections and certification by an accredited fire service company.	▪ On-going ▪ Bi-annually	▪ ECO and Contractor ▪ Contractor
11.3. Inappropriate behaviour of civil contractors and sub-contractors during the construction phase	Prevent unnecessary impacts on the surrounding environment by ensuring that contractors are aware of the requirements of the EMPr. Ensure that contractors and sub-contractors do not induce impacts on the surrounding environment as a result of unplanned pollution on site. Ensure that actions by on-site contractors and sub-contractors and workers are properly managed in order to minimise impacts to surrounding environment.	11.3.1. Ensure that the EMPr and the EA (should it be granted by the DEA), are included in all tender documentation and contractors and sub-contractors contracts.	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors
		11.3.2. Contractors and sub-contractors must use the ablution facilities situated in a designated area within the site; and no bathing/washing should be permitted outside the designated area.	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors
		11.3.3. All litter will be deposited in a clearly labelled, closed, animal-proof disposal bin in the construction area; particular attention needs to be paid to food waste.	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors
		11.3.4. No person other than a qualified specialist or personnel authorised by the Project Developer, will disturb or remove plants outside the demarcated construction area.	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors
		11.3.5. No person other than a qualified specialist or personnel authorised by the Project Developer, will disturb animals on the site.	▪ Check compliance with specified conditions using a report card, and allocate fines when necessary.	▪ On-going	▪ ECO and Contractors
		11.3.6. Educate workers on site about suitable behaviour on site and initiate environmental awareness. Staff must be informed that no trapping, snaring or	▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ Contractor/ ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		feeding of any animal will be allowed.			
11.4. Inappropriate planning and of site camp establishment.	Ensure that environmental issues are taken into consideration in the planning for site establishment.	11.4.1. All construction activities, materials, equipment and personnel must be restricted to the actual construction area specified (as required to undertake the construction work). The construction area must be demarcated by the Contractor.	▪ Monitor compliance and record non-compliance and incidents.	▪ Before construction	▪ ECO
		11.4.2. The Contractor should install and maintain Construction Site Information Boards in the position, quantity, design and dimensions specified by the Project Developer.	▪ Monitor compliance and record non-compliance and incidents.	▪ Before construction	▪ ECO
		11.4.3. General building materials should be stored in appropriate designated areas on site such that there will be no runoff from these areas towards sensitive systems. The site camp must be removed after construction.	▪ Monitor compliance and record non-compliance and incidents.	▪ Before construction	▪ ECO
11.5. Increased animal road mortality	Reduction in animal mortality	11.5.1. The construction staff should be made aware of the presence of fauna and within the proposed project area. The construction personnel and staff must also be made aware of the general speed limits on site and must be alert at all times for potential crossings, and should be trained on how to react in these situations.	▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ Contractor/ ECO ▪ ECO
		11.5.2. To ensure that animals are not attracted to the site (and potentially resulting in increased road mortality), the waste collection bins and skips should be covered with suitable material, where appropriate, and the site camp must be kept clean on a daily basis.	▪ Monitor the activities via visual inspections, and record and report any non-compliance.	▪ Daily	▪ Contractor and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		11.5.3. Establish a monitoring programme to record the number of faunal road mortalities and collisions. If it is established that the number of collisions and faunal fatalities increase within an area, particularly with regards to smaller species (reptiles), then measures such as exclusion fences within these areas only should be installed.	▪ Appropriate monitoring and recording should be undertaken. ▪ Exclusion fences should be installed, if needed to direct animals to safe road crossings.	▪ Weekly ▪ As required	▪ ECO ▪ ECO and Contractor
11.6. Increased energy consumption during the construction phase.	Reduce energy consumption where possible.	11.6.1. Encourage the use of energy saving equipment at the site camp site (such as low voltage lights and low pressure taps) and promote recycling. Construction personnel must be made aware of energy conservation practices as part of the Environmental Awareness Training programme.	▪ Contractor to monitor energy usage via audits. ▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Monthly ▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ Contractor ▪ Contractor/ ECO ▪ ECO
11.7. Impact on the regional water balance as a result of increased water usage.	Reduce water usage during the construction phase.	11.7.1. Water conservation should be practiced as follows: ▪ Cleaning methods utilised for cleaning vehicles, floors, etc. should aim to minimise water use (e.g. sweep before wash-down). ▪ Ensure that regular audits of water systems are conducted to identify possible water leakages. 11.7.2. Avoid the use of potable water for dust suppression during the construction phase and consider the use of alternative approved sources, where possible.	▪ Monitor via site audits and record non-compliance and incidents.	▪ Monthly	▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		11.7.3. Make construction personnel aware of the importance of limiting water wastage, as well as reducing water use.	▪ Carry out Environmental Awareness Training with a discussion on water usage and conservation. ▪ Conduct audits of the signed attendance registers.	▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ Contractor/ ECO ▪ ECO
C. DECOMMISSIONING PHASE					
11.8.Ensure that the construction mitigation and management measures are adhered to during the decommissioning phase.					

12 SPECIFIC PROJECT RELATED ENVIRONMENTAL IMPACTS

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
A. DESIGN PHASE					
A.1. TERRESTRIAL ECOLOGY IMPACTS					
12.1. Potential impact on terrestrial ecology as a result of the proposed infrastructure	Change in habitat through clearance of vegetation, habitat modification and related factors	12.1.1. Ensure that a Rehabilitation Plan is compiled that identifies tasks and procedures to be instituted at specific sites where transformation of habitat has arisen.	▪ Ensure that this is taken into consideration during the planning and design phase, and that a suitable specialist is appointed to compile a Rehabilitation Plan. Review signed minutes of meetings or signed reports.	▪ During design cycle and before construction commences.	▪ Project Developer (Mainstream) and Appointed Specialist ▪ ECO
A.2. AQUATIC ECOLOGY (FRESHWATER) IMPACTS					
12.2. Impact on surface water resources.	To reduce the impact of the proposed development on the surrounding drainage lines and freshwater features.	12.2.1. Ensure that the sensitivity maps guide the design and layout of the proposed development. In terms of the applicable legislation, a 32m zone of regulation in terms of the NEMA is stipulated around all freshwater features; and these should be respected where possible and as much as feasible. In addition, special mention is made of the need to ensure that careful planning of the placement of the monopoles takes place in order to minimise the risk of placing infrastructure unnecessarily within riparian zones. Wherever possible, it is highly recommended that the linear development spans the relevant watercourse, and every effort should be made to prevent placement of monopoles within the riparian zone or associated 32m zone of regulation. If this is not avoidable, the monopoles should be placed as far from the active channel of the watercourse as possible. However, the 32 m zone of regulation around the freshwater features must be adhered to in the vicinity of the substations, and in this regard, no activity may be permitted within the	▪ Ensure that the 32 m zone of regulation is taken into consideration in the final layout of the proposed electrical infrastructure. Ensure that this is taken into account, where possible and as feasible (as recommended by the Aquatic Ecology Specialist), and that the recommended mitigation measures are implemented as required. ▪ Ensure that the requirements of the DWS are considered during the planning and design phase and prior to construction. Ensure that the WUL is submitted and approved prior to the commencement of construction (if required), based on the requirements of the DWS. It should be noted that in most cases, the DWS will only require submission of WULA documentation if the	▪ Once-off prior to the commencement of construction. ▪ Once-off prior to the commencement of construction, in consultation with the DWS (based on the requirements for a WULA). ▪ Once-off prior to the commencement of construction, in consultation with the DWS (based on the requirements for a WULA).	▪ Project Developer (Mainstream) and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		32 m zone of regulation or any watercourse without obtaining the necessary authorisations from the respective authorities. 12.2.2. In terms of Section 21 (c) and (i) of the National Water Act (Act 36 of 1998) (NWA), the relevant authorisation must be obtained from the Department of Water and Sanitation (DWS) for any and all any activities that take place within the watercourses. It is recommended that the relevant DWS officials be consulted in this regard to ensure that all legislative requirements are complied with. Overall, the relevant authorisations required for must be obtained in terms of Section 21 (c) and (i) of the NWA, and in terms of Regulation 509 of 2016 as it pertains to the NWA. 12.2.3. For those ephemeral drainage lines which were not defined as having riparian vegetation and therefore not defined as true watercourses from an ecological point of view, if any of these ephemeral drainage lines have a floodline applicable to them they would be defined as a watercourse and therefore require protection as such (i.e. the zone of regulation in terms of GN509 of 2016 as it relates to the NWA is the 1:100 year floodline). This should be verified by a suitably qualified hydrologist. It is recommended that a surface water baseline study should be undertaken as part of the Water Use Licence Application (WULA) process and in consultation with the DWS, and where applicable, should be used to guide the layout of the proposed development, planned mitigation and conditions of authorization.	proposed WEF and associated electrical grid infrastructure receives preferred bidder status in terms of the REIPPPP. Conduct audits to verify if this has been undertaken and record and report any non-compliance. ▪ Ensure that a suitably qualified hydrologist is appointed to conduct a surface water baseline study for those features not defined as true watercourses during the BA Process, if this is required by the DWS as part of the WULA Process. Conduct audits to verify if this has been undertaken and record and report any non-compliance.		
A.3. VISUAL IMPACTS					
12.3. Potential visual intrusion of construction	Reduce visual intrusion of construction activities project wide.	12.3.1. Ensure plans are in place to minimise fire hazards and dust generation. 12.3.2. Ensure plans are in place to rehabilitate	▪ Ensure that this is taken into consideration during the planning and design phase by reviewing	▪ During design cycle and before construction	▪ Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
activities on existing views of sensitive visual receptors		temporary cleared areas as soon as possible. 12.3.3. Ensure plans are in place to control and minimise erosion risks. 12.3.4. The developer prefers to use monopole pylons for the overhead lines and in this case, where over a relatively long section of the route visual receptors are likely to be in close proximity to the line monopole pylons will be more aesthetically pleasing than lattice type towers. A mix of pylon types should also be avoided where possible when taking into consideration other projects in the area (e.g. Rietrug and Sutherland WEF electrical infrastructure). However, as noted in the Visual Impact Assessment (Appendix D.3 of the BA Report), these are not essential mitigation measures and other factors and specialist recommendations should be taken into account. 12.3.5. Structure style (e.g. power line pylons/towers) should be the same as for other similar developments along the same route where possible (taking into consideration other specialist recommendations and specifications).	signed minutes of meetings or signed reports.	commences.	▪ ECO
A.4. HERITAGE IMPACTS (PALAEONTOLOGY, ARCHAEOLOGY AND CULTURAL LANDSCAPE)					
12.4. Impacts on archaeological remains and palaeontological material.	Achieve a layout that minimizes the potential later impacts to archaeological remains and palaeontological material.	12.4.1. Ensure that the project layout avoids significant palaeontological and archaeological sites that were identified in the Heritage Impact Assessment (Appendix D.4 of the BA Report). These sites should be identified on project maps and regarded as no-go zones with buffers of at least 30 m around all associated features. The relevant waypoints to be avoided with the 30 m buffers are as follows: 573, 575, 576, 524, 527, 614 (whole complex), 498 (whole complex), 492 and the palaeontological sites (i.e. a scatter of petrified wood and partially embedded, articulated post-cranial skeleton of a large tetrapod) approximately 500 m from Alternative 2 of the proposed distribution line routing, and	▪ Take cognizance of the archaeological remains and palaeontological material reported in the HIA when designing layout and routing. ▪ Ensure and verify that the significant palaeontological and archaeological sites identified in the Heritage Impact Assessment (Appendix D.4 of the BA Report) are included on project maps and regarded as no-go zones with buffers during the planning and design phase. Review the site layout	▪ Once-off ▪ Once-off	▪ Project Developer (Mainstream) ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		approximately 1.7 km to the east of Alternatives 1 and 2 of the distribution line routing, respectively identified in the Palaeontological Impact Assessment (Appendix 3 of the Heritage Impact Assessment). Waypoint 492 includes a rock art site that was found by the specialist, and the 30 m buffer does not need to be applied to this site, as the proposed service road diversion for Alternative 2 is routed within 20 m of the site, however an existing farm track is used, therefore the specialist has recommended that this is acceptable. The site at waypoint 546 as well as the Gunstfontein and Beeren Valley farm complexes will not be completely avoidable (the former because a current access road passes through it, the latter two because the proposed power line passes through it) but special care should be taken within the bounds of all three sites to ensure that no damage is done.	plan, and signed minutes of meetings or signed reports.		
A.5. IMPACT ON AVIFAUNA					
12.5. Mortality of Red Data avifauna due to collisions with the earthwire of the proposed power line.	Mortality of Red Data avifauna due to collisions with the earthwire of the proposed power line.	12.5.1. Ensure that the proposed power line design includes Bird Flight Diverters (BFDs), if required and recommended by the avifauna specialist.	▪ Ensure that the BFD design is suitable for installation on the proposed powerline design.	▪ Once-off before construction commences.	▪ Avifaunal specialist and Project Developer (Mainstream)
B. CONSTRUCTION PHASE					
B.1. AQUATIC ECOLOGY (FRESHWATER) IMPACTS					
12.6. Impact on surface water resources.	To reduce the impact of the proposed development on the surrounding surface water features and rivers.	12.6.1. Permit only essential construction personnel within 32m of the freshwater habitat, if absolutely necessary that they enter the regulatory zone. 12.6.2. Limit the footprint area of the construction activities to what is only essential in order to minimise environmental damage.	▪ Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.	▪ Weekly	▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		12.6.3. Implement effective waste management in order to prevent construction related waste from entering the freshwater environments. 12.6.4. Rehabilitate all wetland and riparian habitat areas possibly affected by the proposed electrical infrastructure to ensure that the ecology of these areas is re-instated during all phases. 12.6.5. As far as possible, all rehabilitation activities should occur in the low flow season, during the drier summer months. 12.6.6. As much vegetation growth as possible should be promoted within the proposed electrical infrastructure construction area in order to protect soils. 12.6.7. All areas affected by the electrical infrastructure construction should be rehabilitated upon completion of the electrical infrastructure construction. 12.6.8. Riparian vegetation cover should be monitored to ensure that sufficient vegetation is present to bind the bankside soils and prevent bankside erosion and incision. 12.6.9. It is recommended that a detailed rehabilitation plan be developed by a suitably qualified ecologist in order to address specific rehabilitation requirements.			
B.2. VISUAL IMPACTS					
12.7. Potential visual intrusion of construction activities on existing views of sensitive visual receptors.	Prevent unnecessary visual clutter and focusing attention of surrounding visual receptors on the proposed development.	12.7.1. Parking areas should be demarcated and strictly controlled so that vehicles are limited to specific areas only.	▪ Carry out visual inspections to ensure the construction parking area is demarcated clearly, and record and report any non-compliance. ▪ Carry out visual inspections to ensure strict control over the parking of construction vehicles and access routes in order to restrict	▪ Weekly ▪ Weekly	▪ ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
Note that all the mitigation measures and management actions provided for this potential impact are applicable to both Alternative 1 and Alternative 2 of the proposed distribution line routing and connection to the third party substation, however, where a mitigation measure applies specifically to Alternative 2 only, this has been noted.			activities to within demarcated areas.		
		12.7.2. Where possible construction camps and laydown areas should be located (where sensitive visual receptors are least likely to be affected): • In low visibility areas (e.g. avoid ridgelines and open plains); • Previously disturbed areas (e.g. clearings created by farmers for other purposes which are no longer being used); and/or • Areas near derelict farmsteads (taking into consideration the findings of the Heritage Impact Assessment as well as other assessments that may be relevant), particularly where existing trees can be used to screen these areas from views.	▪ Ensure that this is taken into consideration for the siting of the proposed construction site camp and laydown area. Carry out visual inspections to ensure the construction camp and laydown area are demarcated clearly, and record and report any non-compliance. ▪ Carry out visual inspections to ensure strict control over the boundary of the site camp and laydown area in order to restrict activities to within demarcated areas.	▪ Weekly ▪ Weekly	▪ ECO ▪ ECO
		12.7.3. Night time construction should be avoided where possible (however some construction work on electrical components may need to occur after dark).	▪ Construction operation times to be monitored and managed (as well as included in the tender contract).	▪ Weekly	▪ ECO
		12.7.4. Night lighting of the construction sites should be minimised within requirements of safety and efficiency.	▪ Complaints about night lights should be investigated and documented in a register.	▪ Weekly or bi-weekly	▪ Contractor and ECO
		12.7.5. Particular care should be taken to avoid erosion scarring and damage along the ridge down the escarpment (which is applicable to Alternative 2 of the proposed distribution line and third party substation only).	▪ Carry out site visits and inspections of the ridge down the escarpment during the proposed construction activities. Record and report any non-compliance.	▪ Weekly	▪ ECO
		12.7.6. Maintain good housekeeping on site to avoid litter and minimize waste.	▪ Carry out site visits and inspections of the construction sites and ensure	▪ Daily	▪ Construction Manager and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		12.7.7. Monitor construction sites for strict adherence to demarcated boundaries and minimise areas of vegetation, ground and surface disturbance. Existing clearings should be used where possible and where required. 12.7.8. Monitor that existing roads will be used for access as far as possible and that construction of new access roads is minimised. 12.7.9. Monitor that topsoil from the site is stripped, stockpiled, and stabilised before excavating earth for the proposed construction. 12.7.10. Monitor that vegetation material from vegetation removal is mulched and spread over fresh soil disturbances to aid in the rehabilitation process. 12.7.11. Monitor adherence to lighting plan. 12.7.12. Monitor adherence to rehabilitation plan (i.e. where cleared areas are rehabilitated as soon as possible). 12.7.13. Monitor adherence to erosion control plan. 12.7.14. Monitor adherence to dust and fire control plans.	good housekeeping is maintained. Record and report any non-compliance. ▪ Carry out site visits and record and report any non-compliance. ▪ Carry out site visits and inspections of the access routes. Record and report any non-compliance. ▪ Carry out site visits and inspections of the topsoil management process. Record and report any non-compliance. ▪ Carry out site visits and inspections of the re-vegetation process. Record and report any non-compliance. ▪ Complaints about night lights should be investigated and documented in a register. Investigate any complaints about night lights and document it in a register. ▪ Visit sites requiring rehabilitation. ▪ Carry out site visits and record and report any non-compliance. ▪ Carry out site visits and record and report any non-compliance.	▪ Daily ▪ Daily ▪ Daily ▪ Daily ▪ Daily and as complaints arise. ▪ Daily ▪ Daily ▪ Daily	Environmental Control Officer
B.3. HERITAGE IMPACTS (PALAEONTOLOGY, ARCHAEOLOGY AND CULTURAL LANDSCAPE) (These are direct and cumulative impacts)					
12.8. Destruction of archaeological remains as a result of the construction of the proposed powerlines, on-site substation and service road. Direct impacts to	Minimise the chances of significant archaeological sites being disturbed. Minimise the chances of impacts to other heritage resources located outside of the proposed route of the	12.8.1. Ensure that a suitably qualified archaeologist is appointed to carry out a pre-construction survey of the sections of the final alignment that were not surveyed in order to locate any sites that need to be avoided or mitigated. Note that this requirement pertains to un-surveyed parts of the assessed routes as well as to any alterations to the routing made after completion of the Heritage Impact Assessment.	▪ Appoint a suitably qualified archaeologist to conduct a pre-construction survey. ▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Monitor and verify if any significant	▪ Once-off, prior to start of construction. ▪ Once-off, prior to start of construction. ▪ Once-off, prior to start of construction. ▪ Once-off, prior to start of construction	▪ Project Developer (Mainstream) and Archaeologist ▪ ECO ▪ ECO and Archaeologist

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
archaeological resources may also occur when construction vehicles move through the area and when foundation excavations are made.	electrical grid infrastructure.	12.8.2. Record significant sites within the project footprint that cannot be avoided (none have been found to date). The one site noted as occurring in the proposed on-site substation development envelope (at waypoint 576) does not merit mitigation but should be avoided if possible. No other sites requiring mitigation have been found within the project footprint to date. 12.8.3. Avoid and protect all identified archaeological sites if possible. Ensure that all sensitive areas are cordoned off and protected prior to the start of construction with the buffers as stated in the Heritage Impact Assessment (i.e. waypoints 573, 575, 576, 524, 527, 614 (whole complex), 498 (whole complex), 492 and the palaeontological sites (i.e. a scatter of petrified wood and partially embedded, articulated post-cranial skeleton of a large tetrapod)). 12.8.4. Ensure that the farm road passing through the kraal complex (at waypoint 546) is not widened towards the east and should preferably not be widened at all. The site at waypoint 546 as well as the Gunstfontein and Beeren Valley farm complexes will not be completely avoidable (the former because a current access road passes through it, the latter two because the proposed power line passes through it) but special care should be taken within the bounds of all three sites to ensure that no damage is done. 12.8.5. The no-go sites should be examined periodically by the ECO during the construction phase to ensure that they are being respected. 12.8.6. If any archaeological material is encountered during any phase of the project, work in the immediate area should be halted, and the find should be protected *in situ* and reported to an appropriate specialist and/or to the relevant heritage resources authority (i.e. Heritage Western Cape for the Western Cape and the	sites are found within the project footprint that cannot be avoided, subsequent to the pre-construction survey. Ensure that this is taken into consideration in the site plan. ▪ Identify and cordon off sites with appropriate barriers. Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance. ▪ Carry out visual inspections and site visits to ensure that the farm road passing through the kraal complex is not widened as a result of the proposed project. Record and report any non-compliance. ▪ Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance. ▪ Monitor excavations and construction activities for archaeological materials via visual inspections and report the finds accordingly. ▪ Contact the heritage authorities and the identified archaeologist if any heritage features are uncovered. ▪ Carry out visual inspections to ensure strict control over the behaviour of construction staff in order to restrict activities to within demarcated areas.	and weekly during construction. ▪ Once-off, prior to start of construction and weekly during construction. ▪ Weekly ▪ Daily or during excavations. ▪ As required/necessary during the construction phase. ▪ Weekly	▪ ECO ▪ ECO ▪ ECO ▪ Contractor and ECO ▪ Project Developer (Mainstream) ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		South African Heritage Resources Agency (SAHRA) for the Northern Cape) so that a decision can be made as to how to proceed (i.e. it may require inspection by an archaeologist). Such heritage is the property of the state and may require excavation and curation in an approved institution. Sufficient time should be allowed to remove/collect such material. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (for the Northern Cape) and Heritage Western Cape (for the Western Cape), must be alerted immediately. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required. 12.8.7. Ensure that no activity takes place outside of the authorized construction footprint (and construction vehicles should remain within the construction corridor).			
12.9. Alteration of the cultural landscape as a result of the construction of the proposed powerlines, on-site substation and service road. The cultural landscape will be impacted through the presence of incompatible structures (i.e. the proposed power line and pylons) and the construction vehicles in the rural landscape.	Minimise the chances of the cultural landscape being disturbed.	12.9.1. Avoid creating the service road up steep slopes (i.e. where the road would be visible from longer distances). This is mainly applicable to the scarp within the Alternative 2 distribution line and service road alignment. 12.9.2. Follow the suggested service road detour around the east side of the scarp for the Alternative 2 routing.	▪ Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports, and the approved site layout.	▪ Once-off, prior to start of construction.	▪ ECO and Project Developer (Mainstream)

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
12.10. Damage to historical buildings as a result of the construction of the proposed powerlines, on-site substation and service road.	Minimise impacts on the built environment.	12.10.1. Ensure that all structures (including stone kraals) are regarded as no-go areas during construction, and ensure that foundations are excavated as far away from structures as possible and preferably not within 10 m of any buildings.	▪ Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance. ▪ Monitor the placement of excavations and foundations via visual inspections and record and report any non-compliance.	▪ Weekly ▪ Daily or during excavations.	▪ ECO ▪ ECO
12.11. Disturbance, damage or destruction of scientifically important fossils at or beneath the ground surface as a result of surface clearance (for access roads, substations and laydown areas etc.) and excavations (for the power line footings and O&M building).	Ensure the protection of known sensitive fossil sites from disturbance. Safeguarding, recording and sampling of significant new chance fossil finds. This will lead to an improved palaeontological database for the south-west Karoo region.	12.11.1. Ensure that a suitably qualified palaeontologist is appointed to undertake a pre-construction walk-down for any sectors of the 132 kV power line route finally chosen that were not covered or surveyed during the BA Phase (as indicated by the yellow dashed rectangle in Figure 1 of the Palaeontological Impact Assessment, which is included as an appendix to the Heritage Impact Assessment (Appendix D.4 of the BA Report)). Note that this requirement pertains to un-surveyed parts of the assessed routes as well as to any alterations to the routing made after completion of the Heritage Impact Assessment. The resulting report will need to be submitted to and approved by the relevant heritage management authority. 12.11.2. Ensure the safeguarding of identified sites of high palaeontological sensitivity by a 30-m wide buffer zone (i.e. extensive surface scatter of petrified wood plus occasional bone fragments on either side of a farm track, as indicated in Figure 49 of the Palaeontological Impact Assessment, which is included as an appendix to the Heritage Impact Assessment (Appendix D.4 of the BA Report)). As noted above, the partially-embedded, well-articulated postcranial skeleton of a large tetrapod, found on Farm Beeren Valley 150 is of conservation value but will not be impacted by the present BA project. 12.11.3. Monitoring of all surface clearance and	▪ Appoint a suitably qualified palaeontologist to conduct a pre-construction survey. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Palaeontologist to undertake a field study of areas not surveyed in the original assessment. ▪ Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance. ▪ Ensure that the ECO monitors all substantial excavations into sedimentary bedrocks for fossil material (e.g. bones, teeth, fossilized wood). ▪ Carry out Environmental Awareness Training to ensure that the Contractors are informed of the possible type of heritage features that may be encountered during the construction phase. ▪ Ensure that all chance fossil finds are safeguarded *in-situ* via visual inspections and record and report any non-compliance in this regard.	▪ Once-off prior to construction. ▪ Once-off prior to construction. ▪ Weekly ▪ On-going during construction ▪ Once-off training and ensure that all new staff are inducted. ▪ On-going during construction and during fossil finds. ▪ During fossil finds throughout the construction phase. ▪ During fossil finds ▪ During fossil finds	▪ Project Developer (Mainstream) and ECO ▪ Qualified palaeontologist appointed and commissioned by the Project Developer (Mainstream) ▪ ECO ▪ ECO ▪ Contractor and ECO ▪ ECO ▪ Project Developer (Mainstream) and ECO ▪ ECO and qualified Palaeontologist (appointed by the Project Developer) ▪ ECO and

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		substantial (deeper than 1 m) excavations by the ECO for fossil material. The ECO should be made aware of the potential occurrence of scientifically-important fossil remains within the development footprint. 12.11.4. Safeguarding of chance fossil finds (preferably *in situ*) during the construction phase by the ECO. 12.11.5. Reporting of chance fossil finds to Heritage Western Cape (for the Western Cape) or SAHRA (for the Northern Cape). 12.11.6. Recording and judicious sampling of significant chance fossil finds by a qualified palaeontologist, together with pertinent contextual data (stratigraphy, sedimentology, taphonomy) (Phase 2 mitigation). The palaeontologist concerned with potential mitigation work (Phase 2) would need a valid fossil collection permit from the relevant heritage management authority, i.e. Heritage Western Cape (for the Western Cape) or SAHRA (for the Northern Cape). 12.11.7. Curation of fossil material within an approved repository (museum/university fossil collection) and submission of a Phase 2 palaeontological heritage report to (for the Western Cape) or SAHRA (for the Northern Cape) by a qualified palaeontologist. All palaeontological fieldwork and reporting should meet the minimum standards outlined by Heritage Western Cape (2016) and SAHRA (2013).	▪ Appoint a suitably qualified palaeontologist to conduct recording and sampling of chance fossil finds. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. ▪ Palaeontologist to apply for a fossil collection permit from the relevant heritage authority and undertake recording and sampling of significant chance fossil finds. ▪ Undertake audits to verify the curation of the fossil material.		qualified Palaeontologist (appointed by the Project Developer)
B.4. AVIFAUNA IMPACTS					
12.12. Displacement of Red Data species due to permanent habitat transformation associated with construction	Manage habitat transformation and conserve Red Data species. Prevent unnecessary impacts on the surrounding	12.12.1. A site-specific Construction EMPr must be implemented, which gives an appropriate and detailed description of how construction activities must be conducted to reduce unnecessary destruction and degradation of habitat. All contractors are to adhere to the Construction EMPr and should apply good	▪ Oversee activities to ensure that the Construction EMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance. ▪ Ensure that the construction area and footprint is kept to a minimum.	▪ On a daily basis ▪ Weekly ▪ Weekly ▪ Weekly ▪ Weekly	▪ ECO ▪ ECO ▪ ECO ▪ ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
activities.	environment by ensuring that contractors are aware of the requirements of the site-specific Construction EMPr.	environmental practice during construction. The Construction EMPr should specifically include the following: ▪ The minimum footprint areas for infrastructure should be used wherever possible, including road widths and lengths; ▪ Ensure that no off-road driving is allowed; ▪ Ensure maximum use of existing roads; ▪ Measures to control dust; ▪ Ensure that access to the rest of the property is restricted; and ▪ Following construction, rehabilitation of all areas disturbed (e.g. temporary access tracks) must be undertaken and to this end a habitat restoration plan is to be developed by a rehabilitation specialist and implemented accordingly.	Carry out regular site inspections to verify the limits of the construction area to ensure unnecessary disturbance is avoided. ▪ Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access roads must be demarcated clearly. Undertake site inspections to verify. ▪ Construction access roads must be demarcated clearly. Undertake site inspections to verify. ▪ Monitor the implementation of dust control mechanisms via site inspections and record and report non-compliance. ▪ Ensure that the construction area is demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. ▪ Appointment of Rehabilitation Specialist to develop a Habitat Restoration Plan and ensure that it is approved by auditing the final and signed report acceptance. ▪ Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance.	▪ Weekly ▪ Once-off prior to the completion of construction. ▪ Monthly during the construction phase.	▪ ECO ▪ ECO, Project Developer (Mainstream), and Rehabilitation Specialist ▪ ECO and Construction Manager or Contractor
12.13. Displacement of Red Data species due to disturbance associated with construction	Prevent unnecessary displacement of Red Data avifauna by ensuring that contractors are aware of the requirements of the	12.13.1. A site-specific Construction EMPr must be implemented, which gives an appropriate and detailed description of how construction activities must be conducted. All contractors are to adhere to the Construction EMPr and should	▪ Oversee activities to ensure that the Construction EMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance.	▪ On a daily basis ▪ Weekly ▪ Weekly	▪ ECO ▪ ECO ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
activities.	Construction EMPr.	apply good environmental practice during construction. The Construction EMPr must specifically include the following: ▪ Ensure that no off-road driving is allowed; ▪ Ensure maximum use of existing roads; ▪ Measures to control noise; ▪ Ensure that access to the rest of the property is restricted; ▪ Ensure that the footprint is restricted to the absolute minimum; ▪ The appointed ECO must be trained by an avifaunal specialist to identify the potential priority species as well as the signs that indicate possible breeding by these species. The ECO must then, during audits/site visits, make a concerted effort to look out for such breeding activities of Red Data species, and such efforts may include the training of construction staff to identify Red Data species, followed by regular questioning of staff as to the regular whereabouts on site of these species. If any of the Red Data species are confirmed to be breeding (e.g. if a nest site is found), construction activities within 500 m of the breeding site must cease, and an avifaunal specialist is to be contacted immediately for further assessment of the situation and instruction on how to proceed; and ▪ Prior to construction, an avifaunal specialist should conduct a site walk through, covering the final service road and power line routes, to identify any nests/breeding/roosting activity of priority species, as well as any additional sensitive habitats. The results of which may inform the final construction schedule in close proximity to that specific area, including abbreviating construction	▪ Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access roads must be demarcated clearly. Undertake site inspections to verify. ▪ Construction access roads must be demarcated clearly. Undertake site inspections to verify. ▪ Monitor the implementation of noise control mechanisms via site inspections and record and report non-compliance. ▪ Ensure that the construction area is demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. ▪ Appoint an Avifauna Specialist prior to the construction phase to train and guide the ECO in order identify potential priority species and signs for potential breeding. ▪ ECO to undertake site visits and audits to find breeding sites. ▪ ECO to provide training and information sessions to the construction personnel to identify Red Data species. Conduct regular audits of attendance registers for training. ▪ Ensure that construction activities are stopped within 500 m of any breeding sites of Red Data species. Ensure that an Avifaunal Specialist is contacted immediately for further assessment. Conduct audits	▪ Weekly ▪ Weekly ▪ Once-off before construction commences, for a three-day period. ▪ Weekly ▪ Once-off and ensure all new construction personnel are trained in this regard. ▪ Throughout construction when breeding sites are found. ▪ Once-off before the start of construction activities	▪ ECO ▪ ECO ▪ Project Developer (Mainstream), Avifauna Specialist and ECO ▪ ECO ▪ ECO ▪ Project Developer (Mainstream), Avifauna Specialist and ECO ▪ Project Developer (Mainstream), Avifauna Specialist and ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		time, scheduling activities around avian breeding and/or movement schedules, and lowering levels of associated noise.	to verify the placement of the buffer area and verify if the Avifaunal Specialist has been appointed. ▪ Appointment of Avifaunal Specialist to conduct site walk through of the final service road and power line routes. Record and report any non-compliance.		
12.14. Electrocution of Red Data avifauna during construction of the proposed power line.	Prevent any electrocutions of Red Data avifauna during construction of the proposed power line.	12.14.1. The avifaunal specialist must certify that the pole structures to be used on the 132kV powerline are bird-friendly. The pole design must be presented to the avifaunal specialist for sign-off prior to commencement of construction.	▪ Appointment of Avifauna Specialist to sign off on the powerline design. ECO to ensure that this has been complied with by auditing reports, minutes of meetings or sign-off process.	▪ Once-off before construction.	▪ Avifaunal Specialist, Project Developer (Mainstream), ECO and Construction Manager or Contractor
12.15. Mortality of Red Data avifauna due to collisions with the earthwire of the proposed power line during the construction phase.	Mortality of Red Data avifauna due to collisions with the earthwire of the proposed power line.	12.15.1. An avifaunal specialist must conduct a site walk through of final pylon positions prior to construction to determine if, and where, BFDs are required. 12.15.2. Install BFDs as per the instructions of the specialist following the site walk through, which may include the need for modified BFDs fitted with solar powered LED lights on certain spans.	▪ Walk-through to be conducted once the final pole positions have been pegged. ▪ Ensure that the BFD design is suitable for installation on the proposed powerline design, and install the devices prior to the line being energized.	▪ Once-off before construction commences. ▪ Once-off before the line is energized.	▪ Avifaunal specialist and Project Developer (Mainstream) ▪ Construction Manager or Contractor
B.5. WASTE MANAGEMENT					
12.16. Pollution of the surrounding environment (including drainage lines) as a result of the handling, temporary stockpiling and disposal of general	Reduce environmental impacts such as soil, surface water and groundwater contamination as a result of incorrect storage, handling and disposal of general waste. Minimise the production of	12.16.1. General waste (i.e. construction waste, building rubble, discarded concrete, bricks, tiles, wood, glass, window panes, air conditioners, plastic, metal, excavated material, packaging material, paper and domestic waste etc.) generated during the construction phase should be stockpiled temporarily (i.e. once-off) on site in a designated area within suitable waste collection bins and skips (or similar). Waste collection bins and skips	▪ Monitor the strategic placement of the temporary, designated waste stockpiling area at the site camp via visual inspections, and record and report any non-compliance. ▪ Monitor the temporary storage and handling of general waste on site via site audits and record non-compliance and incidents (i.e.	▪ Once-off prior to the commencement of the construction phase and as required as the construction phase process evolves. ▪ Daily	▪ ECO and Contractor ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
waste.	waste.	should be covered with suitable material, where appropriate.	conduct visual inspections of the temporary waste storage area).		
	Prevent environmental problems (e.g. pollution / change in soil pH) due to solid and liquid wastes disposed of on the site. Ensure compliance with waste management legislation.	12.16.2. Should the on-site stockpiling of general waste exceed 100 m^3 and a period of 90 days, then the National Norms and Standards for the Storage of Waste (published on 29 November 2013 under GN 926) must be adhered to.	▪ Record the amount of general waste that is temporarily stockpiled at the designated area on site, as well as the duration and record non-compliance and incidents. ▪ Monitor the duration and amounts of general waste that is temporarily stockpiled at the designated area on site via site audits and record non-compliance and incidents (i.e. conduct visual inspections of the temporary waste storage area). ▪ Audit compliance with the Norms and Standards for the Storage of Waste (published on 29 November 2013 under GN 926) if the storage amounts are exceeded (i.e. only if required).	▪ Daily ▪ Weekly ▪ Monthly	▪ Contractor ▪ ECO ▪ Project Developer (Mainstream).
		12.16.3. Ensure that the designated stockpiling area for general waste (i.e. skips and waste collection bins) is inspected on a daily basis to verify its condition and integrity, particularly after rainfall events.	▪ Monitor the temporary, designated waste stockpiling area at the site camp, as well as the handling of general waste on site via site audits and record non-compliance and incidents.	▪ Daily	▪ ECO
		12.16.4. Ensure that general waste generated during the construction phase is removed from the site on a regular basis, and safely disposed of at an appropriate, licenced waste disposal facility by an approved waste management Contractor. Waste disposal slips or waybills should be kept on file as proof of disposal. As a general principle, waste manifests must be obtained to prove legal disposal of waste.	▪ Ensure that a suitable Waste Management Contractor is appointed to remove and dispose the general waste at an appropriate, licenced waste disposal facility. ▪ Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Once-off prior to the construction phase. ▪ Weekly	▪ Project Developer (Mainstream)/ Contractor ▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		12.16.5. Ensure that the construction site is kept clean at all times and that construction personnel are made aware of correct waste disposal methods. Littering must be prevented through effective site camp management.	▪ Monitor the condition of the site camp throughout the construction phase via visual site inspections. Record non-compliance and incidents. ▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Daily ▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ ECO and Contractor ▪ ECO and Contractor ▪ ECO
		12.16.6. Sufficient general waste disposal bins must also be provided for use by construction personnel throughout the site. These bins must be emptied on a regular basis.	▪ Monitor general waste generation by construction staff and collection via audits throughout the construction phase.	▪ Daily or Weekly	▪ ECO and Contractor.
		12.16.7. Ensure that all general waste emanating from the construction phase is removed from site prior to the commencement of the rehabilitation and operational phases.	▪ Undertake a final inspection at the end of the construction phase in order to verify and ensure that all general waste is removed from site and correctly disposed, prior to the commencement of the rehabilitation and operational phases.	▪ At the end of the construction phase.	▪ ECO and Contractor.
		12.16.8. Promote waste reduction, re-use, and recycling opportunities on site during the construction phase.	▪ Monitor waste generation and collection throughout construction. ▪ Investigate if any complaints have been expressed by the surrounding community regarding waste handling.	▪ Weekly or bi-weekly	▪ ECO and Contractor
		12.16.9. Ensure an adequate and sustainable use of resources.	▪ Monitor waste generation and collection throughout construction.	▪ Weekly or bi-weekly	▪ ECO and Contractor
		12.16.10. Control and implement waste management plans provided by contractors. Ensure that relevant legislative requirements are respected.	▪ Control of waste management practices throughout construction phase	▪ Weekly or bi-weekly	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
		12.16.11. Normal sewage management practises should be implemented. These include ensuring that portable sanitation facilities are regularly emptied and the resulting sewage is contained and transported safely (by an appointed (suitable) service provider) for correct disposal at an appropriate, licenced facility. Proof of disposal (in the form of waste disposal slips or waybills) should be retained on file for auditing purposes. No waste water must be discharged to the natural environment. 12.16.12. As part of the Environmental Awareness Training, all construction personnel should be made aware of the sewage management practises.	▪ Monitor the placement of sanitation facilities during the construction phase via visual site inspections. Record non-compliance and incidents. ▪ Ensure that a suitable Contractor is appointed to remove and dispose the sewage at an appropriate, licenced facility. ▪ Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents. ▪ Carry out Environmental Awareness Training. ▪ Conduct audits of the signed attendance registers.	▪ Weekly ▪ During construction ▪ Weekly ▪ Once-off training and ensure that all new staff are inducted. ▪ Monthly	▪ ECO and Contractor ▪ ECO ▪ ECO ▪ ECO and Contractor ▪ ECO
12.17. Pollution of the surrounding environment as a result of the handling, temporary stockpiling and disposal of hazardous waste.	Reduce environmental impacts such as soil, surface water and groundwater contamination as a result of incorrect storage, handling and disposal of hazardous waste.	12.17.1. Hazardous waste (i.e. empty tins, oils, fuel spillages, spilled materials and chemicals etc.) generated during the construction phase should be stockpiled temporarily (i.e. once-off) on site in a designated area in suitable waste collection bins and leak-proof storage skips (or similar). Waste collection bins and skips should be covered with suitable material, where appropriate. Hazardous waste must be stored separately from all other general waste. The designated stockpiling area must be labelled correctly.	▪ Monitor the strategic placement of the temporary, designated waste stockpiling area at the site camp via visual inspections, and record and report any non-compliance. ▪ Monitor the temporary storage and handling of hazardous waste on site via site audits and record non-compliance and incidents (i.e. conduct visual inspections of the temporary waste storage area).	▪ Once-off prior to the commencement of the construction phase and as required as the construction process evolves. ▪ Daily	▪ ECO and Contractor ▪ ECO
		12.17.2. Should the on-site stockpiling of hazardous waste exceed 80 m^3, then the National Norms and Standards for the Storage of Waste (published on 29 November 2013 under GN 926) must be adhered to.	▪ Record the amount of hazardous waste that is temporarily stockpiled at the designated area on site, as well as the duration and record non-compliance and incidents. ▪ Monitor the duration and amounts of hazardous waste that is temporarily stockpiled at the designated area on site via site audits and record non-	▪ Daily ▪ Weekly ▪ Monthly	▪ Contractor ▪ ECO ▪ Project Developer (Mainstream).

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	**Frequency**	**Responsibility**
			compliance and incidents (i.e. conduct visual inspections of the temporary waste storage area). ▪ Audit compliance with the Norms and Standards for the Storage of Waste (published on 29 November 2013 under GN 926) if the storage amounts are exceeded (i.e. only if required).		
		12.17.3. Ensure that the designated stockpiling area for hazardous waste (i.e. leak proof skips and waste collection bins) is inspected on a daily basis to verify its condition and integrity, particularly after rainfall events.	▪ Monitor the temporary, designated waste stockpiling area at the site camp, as well as the handling of hazardous waste on site via site audits and record non-compliance and incidents.	▪ Daily	▪ ECO
		12.17.4. Ensure that all hazardous waste is removed from the site on a regular basis, and safely disposed at an appropriate, licenced hazardous waste disposal facility by an approved waste management Contractor.	▪ Ensure that a suitable Waste Management Contractor is appointed to remove and dispose the hazardous waste at an appropriate, licenced hazardous waste disposal facility. ▪ Monitor waste disposal slips and waybills via site audits and record non-compliance and incidents.	▪ Once-off prior to the construction phase. ▪ Weekly	▪ Project Developer (Mainstream)/ Contractor ▪ ECO
		12.17.5. Refer to the management actions in Section 12.16.5 and 12.16.7 of this Section of the EMPr and implement them for hazardous waste as well.	▪ Refer to the monitoring methodology in Section 12.16.5 and 12.16.7 of this Section of the EMPr and implement them for hazardous waste as well.	▪ Refer to the monitoring frequency in Section 12.16.5 and 12.16.7 of this Section of the EMPr and implement them for hazardous waste as well.	▪ Refer to the monitoring responsibility in Section 12.16.5 and 12.16.7 of this Section of the EMPr and implement them for hazardous waste as well.
		12.17.6. All liquid waste (used oil, paints, lubricating compounds and grease) to be packaged and	▪ Waste removal and disposal to be monitored throughout construction	▪ Weekly or bi-weekly	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
		disposed of by appropriate means.			
		12.17.7. Adequate containers for the cleaning of equipment and materials (paint, solvent) must be provided as to avoid spillages.	▪ Waste removal and disposal to be monitored throughout construction	▪ Weekly or bi-weekly	▪ ECO and Contractor
		12.17.8. Waste water from construction and painting activities must be collected in a designated container and disposed of at a suitable disposal point off site.	▪ Waste removal and disposal to be monitored throughout construction	▪ Weekly or bi-weekly	▪ ECO and Contractor
		12.17.9. Control and implement waste management plans provided by contractors. Ensure that relevant legislative requirements are respected.	▪ Control of waste management practices throughout construction phase	▪ Weekly or bi-weekly	▪ ECO and Contractor
C. OPERATIONAL PHASE					
C.1. HERITAGE IMPACTS (PALAEONTOLOGY, ARCHAEOLOGY AND CULTURAL LANDSCAPE)					
12.18. Destruction of archaeological remains as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road.	Minimise the chances of significant archaeological sites and/or graves being disturbed.	12.18.1. Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place outside of the authorized operational footprint.	▪ Carry out visual inspections to ensure strict control over the behaviour of operational staff in order to restrict activities to within demarcated areas.	▪ Weekly	▪ Environmental Manager
12.19. Damage to historical buildings as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road.	Minimise impacts on the built environment.	12.19.1. Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place outside of the authorized operational footprint.	▪ Carry out visual inspections to ensure strict control over the behaviour of operational staff in order to restrict activities to within demarcated areas.	▪ Weekly	▪ Environmental Manager
12.20. Destruction of palaeontological	Minimise the chances of significant fossil material or	12.20.1. Ensure that all vehicles remain on the service road at all times and ensure that no activity	▪ Carry out visual inspections to ensure strict control over the	▪ Weekly	▪ Environmental

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
material as a result of the existence and maintenance of the proposed powerlines, on-site substation and service road.	palaeontological sites being disturbed.	takes place outside of the authorized operational footprint.	behaviour of operational staff in order to restrict activities to within demarcated areas.		Manager
C.2. AVIFAUNA IMPACTS					
12.21. Electrocution of Red Data avifauna on the 132kV line and in the on-site substation.	Ensure effective reactive mitigation if need be in the proposed on-site substation yard if Red Data species are electrocuted.	12.21.1. The hardware within the proposed on-site substation yard is too complex to warrant any mitigation for electrocution at this stage. It is recommended that if on-going impacts are recorded once operational, site specific mitigation be applied reactively. If any electrocutions of Red Data avifauna are reported in the proposed on-site substation yard, the avifaunal specialist must be notified for an inspection of the problem and advice on how the problem can be resolved, if at all, through appropriate mitigation. This is an acceptable approach because Red Data avifauna is unlikely to frequent the substation and be electrocuted.	▪ Avifaunal specialist to be appointed to conduct on-site investigation. ▪ Environmental Manager to record impacts of electrocution of Red Data avifauna at the proposed on-site substation and ensure that reactive site specific mitigation is implemented if required. Record and report any non-compliance.	▪ As and when required.	▪ Avifaunal Specialist, Project Developer (Mainstream) and Environmental Manager
12.22. Mortality of Red Data avifauna due to collisions with the earth-wire of the proposed powerline.	Mortality of Red Data avifauna due to collisions with the earth-wire of the proposed powerline.	12.22.1. The operational monitoring programme must include regular monitoring and inspections (i.e. quarterly) of the grid connection power line for collision-related mortalities by an avifaunal specialist.	▪ Avifaunal specialist to be appointed and must conduct a quarterly walk-through of the grid connection. ▪ Environmental Manager to verify appointment of specialist and monitor the frequency of monitoring by auditing signed reports and minutes of meetings.	▪ Quarterly	▪ Avifaunal specialist and Facility Manager
D. DECOMMISSIONING PHASE					
D.1. VISUAL IMPACTS					
12.23. Potential visual intrusion of decommissioning	Prevent unnecessary visual clutter and focusing attention of surrounding visual	12.23.1. Disturbed and transformed areas should be contoured to approximate naturally occurring slopes to avoid lines and forms that will contrast	▪ Conduct visual inspections to ensure that landscaping is following the	▪ Weekly	▪ ECO

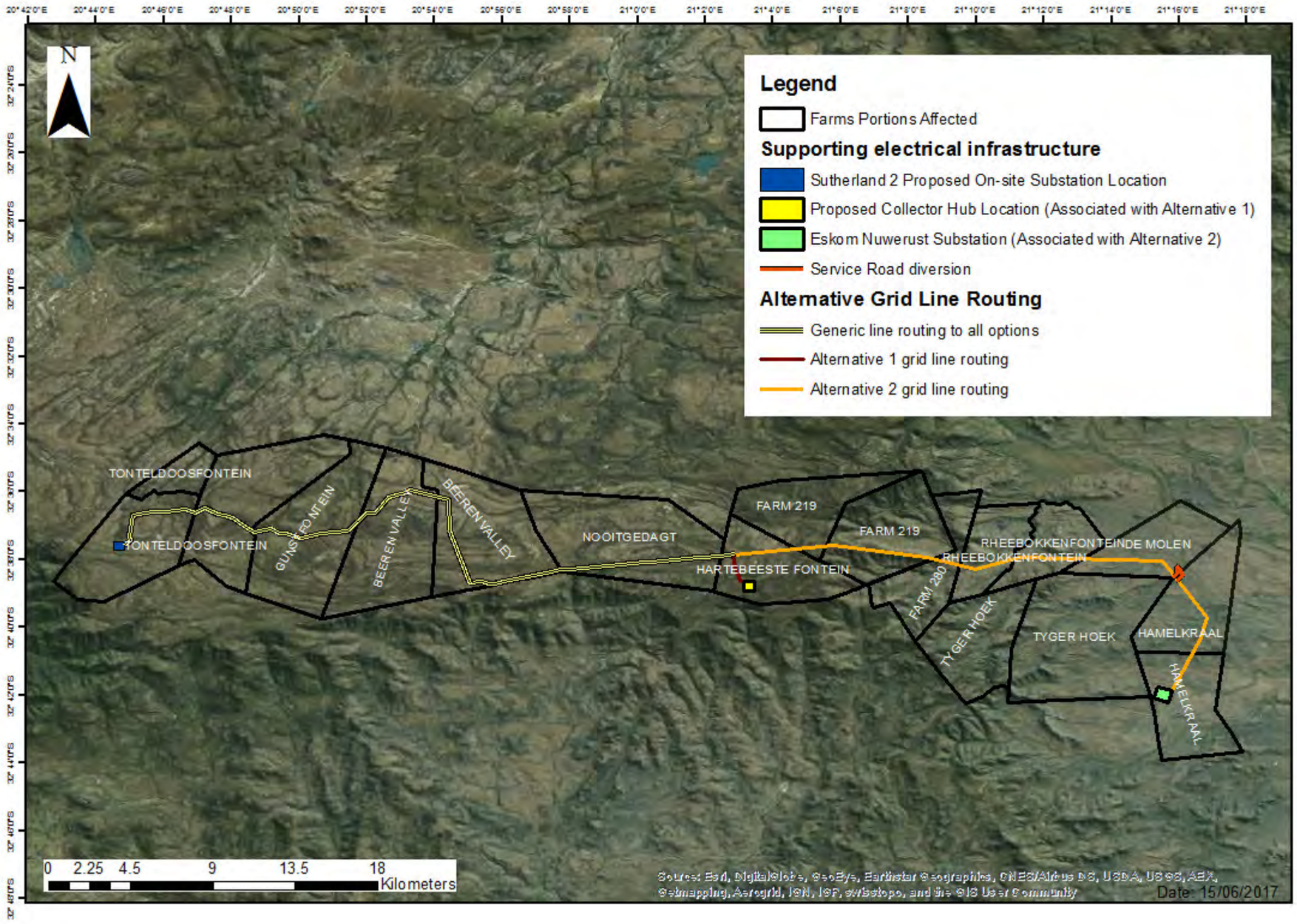
Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
activities on existing views of sensitive visual receptors.	receptors on the proposed development.	with the existing landscapes. 12.23.2. Edges of re-vegetated areas should be feathered to reduce form and line contrasts with surrounding undisturbed landscape.	rehabilitation plan.		
		12.23.3. Where possible decommissioning camps and laydown areas should be located (where sensitive visual receptors are least likely to be affected): • In low visibility areas (e.g. avoid ridgelines and open plains); • Previously disturbed areas (e.g. clearings created by farmers for other purposes which are no longer being used); and/or • Areas near derelict farmsteads (taking into consideration the findings of the Heritage Impact Assessment as well as other assessments that may be relevant), particularly where existing trees can be used to screen these areas from views.	▪ Ensure that this is taken into consideration for the siting of the proposed site camp and laydown area. Carry out visual inspections to ensure the site camp and laydown area are demarcated clearly, and record and report any non-compliance. ▪ Carry out visual inspections to ensure strict control over the boundary of the site camp and laydown area in order to restrict activities to within demarcated areas.	▪ Weekly ▪ Weekly	▪ ECO ▪ ECO
		12.23.4. Stockpiled topsoil should be reapplied to disturbed areas and these areas should be re-vegetated using a mix of indigenous species in such a way that the areas will form as little contrast in form, line, colour and texture with the surrounding undisturbed landscape.	▪ Site visits to ensure that stockpiled topsoil (or appropriate soil for vegetation when stockpiled topsoil is exhausted) is used.	▪ Weekly	▪ ECO
		12.23.5. Night lighting of decommissioning sites should be minimised within requirements of safety and efficiency.	▪ Complaints about night lights should be investigated and documented in a register.	▪ Weekly or bi-weekly	▪ ECO
		12.23.6. Working at night should be avoided where possible.	▪ Operation times for decommissioning activities to be monitored and managed (as well as included in the tender contract).	▪ Weekly	▪ ECO

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
	Reduce the visual impact of decommissioning activities project wide	12.23.7. Maintain good housekeeping on site to avoid litter and minimize waste. 12.23.8. Monitor sites for strict adherence to demarcated boundaries and minimise areas of vegetation, ground and surface disturbance. Existing clearings should be used where possible and where required. 12.23.9. Monitor that existing roads will be used for access as far as possible. 12.23.10. Monitor that topsoil from the site is stripped, stockpiled, and stabilised before excavating earth. 12.23.11. Monitor that vegetation material from vegetation removal is mulched and spread over fresh soil disturbances to aid in the rehabilitation process. 12.23.12. Monitor adherence to lighting plan. 12.23.13. Monitor adherence to rehabilitation plan (i.e. where cleared areas are rehabilitated as soon as possible). 12.23.14. Monitor adherence to erosion control plan. 12.23.15. Monitor adherence to dust and fire control plans.	▪ Carry out site visits and inspections of the sites and ensure good housekeeping is maintained. Record and report any non-compliance. ▪ Carry out site visits and record and report any non-compliance. ▪ Carry out site visits and inspections of the access routes. Record and report any non-compliance. ▪ Carry out site visits and inspections of the topsoil management process. Record and report any non-compliance. ▪ Carry out site visits and inspections of the re-vegetation process. Record and report any non-compliance. ▪ Complaints about night lights should be investigated and documented in a register. Investigate any complaints about night lights and document it in a register. ▪ Visit sites requiring rehabilitation. ▪ Carry out site visits and record and report any non-compliance. ▪ Carry out site visits and record and report any non-compliance.	▪ Daily ▪ Daily ▪ Daily ▪ Daily ▪ Daily ▪ Daily and as complaints arise. ▪ Daily ▪ Daily ▪ Daily	▪ Decommissioning Manager and Environmental Control Officer
D.2. HERITAGE IMPACTS (PALAEONTOLOGY, ARCHAEOLOGY AND CULTURAL LANDSCAPE)					
12.24. Destruction of archaeological remains as a result of the removal of the proposed powerlines, on-site substation and rehabilitation of	Minimise the chances of significant archaeological sites and/or graves being disturbed.	12.24.1. Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place outside of the decommissioning footprint.	▪ Carry out visual inspections to ensure strict control over the behaviour of decommissioning contractors and staff in order to restrict activities to within demarcated areas.	▪ Weekly	▪ ECO and Contractor

Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
the service road.					
12.25. Alteration of the cultural landscape as a result of the removal of the proposed powerlines, on-site substation and rehabilitation of the service road.	Minimise the impact on the cultural landscape as a result of the presence of vehicles in the rural landscape during the decommissioning process.	12.25.1. Ensure that rehabilitation is effective and that no landscape scarring remains visible from long distances.	▪ Carry out visual inspections to ensure that the rehabilitation process is effective and record and report any non-compliance.	▪ Weekly	▪ ECO and Contractor
12.26. Damage to historical buildings as a result of the removal of the proposed powerlines and on-site substation and rehabilitation of the service road.	Minimise impacts on the built environment.	12.26.1. Ensure that all structures (including stone kraals) are regarded as no-go areas during decommissioning.	▪ Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance.	▪ Weekly	▪ ECO
12.27. Destruction of palaeontological material as a result of the removal of the proposed powerlines, on-site substation and rehabilitation of the service road.	Minimise the chances of significant fossil material or palaeontological sites being disturbed.	12.27.1. Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place outside of the decommissioning footprint.	▪ Carry out visual inspections to ensure strict control over the behaviour of decommissioning contractors and staff in order to restrict activities to within demarcated areas.	▪ Weekly	▪ ECO and Contractor
D.3. AVIFAUNA IMPACTS					
12.28. Displacement of Red Data avifauna due to disturbance associated with the decommissioning	Prevent unnecessary displacement of Red Data avifauna by ensuring that contractors are aware of the requirements of the site-specific Decommissioning	12.28.1. A site-specific Decommissioning EMPr must be implemented, which gives an appropriate and detailed description of how decommissioning activities must be conducted to reduce unnecessary destruction of habitat. All contractors are to adhere to the Decommissioning	▪ Implementation of Decommissioning EMPr and oversee activities to ensure that the Decommissioning EMPr is implemented and enforced, via site audits and inspections. Record and report any non-	▪ On a daily basis ▪ Once-off prior to the completion of decommissioning. ▪ Monthly during the	▪ ECO ▪ Project Developer (Mainstream) and Rehabilitation

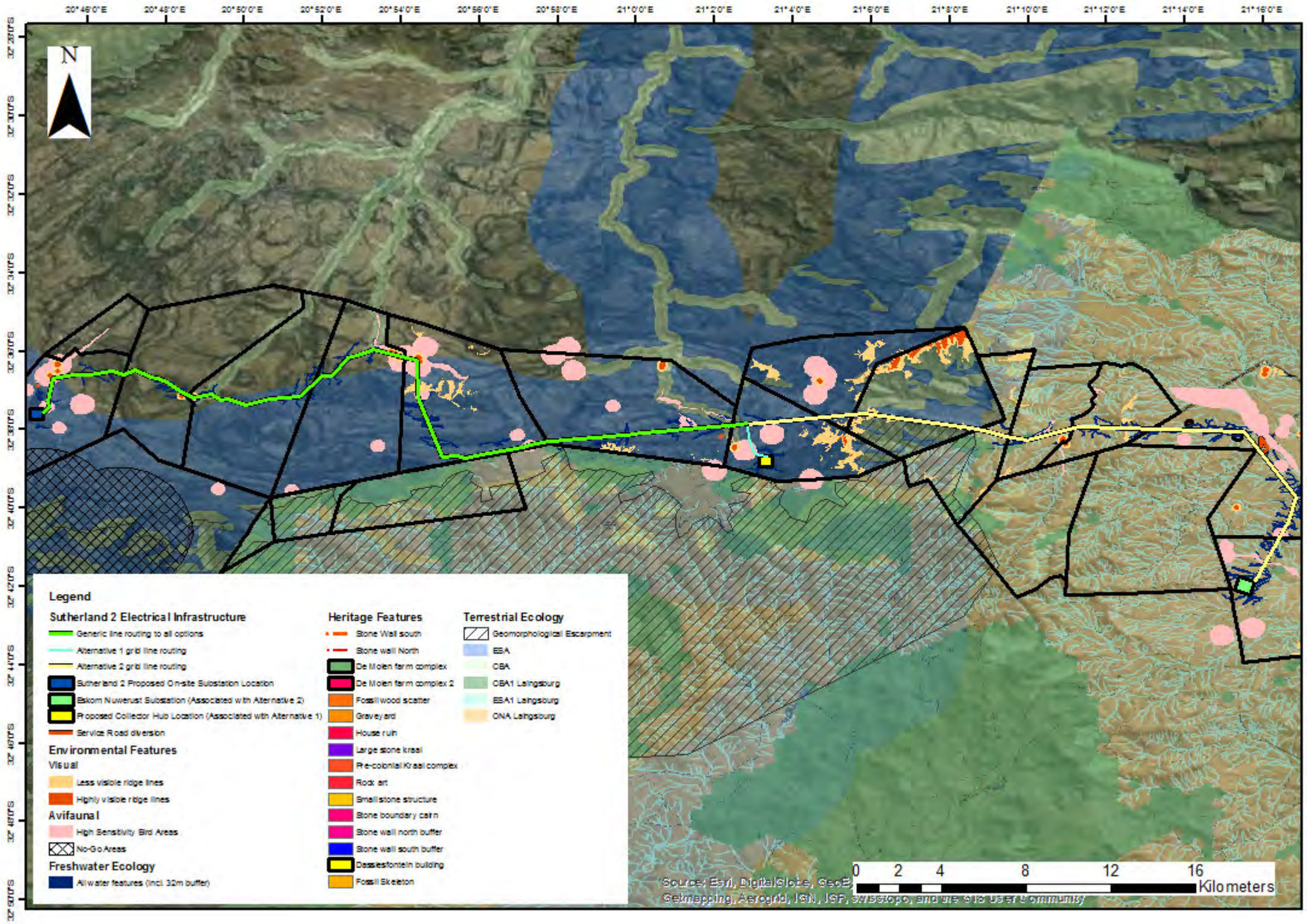
Impact	Mitigation/Management Objectives	Mitigation/Management Actions	Monitoring		
			Methodology	Frequency	Responsibility
activities.	EMPr.	EMPr and should apply good environmental practice during decommissioning. 12.28.2. Following decommissioning, rehabilitation of all areas disturbed (e.g. temporary access tracks) must be undertaken and to this end a habitat restoration plan is to be developed by a rehabilitation specialist and implemented accordingly.	compliance. ▪ Appointment of Rehabilitation Specialist to develop a Habitat Restoration Plan and ensure that it is approved by auditing the final and signed report acceptance. ▪ Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance.	decommissioning phase.	Specialist and ECO ▪ ECO, Decommissioning Manager or Contractor
D.4. WASTE MANAGEMENT					
12.29. Generation of waste due to disassembly of the distribution line and associated structures.	Avoid substantial negative impacts at the decommissioning phase due to insufficient planning.	12.29.1. Suitable receptacles must be provided for the temporary storage of various waste types such as scrap metal and concrete, until it is removed to the nearest licensed landfill.	▪ Audit the implementation of mitigation measures recommended for the decommissioning phase.	▪ During the decommissioning phase	▪ ECO
		12.29.2. Waste separation is encouraged and therefore receptacles should be labelled to reflect the different waste types.	▪ Audit the implementation of mitigation measures recommended for the decommissioning phase.	▪ During the decommissioning phase	▪ ECO
		12.29.3. Ensure that the construction mitigation and management measures are adhered to during the decommissioning phase.	▪ Audit the implementation of mitigation measures recommended for the decommissioning phase.	▪ During the decommissioning phase	▪ ECO

13 APPENDIX A – SITE LAYOUT MAP

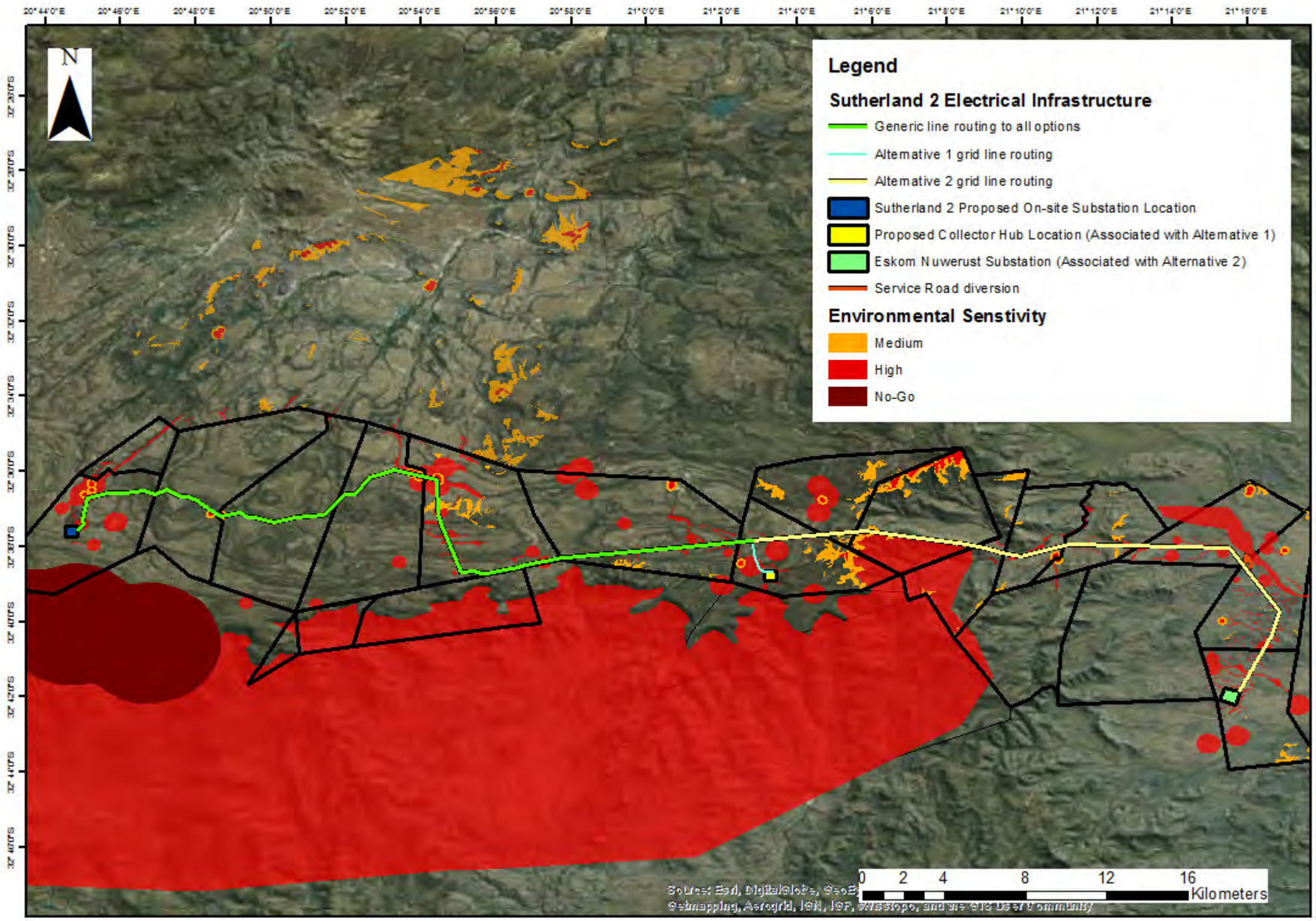

N
Legend
Farms Portions Affected
Supporting electrical infrastructure
Sutherland 2 Proposed On-site Substation Location
Proposed Collector Hub Location (Associated with Alternative 1)
Eskom Nuwerust Substation (Associated with Alternative 2)
Service Road diversion
Alternative Grid Line Routing
Generic line routing to all options
Alternative 1 grid line routing
Alternative 2 grid line routing
TONTELDOOSFONTEIN
TONTELDOOSFONTEIN
GUNSFONTEIN
BEERENVALLEY
BEERENVALLEY
NOOITGEDAGT
FARM 219
FARM 219
HARTEBEESTE FONTEIN
RHEEBOKKENFONTEINDE MOLEN
RHEEBOKKENFONTEIN
FARM 280
TYGER HOEK
TYGER HOEK
HAMELKRAAL
HAMELKRAAL
0 2.25 4.5 9 13.5 18
Kilometers
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Date: 15/06/2017

14 APPENDIX B – ENVIRONMENTAL FEATURES AND SENSITIVITY MAPS

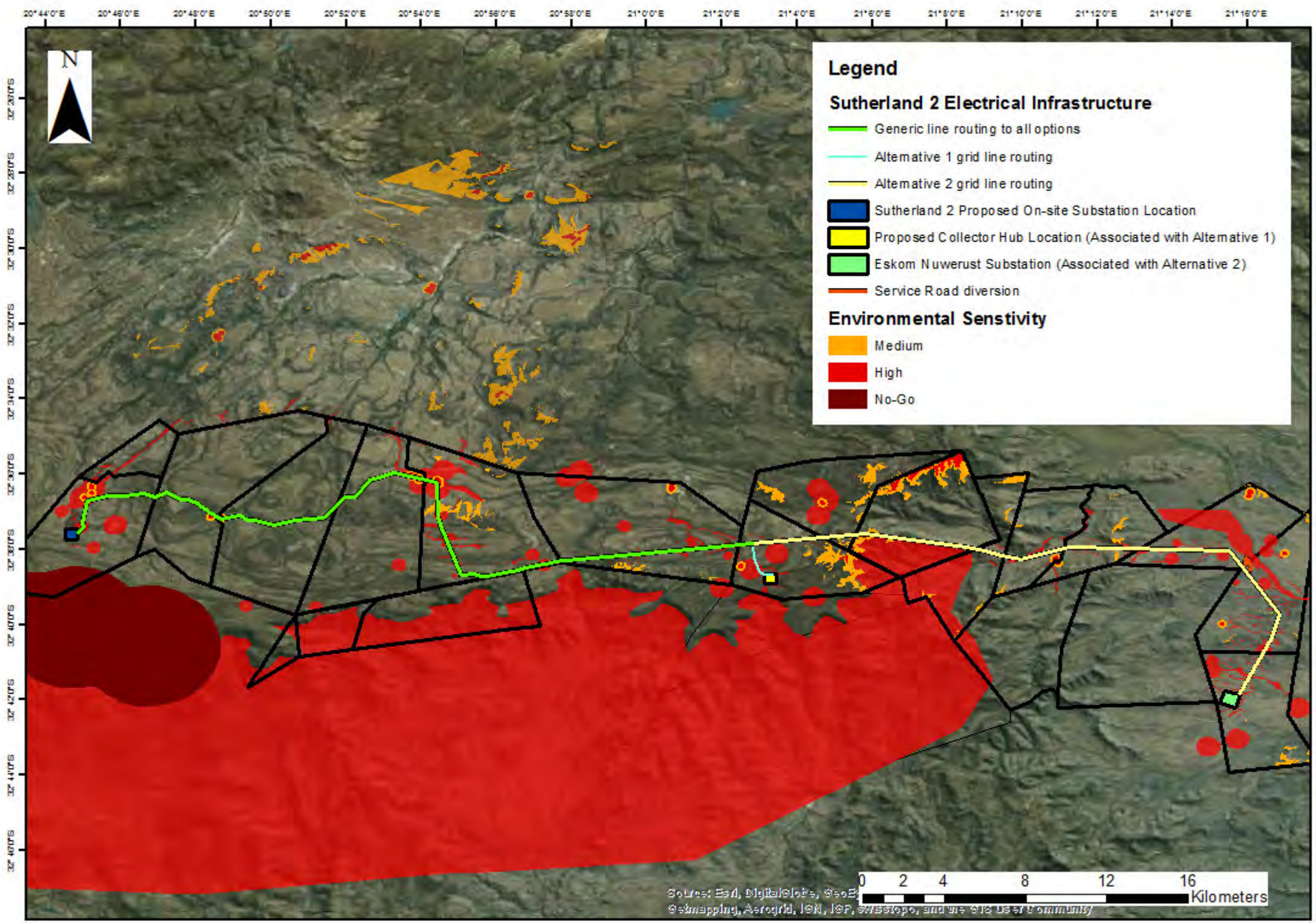
Environmental Features Map



Environmental Sensitivity Map



15 APPENDIX C – COMBINED LAYOUT AND SENSITIVITY MAP


20°44'0"E
20°46'0"E
20°48'0"E
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20°52'0"E
20°54'0"E
20°56'0"E
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21°0'0"E
21°2'0"E
21°4'0"E
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21°8'0"E
21°10'0"E
21°12'0"E
21°14'0"E
21°16'0"E
32°26'0"S
32°28'0"S
32°30'0"S
32°32'0"S
32°34'0"S
32°36'0"S
32°38'0"S
32°40'0"S
32°42'0"S
32°44'0"S
32°46'0"S
N
Legend
Sutherland 2 Electrical Infrastructure
Generic line routing to all options
Alternative 1 grid line routing
Alternative 2 grid line routing
Sutherland 2 Proposed On-site Substation Location
Proposed Collector Hub Location (Associated with Alternative 1)
Eskom Nuwerust Substation (Associated with Alternative 2)
Service Road diversion
Environmental Senstivity
Medium
High
No-Go
0 2 4 8 12 16
Kilometers
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

16 APPENDIX D – FRESHWATER MONITORING ACTION PLAN (AS NOTED IN THE AQUATIC ECOLOGY IMPACT ASSESSMENT)

Aspect	Monitoring Location	Frequency of sampling	Frequency of Reporting	Report Content
During the construction phase				
Erosion	The portion of any river (Riet, Portugal's, Vanwyks or Juk) within the study area, but with specific reference to those areas directly impacted by distribution line crossings.	Monitoring of erosion should occur on a weekly basis during construction by the contractor, and after every major rainstorm and/or flood event. Any evidence of erosion should be recorded photographically /diagrammatically and reported during the ECO site visit.	1. After every major rainstorm and / or flood. 2. Monthly monitoring report compiled by the appointed ECO during the construction phase.	1. Brief indication of the method of assessment. 2. Assumptions and limitations must be listed. 3. Photos and GPS point locations taken of existing erosion in the freshwater features and adjacent banks must be incorporated into the report. 4. Any erosion observed must be discussed in detail and management recommendations made. 5. Map indicating where erosion is present. 6. Control measures which are recommended, or which have been undertaken.
During the operational phase				
Erosion	The portion of any river (Riet, Portugal's, Vanwyks or Juk) within the study area, but with specific reference to those areas directly impacted by distribution line crossings.	Monitoring of erosion should occur after every rainstorm and/or following any rainfall event where there is surface flow in the system.	1. After every major rainstorm and / flood for the first wet season post construction. 2. Monthly monitoring report compiled by the appointed ECO.	1. Brief indication of the method of assessment. 2. Assumptions and limitations must be listed. 3. Photos and GPS point locations taken of existing erosion in the freshwater features and adjacent banks must be incorporated into the report. 4. Any erosion observed must be discussed in detail and management recommendations made (such as revegetation etc.) 5. Map indicating where erosion is present. 6. Control measures undertaken to be reported.
Alien vegetation control	The portion of any river (Riet, Portugal's, Vanwyks or Juk) within the study area, but with specific focus on those areas directly	Regrowth of alien vegetation should be monitored monthly during the first growing season.	At the end of the first growing season following the completion of construction.	1. Provide a list of species occurring within the study area. 2. Discuss the density of species. 3. Freshwater feature integrity and risk to be discussed. 4. Fixed point photo (i.e. taking photo at specific point

Aspect	Monitoring Location	Frequency of sampling	Frequency of Reporting	Report Content
	impacted by distribution line crossings.			within priority area to show effect of alien vegetation control). 5. Control measures undertaken to be recorded. 6. Assess the necessity of further alien and invasive vegetation control. 7. The VEGRAI method should be utilised at each assessment, both upstream and downstream of the disturbed areas, in order to provide an auditable result of the riparian habitat Ecostatus.

BASIC ASSESSMENT REPORT

APPENDIX H: DETAILS OF EAP AND EXPERTISE

contents

Appendix H.1 Curriculum Vitae of EAP – Surina Laurie

Name of firm	CSIR
Name of staff	Surina Laurie
Profession	Environmental Assessment Practitioner
Position in firm	Senior Environmental Assessment Practitioner
Years' experience	More than 6 years
Nationality	South African

Biographical sketch

Surina has more than 6 years of experience as an Environmental Assessment Practitioner (EAP). She completed both her BSc in Conservation Ecology and MPhil in Environmental Management (part-time) at the University of Stellenbosch. With her honours project, she worked closely with the Endangered Wildlife Trust Riverine Rabbit Working Group and was responsible for determining the conservation opportunity for the Riverine Rabbit in the Karoo. With this project, she gained valuable experience in how to interact and manage stakeholders in such a way that a project's objectives and conservation goals are met without the stakeholders not being included in the decision-making process. The management of stakeholders and the ability to incorporate their needs into the objectives of a project is seen as an essential component of an Environmental Impact Assessment (EIA) process.

With her Masters' thesis she researched and addressed why there is a need to undertake a Cost Benefit Analysis (CBA) as part of any EIA. The need for a CBA stems from the fact that losing environmental services will have an economic impact on a regional/national level in the long term but this is usually not considered during an EIA process. A CBA will look at both the economic benefits (profit) from a project and the economic losses because of loss of ecosystem services or rehabilitation costs. By including a CBA in an EIA, both the economic and environmental financial implications (not just the environmental significance of an impact) of a project will be considered by the decision making authority prior to the issuing of Environmental Authorisations or permits.

She has experience in undertaking Basic Assessments and Scoping and Environmental Impact Assessments for various sectors, including renewable energy, industry and tourism. She also has experience in undertaking environmental audits, due diligence assessments and the compilation of Environmental Management Programmes.

Registered Professional Natural Scientist (Pr. Sci. Nat.) in Environmental Science (Reg. No: 400033/15) with the South African Council of Natural Scientific Professions.

Education

2015	Certificate in Environmental Economics, University of London (SOAS)
2013	Project Management Course, University of Cape Town Graduate School of Business
2011-2012 (Part-time)	MPhil Environmental Management, University of Stellenbosch
2007-2010	BSc Conservation Ecology, University of Stellenbosch

Employment Record

Feb 2014 to present	CSIR, Project Manager, EAP
Sept 2011 to Jan 2014	WSP Environmental (Pty) Ltd, Environmental Consultant
Nov 2010 to Aug 2011	EnviroAfrica, Junior Environmental Consultant

Experience record *Abridged experience in Environmental Impact and Basic Assessment processes:*

Date	Project Description	Role	Client
2016 - current	Basic Assessment Processes: Proposed development of three Distribution Lines and electrical grid infrastructure to connect to the proposed Sutherland WEF, Sutherland 2 WEF and Rietrug WEF to the National Grid, near Sutherland in the Northern and Western Cape	Project Leader	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 - current	National SEA for Solar and Wind (Phase 2)	Project Manager	Department of Environmental Affairs
2016 - 2017	Mainstream Sutherland WEFs Amendment 1 and 2	Project Leader	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 - 2017	Scoping and EIA Process: Proposed Development of the Teekloof WEF, near Victoria West, Northern Cape.	Project Leader	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 - 2017	Scoping and EIA Process: Proposed Development of the Platberg WEF, near Victoria West, Northern Cape.	Project Leader	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 - 2017	Environmental Screening Study for the Vryburg Solar PV Project	Project Leader	Veroniva (PTY) Ltd
2016	Basic Assessment Process: Proposed Development of Supporting Infrastructure to the Victoria West Wind Energy Facility, Victoria West, Northern Cape	Project Leader	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2015	Review of the validity of appeals received against the Environmental Authorisation issued for the construction of an 11 MW Hydropower Station, Groblershoop, Northern Cape Province	Project Leader	Department of Environmental Affairs
2015 - 2016	Scoping and EIA Process: Proposed development five 100 MW Photovoltaic Facilities near Dealesville, Free State.	Project Leader	29 Solar (PTY) Ltd
2015 – 2016	Scoping and EIA Process: Proposed construction of the Mulilo Solar Development consisting of seven 75 MW PV Solar Energy Facilities and associated infrastructure near Kenhardt, Northern Cape	Project Leader	Mulilo Renewable Project Development (Pty) Ltd
2015 - 2016	Basic Assessment Process: Proposed development of three Transmission Lines and electrical infrastructure to connect to the proposed 75 MW Solar PV Facilities (Kenhardt PV 1, PV 2, and PV 3) on the remaining extent of Onder Rugzeer Farm 168, and the remaining extent of Portion 3 of Gemsbok Bult Farm 120, north-east of Kenhardt, Northern Cape.	Project Leader	Scatec Solar SA 163 (PTY) Ltd
2015 - 2016	Scoping and EIA Process: Proposed development of three 75 MW Solar PV Facilities (Kenhardt PV 1, PV 2, and PV 3) on the remaining extent of Onder Rugzeer Farm 168, north-east of Kenhardt, Northern Cape.	Project Leader	Scatec Solar SA 163 (PTY) Ltd
2014 - 2016	Integrated Scoping and EIA process for the construction of three Photovoltaic (PV) or Concentrated Photovoltaic (CPV) Solar Facilities with a generating capacity of 75 MW each on the farms remaining extent of Portion 3 of the Farm Gemsbok Bult 120 and Boven Rugzeer remaining extent of 169, located 30 km north-east of Kenhardt. Two of the projects will be located on the farm remaining extent of Portion 3 of the Farm Gemsbok Bult 120 and one on Boven Rugzeer remaining extent 169.	Project Manager	Mulilo Renewable Project Development (Pty) Ltd
2014 - present	Integrated Scoping and EIA process for the development of twelve (12) Photovoltaic (PV) or Concentrated Photovoltaic (CPV) Solar Facilities with a generating capacity of 75 MW/100MW each, near Dealesville, Free State.	Project Manager	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2013-2014	Basic Assessment for the construction of three additional petroleum storage tanks at the Cape Town Harbour.	Environmental Consultant	FFS Refiners (Pty) Ltd
2013-2014	Scoping and EIA for the construction of a Sewage Package Plant on Robben Island.	Environmental Consultant	Department of Public Works
2013	Development of an EMPr for the undertaking of maintenance work on the Stilbaai Fishing Harbour's	Environmental Consultant	Department of Public Works

Date	Project Description	Role	Client
	Slipway located in Stilbaai, Western Cape, South Africa. In order to be compliant to the requirements of the National Environmental Management Act (Act 107 of 1998) and Environmental Impact Assessment (EIA) Regulations, a Maintenance Management Plan (MMP) needed to be developed to manage the environmental impacts associated with maintenance work that is scheduled to be undertaken on the Stilbaai Fishing Harbour's Slipway as well as any future on-going maintenance requirements.		
2012-2014	Waste Management License for the proposed storage of Ferrous HMS 1+2, Shredded Ferrous and Bales located at the K/L Berth at Duncan Road, Port of Cape Town	Environmental Consultant	The New Reclamation Group (Pty) Ltd
2012-2014	Scoping and EIA for the construction a biodiesel refinery in the Coega Industrial Development Zone (IDZ). The proposed project entails the import of used vegetable oil from the USA and converting it through various processes to biodiesel which will be exported to Europe. The proposed project requires an Air Emissions License, a Waste Management License and Environmental Authorisation.	Environmental Consultant	FIS Biofuels (Ltd)
2013-2013	Basic Assessment for the proposed redevelopment of Berths B, C and D in Duncan Dock at the Port of Cape Town.	Assistant Environmental Consultant	FPT (Pty) Ltd
2011- 2012	Development of an EMPr for the Eerstelingsfontein Opencast Project (EOP).	Assistant Environmental Consultant	Exxaro Resources Limited
2011-2014	Basic Assessment for the proposed reinstatement of the Blue Stone Quarry located on Robben Island.	Assistant Environmental Consultant	Department of Public Works
2011	Scoping and EIA for the proposed upgrade to the Struisbaai WWTW.	Assistant Environmental Consultant	Cape Agulhas Municipality
2011	Basic Assessment for the construction of a cellular mast.	Environmental Consultant	MTN (Pty) Ltd
2010-2011	Basic Assessment for the construction of a Heritage Centre.	Environmental Consultant	Waenhuiskrans Arniston Community Development Trust
2010-2011	Scoping and EIA for the rezoning of the area from open space to residential, the construction of six residential units and the upgrading of the existing Waste Water Treatment Plant.	Environmental Consultant	Private developer

Abridged experience in undertaking the role of an Environmental Control Officer and compliance auditing:

Date	Project Description	Role	Client
2013- 2014	The proposed extension project involved the installation of five new above ground storage tanks. The two largest tanks have a tank capacity of 2,500m^3 each and a height of 18m. The three smaller tanks have a tank capacity of 2,300m^3, 1,350m^3 and 212m^3 and heights of 18m, 10.8m and 10.8m respectively, giving an additional 8862m^3 storage capacity to the current FFS operation	ECO	FFS Refiners (Pty) Ltd
2012- 2014	Compliance auditing of drum re-conditioners for the used oil industry in the Western Cape.	Assistant Environmental Consultant	The Rose Foundation
2012	Environmental legal compliance auditing of various Much Asphalt sites. The audit entailed review of national, provincial legislation and municipal by-laws and a site visit in order to determine whether the sites were compliant to the relevant environmental legislation.	Environmental Consultant	Much Asphalt
2011- 2013	Construction of a new De-Ashing Plant for FFS Vissershok Construction of a De-Ashing Plant. This	ECO	FFS Refiners (Pty) Ltd

Date	Project Description	Role	Client
	project involved the monthly independent audits and reports of all the environmental and social aspects of the construction phase the new De-Ashing Plant at Vissershok.		
2011- 2012	Construction of the new 1200m^3 Tank at FFS Cape Town Harbour Site. This project involved two site audits per month to ensure compliance to the Environmental Authorisation and Environmental Management Plan for the proposed project.	ECO	FFS Refiners (Pty) Ltd

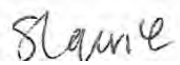
Language capabilities

	Speaking	*Reading*	*Writing*
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

Appendix H.2 EAP Declaration of Interest

I, _____Surina Laurie_____, declare that:

- 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 will take into account, to the extent possible, the matters listed in Regulation 18 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, unless access to that information is protected by law, in which case it will be indicated that such information exists and will be provided 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 inputs and comments of all stakeholders and 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 declare that all the particulars furnished by me are true and correct;
- 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;
- I will provide the competent authority any information that is provided by the EAP to interested and affected parties and; any responses by the EAP to comments or inputs made by interested or affected parties;
- I affirm that the information provided in this report includes input and recommendations from specialist reports where relevant;
- the information provided in this report has been sourced from relevant literature, legislation, previous studies and specialist input and is therefore believed to be correct;
- I will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations;
- I realise that a false declaration is an offence in terms of regulation 48 of the Regulations and is punishable in terms of section 24F of the Act; and
- I am aware of what constitutes an offence in terms of Regulation 48 and that a person convicted of an offence in terms of Regulation 48(1) is liable to the penalties as contemplated in section 49B of the Act.

Signed at Stellenbosch on the 20th of July 2017	 **Environmental Assessment Practitioner**

Appendix H.3 Curriculum Vitae of Project Manager – Rohaida Abed

Name of firm	CSIR
Name of staff	Rohaida Abed
Profession	Environmental Assessment Practitioner
Position in firm	Environmental Assessment Practitioner (L1)
Years' experience	More than 6 years
Nationality	South African

Biographical Sketch

Rohaida is an Environmental Assessment Practitioner in the CSIR Environmental Management Services team based in Durban. She has more than six years of experience in the Environmental Management field, and has been involved in various transport infrastructure related projects as an Environmental Control Officer, which included monitoring compliance with Environmental Authorizations and Environmental Management Plans. She has also been conducting Environmental Assessments relating to Port infrastructure, Bulk Liquid Storage facilities and renewable energy in the capacity of Project Manager.

Registered Professional Natural Scientist (Pr. Sci. Nat.) in Environmental Science (Reg. No: 400247/14) with the South African Council of Natural Scientific Professions.

Education

2005	Bachelor of Science (Environmental Science), UKZN
2006	Bachelor of Science Honours (Environmental Science), UKZN
2010	Master of Science (Environmental Science), UKZN

Employment Record

2006 – 2008	University of KwaZulu-Natal (Academic Demonstrator)
March 2010 – April 2010	EnAq Consulting (Environmental Officer)
May 2010 – September 2011	Henwood & Nxumalo Consulting Engineers (Environmental Scientist)
October 2011 – to present	CSIR (Environmental Assessment Practitioner)

Short Courses

May 2009	Management of Estuaries in South Africa (Marine and Estuarine Research, FET Water, and Water Research Commission)
October 2010	Environmental Impact Assessment: A Practical Approach (North West University (Potchefstroom Campus), Centre for Environmental Management)

Experience record

Date	Project Description	Role	Client
2010 – 2011	The Repair and Rehabilitation of the Umzinto River Bridge Number 823 on the South Coast of KwaZulu-Natal	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Construction of the Kwahlongwa Bridge Number 3257 over the Kwa-Malukaka River on D297 near Umzumbe, South Coast of KwaZulu-Natal	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Construction of a bridge and approach roads across the Indaka River at Eludimbi, within the Msinga Local Municipality, KwaZulu-Natal	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Extension of the Lion Park Pipeline along the P566 and D2173 in the Manyavu area, KwaZulu-Natal	Environmental Control Officer	Umgeni Water
2010 – 2011	The Construction of a bridge and approach roads across the Tugela River at Thulwane, within the Nkandla Local Municipality, KwaZulu-Natal	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Construction of a bridge and approach roads	Environmental Control	KwaZulu-Natal

Date	Project Description	Role	Client
	across the Mona River at Nqolotshe, within the Hlabisa and Nongoma Local Municipalities, KwaZulu-Natal	Officer	Department of Transport
2010 – 2011	The Construction of the Mdloti River Bridge (Northbound) on the R102, within the eThekwini Municipality, KwaZulu-Natal.	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Upgrade of the R102 from the Duffs Road Interchange to King Shaka International Airport, within the eThekwini Municipality, KwaZulu-Natal.	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010 – 2011	The Construction of the P701 Provincial Road from Ulundi to Empangeni, KwaZulu-Natal	Environmental Control Officer	KwaZulu-Natal Department of Transport
2010	Environmental Impact Assessment for the construction of a bridge and approach roads across the Mona River at Nqolotshe, within the Hlabisa and Nongoma Local Municipalities, KwaZulu-Natal	Project Assistant	KwaZulu-Natal Department of Transport
2011 - 2014	Environmental Impact Assessment for the proposed Bulk Liquid Storage and Handling Facility in Zone 8 of the Coega IDZ, Port of Ngqura	Project Consultant	Oiltanking Grindrod Calulo (PTY) Ltd
2012 - 2014	Environmental Impact Assessment for the proposed Manganese Export Terminal in Zones 8, 9 and 11 of the Coega IDZ, including the Port of Ngqura, and surrounding area	Project Assistant	Hatch Africa (PTY) Ltd c/o Transnet
2012 - 2014	Basic Assessment for the Provision of Landside Structures and Infrastructure to the Bulk Liquid Storage and Handling Facility in the Port of Ngqura	Project Manager	Eastern Cape Infrastructure Joint Venture c/o Transnet Capital Projects
2013 – 2014	Environmental Impact Assessment for the Provision of Marine Infrastructure, including a General Cargo Berth and Liquid Bulk Berths at the Port of Ngqura	Project Manager	Transnet Capital Projects
2013 – 2016	Basic Assessment for the decommissioning of unused infrastructure at the Port of Ngqura	Project Manager	Transnet Capital Projects
2015	Public Participation Process for the Application for non-substantive Amendment to the Environmental Authorisation for the proposed Landside Structures and Infrastructure to the Bulk Liquid Storage and Handling Facility in the Port of Ngqura	Project Manager	Transnet Capital Projects
2014 – 2016	Basic Assessment for the Proposed Decommissioning and Upgrade of a Bulk Liquid Storage and Handling Facility at Maydon Wharf, Port of Durban, KwaZulu-Natal	Project Manager	Oiltanking Grindrod Calulo Terminals (PTY) Ltd
2015 – ongoing	Environmental Management Plan for the Proposed Construction of a Bulk Liquid Storage and Handling Facility in the Port of Cape Town, Western Cape	Project Manager	Oiltanking Grindrod Calulo Terminals (PTY) Ltd
2015 – 2016	Basic Assessment Process for the Proposed development of three Transmission Lines and electrical infrastructure to connect to the proposed 75 MW Solar PV Facilities (Kenhardt PV 1, PV 2, and PV 3) on the remaining extent of Onder Rugzeer Farm 168, and the remaining extent of Portion 3 of Gemsbok Bult Farm 120, north-east of Kenhardt, Northern Cape.	Project Manager	Scatec Solar SA 163 (PTY) Ltd
2015 – 2016	Scoping and EIA Process for the Proposed development of three 75 MW Solar PV Facilities (Kenhardt PV 1, PV 2, and PV 3) on the remaining extent of Onder Rugzeer Farm 168, north-east of Kenhardt, Northern Cape.	Project Manager	Scatec Solar SA 163 (PTY) Ltd
2015 - 2016	Environmental Impact Assessment Process for the Proposed Construction, Operation and Decommissioning of a Seawater Reverse Osmosis Plant and Associated Infrastructure at Tongaat and Lovu on the KwaZulu-Natal North Coast and South Coast	Project Assistant	Umgeni Water Amanzi
2015 – 2016	EIA for a Gas-To-Power project and associated infrastructure, forming part of the proposed Uyekraal Gas-to-Power Development, Saldanha Bay, Western Cape	Project Manager	Mulilo Thermal Developments
2016	Application for the non-substantive Amendment to the Environmental Authorisation for the proposed Bulk Liquid Storage and Handling Facility in Zone 8 of	Project Manager	Oiltanking Grindrod Calulo (PTY) Ltd

Date	Project Description	Role	Client
	the Coega IDZ, Port of Ngqura		
2016	Application for the non-substantive Amendment to the Environmental Authorisation for the proposed Victoria West Renewable Energy Facility, Northern Cape	Project Manager	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016	Scoping and EIA Process: Proposed Development of the Teekloof WEF, near Victoria West, Northern Cape.	Project Assistant	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016	Scoping and EIA Process: Proposed Development of the Platberg WEF, near Victoria West, Northern Cape.	Project Assistant	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 - 2017	Screening Assessment for the proposed storage of Dangerous Goods at an existing Storage Terminal at Maydon Wharf, Port of Durban, KwaZulu-Natal	Project Manager	Oiltanking Grindrod Calulo Terminals (PTY) Ltd
2016 – ongoing	Basic Assessment Processes: Proposed development of three Distribution Lines and electrical grid infrastructure to connect to the proposed Sutherland WEF, Sutherland 2 WEF and Rietrug WEF to the National Grid, near Sutherland in the Northern and Western Cape	Project Manager	South Africa Mainstream Renewable Power Developments (Pty) Ltd

Language capabilities

	Speaking	*Reading*	*Writing*
English	Excellent	Excellent	Excellent

Appendix H.4 Curriculum Vitae of Project Assistant – Andile Dludla

Name of firm	CSIR
Name of staff	Andile Dludla
Profession	Environmental Assessment and Management
Position in firm	Junior Environmental Assessment Practitioner
Years' experience	More than 2 years
Nationality	South African

Biographical sketch

Andile is a Junior Environmental Assessment Practitioner in the CSIR Environmental Management Services team based in Stellenbosch. He has more than 2 years of experience in the Environmental Management field, and has been involved in various Coastal Management, Renewable Energy and Gas related projects as an Environmental Officer/Assistant. He is also currently undertaking his MPhil in Environmental Management at the University of Stellenbosch.

Education

2011	Bachelor of Science (Environment and Water Science), University of Western Cape
2012	Bachelor of Science Honours (Environment and Water Science), University of Western Cape
2017 (Current)	Master of Philosophy (Environmental Management), University of Stellenbosch

Employment Record

Company	Title	Year
Department of Environmental Affairs	Intern	2014 – 2015
CSIR	Intern: Environmental Assessment Practitioner	2015–2017
CSIR	Junior Environmental Assessment Practitioner	2017-present

Key Experience Record

Date	Project Description	Role	Client
2014	NATIONAL ESTUARINE MANAGEMENT PROTOCOL: Guidelines for the Development and Implementation of Estuarine Management Plans	Project Assistant	DEA
2015-2016	Shale Gas Strategic Environmental Assessment	Project Assistant	DEA
2016-2017	Mainstream Sutherland WEFs Amendment 2	Project Assistant	South Africa Mainstream Renewable Power Developments (Pty) Ltd
2016 – ongoing	Three BA Processes for Electrical Grid Infrastructure for the Sutherland WEF, Sutherland 2 WEF and Rietrug WEF	Project Assistant	South Africa Mainstream Renewable Power Developments (Pty) Ltd

SHORT COURSES

Year	Course	Institution
May 2014	Introduction to EIA Procedures: an accredited short learning programme, Certificate	Rhodes University and Coastal Environmental Services
December 2014	Introduction to Estuary Management	Nelson Mandela Metropolitan University

BASIC ASSESSMENT REPORT

APPENDIX I: SPECIALIST'S DECLARATION OF INTEREST

contents

Declarations of Interest	
1. Terrestrial Ecology Specialist	Simon Bundy
2. Aquatic Ecology Specialist	Stephen van Staden
3. Visual Specialist	Henry Holland
4. Heritage Specialist	Dr. Jayson Orton
5. Palaeontological Specialist	Dr. John Almond
6. Avifauna Specialist	Chris van Rooyen

Declaration of Interest: Simon Bundy

I, Simon C Bundy, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study 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: 

Name of Specialist: Simon C Bundy

Date: 20 December 2016

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

Specialist:	Simon Colin Bundy		
Contact person:	Simon Colin Bundy		
Postal address:	24 San Te Fe, Seaward Estates, Ballito, 4420		
Postal code:	4420	Cell:	082 446 4847
Telephone:	032 946 0685	Fax:	032 946 0784
E-mail:	simon@ecocoast.co.za		
Professional affiliation(s) (if any)	South African Council of Natural Scientific Professionals No. 400093/06 – Professional Ecologist		

Project Consultant:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Simon C Bundy

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:

Name of company (if applicable):
Sustainable Development Projects cc

Date: 20/12/16

Declaration of Interest: Stephen van Staden

I, Stephen van Staden, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study 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: 

Name of Specialist: Stephen van Staden

Date: 5 December 2016

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

Specialist:	Scientific Aquatic Services (T/A SAS Environmental)		
Contact person:	Stephen van Staden		
Postal address:	P O Box 751779 Gardenview		
Postal code:	2047	Cell:	083 415 2356
Telephone:	011 616 7893	Fax:	086 724 3132 / 011 615 6240
E-mail:	stephen@sasenvironmental.co.za		
Professional affiliation(s) (if any)	SACNASP – *Pri.Sci.Nat.* Registration Number 400134/05		

Project Consultant:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.co.za		

4.2 The specialist appointed in terms of the Regulations_

I **STEPHEN VAN STADEN** 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:

SCIENTIFIC AQUATIC SERVICES (SAS ENVIRONMENTAL)
Name of company (if applicable):

5th DECEMBER 2016
Date:

Declaration of Interest: Henry Holland

I, Henry Holland, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study 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: 

Name of Specialist: Henry Holland

Date: 14 March 2017

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

Specialist:	Visual Specialist		
Contact person:	Henry Holland		
Postal address:	8 Cathcart Street		
Postal code:	6139	Cell:	0822266689
Telephone:	046 6228735	Fax:	
E-mail:	hholland@gmail.com		
Professional affiliation(s) (if any)			

Project Consultant:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, ~~Henry Holland~~ _____, 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:

Name of company (if applicable):

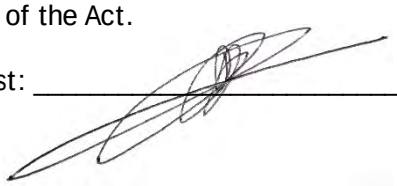
14 March 2017
Date:

Declaration of Interest: Dr. Jayson Orton

I, Jayson Orton, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study 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: _____



Name of Specialist: JAYSON ORTON

Date: 6 March 2017

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

Specialist:	ASHA Consulting (Pty) Ltd		
Contact person:	Dr Jayson Orton		
Postal address:	40 Brassie Street, Lakeside		
Postal code:	7945	Cell:	083 272 3225
Telephone:	021 788 8425	Fax:	n/a
E-mail:	jayson@asha-consulting.co.za		
Professional affiliation(s) (if any)	APHP: Professional heritage practitioner ASAPA: Accredited Principal Investigator, Member No. 233		

Project Consultant:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.co.za		

4.2 The specialist appointed in terms of the Regulations

I, Jayson Orton, 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:

ASHA CONSULTING (PTY) LTD

Name of company (if applicable):

06 MARCH 2017

Date:

Declaration of Interest: Dr. John Almond

I, Dr John Edward Almond, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study are true and correct; and
- I realize 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:

Name of Specialist: Dr. John Edward Almond

Date: 21 February 2017

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

Specialist:	Dr. J. E. Almond		
Contact person:	Dr. J. E. Almond		
Postal address:	PO Box 12410, Mill Street, Cape Town, RSA		
Postal code:	8010	Cell:	n/a
Telephone:	021 462 3622	Fax:	n/a
E-mail:	almond@universe.co.za		
Professional affiliation(s) (if any)	Palaeontological Society of Southern Africa, Association of Professional Heritage Practitioners (Western Cape)		

Project Consultant:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, Dr John Edward Almond, 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.

John E Almond

Signature of the specialist:

NATURA VIVA CC

Name of company (if applicable):

21 February 2017

Date:

Declaration of Interest: Chris Van Rooyen

I, Chris van Rooyen, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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 have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study 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

Name of company: Chris van Rooyen Consulting

Date: 2 April 2017

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

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

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

(1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and

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

PROJECT TITLE

Basic Assessment Process for the Proposed Construction of Electrical Grid Infrastructure to support the proposed authorised Sutherland 2 Wind Energy Facility, near Sutherland, Northern and Western Cape Provinces

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:	Council for Scientific and Industrial Research (CSIR)		
Contact person:	Surina Laurie		
Postal address:	PO Box 320, Stellenbosch		
Postal code:	7599	Cell:	082 468 0962
Telephone:	021 888 2561	Fax:	021 888 2693
E-mail:	SLaurie@csir.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):

2 April 2017
Date:

BASIC ASSESSMENT REPORT

APPENDIX J: ADDITIONAL INFORMATION

contents

Appendix J.1: References used in the BA Report

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