ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
DRAFT BASIC ASSESSMENT REPORT

POWER LINE BETWEEN THE PERDEKRAAL WEST WIND ENERGY FACILITY AND THE ESKOM KAPPA SUBSTATION, WESTERN CAPE PROVINCE

March 2016

Prepared for:

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Bryanston
2021

Prepared by:

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File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

PROJECT DETAILS

DEA Reference No.	:	Not yet assigned
Title	:	Power Line between the Perdekraal West Wind Energy Facility and the Eskom Kappa Substation, Western Cape Province
Authors	:	Savannah Environmental John von Mayer Jo-Anne Thomas
Client	:	Perdekraal West Wind Farm (Pty) Ltd
Report Status	:	Draft Basic Assessment Report for Public Review
Review Period	:	22 March 2016- 25 April 2016

When used as a reference this report should be cited as: Savannah Environmental (2016). Draft Power Line between the Perdekraal West Wind Energy Facility and the Eskom Kappa Substation, Western Cape Province

TABLE OF CONTENTS

PAGE

APPENDICES

Appendix A: A3 Maps

- » *Appendix A1: A3 Locality Map*
- » *Appendix A2: A3 Layout Map*

Appendix B: Site Photographs

Appendix C: Facility Illustration(s)

Appendix D: Specialist(s)

- » *Appendix D1: Ecology Report*
- » *Appendix D2: Avifauna Report*
- » *Appendix D3: Visual Report*

Appendix E: Public Participation

- » *Appendix E1: Adverts and Site Notices*
- » *Appendix E2: Stakeholder Correspondence*
- » *Appendix E3: List of registered I&APs*

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: EAP Declaration and CVs

Appendix I: Specialist Declarations

Appendix J: Additional Information

- » *Appendix J1: Power line Coordinates*

SUMMARY AND OVERVIEW OF THE PROPOSED PROJECT

The original EA (DEA reference: 12/12/20/1783) for the Perdekraal Renewable Energy Facility and associated infrastructure was originally authorised on 04 January 2012 for a total potential output of between 230-300MW. A 132kV power line and substation connecting the wind energy facility to the Eskom Kappa Substation was also authorised under the original application (DEA Reference Number: 12/12/20/1783).

The authorisation was then split into two separate wind energy facilities namely: Perdekraal East Wind Project (DEA Reference Number: 12/12/20/1783/2) and Perdekraal West Wind Project (DEA Reference Number: 12/12/20/1783/1).

The authorised power line and substation was included in both the Perdekraal West and Perdekraal East Wind Energy Facilities split EAs, however, Perdekraal East Wind Energy Facility has been selected as a Preferred Bidder project under round 4 of the Department of Energy's (DoE) Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) and have begun planning to construct the power line and substation. Due to additional costs associated with a double-circuit power line and the fact that the Perdekraal West Wind Energy Facility is not a Preferred Bidder, Perdekraal East Wind Energy Facility opted for a single-circuit 132kV power line. The servitude registered for the power line will be 100m wide and will include the provision for three potential power lines.

Perdekraal West Wind Farm (Pty) Ltd is the holder of the Perdekraal West Wind Energy Facility EA (DEA Reference Number: 12/12/20/1783/1) and in order to secure a connection to the Eskom Kappa Substation for the Perdekraal West Wind Energy Facility a separate authorisation is now required for the power line with a voltage of 132kV. This is the subject of this application. The proposed power line corridor is located to the west of the Perdekraal West Wind Energy Facility adjacent to the authorised power line route, and will be approximately 8km in length.

Perdekraal West Wind Farm (Pty) Ltd is the holder of the Perdekraal West Wind Energy Facility EA (DEA Reference Number: 12/12/20/1783/1) and in order to secure a connection to the Eskom Kappa Substation for the Perdekraal West Wind Energy Facility a separate environmental authorisation is required for the power line with a voltage of 132kV. This is the subject of this application. The proposed power line corridor is located to the west of the Perdekraal West Wind Energy Facility adjacent to the authorised power line route being constructed for the Perdekraal East Wind Project, and will be approximately 8km in length. Perdekraal East Wind Project was selected as a Preferred Bidder project under round 4 of the DoE REIPPPP. Perdekraal East Wind Project will construct the entire footprint of the authorised substation (Adamskraal Substation). The

Perdekraal West IPP on-site substation will then fall within the existing authorised footprint of the Adamskraal Substation and will occupy one of the IPP feeder bays.

Due to the short length of the power line and the location thereof adjacent to an authorised power line, no alternatives are being considered within this Basic Assessment Report (refer to Figure 1.3). A corridor of 250m in width is being considered within this Basic Assessment process. For the placement of the power line access roads (of up to 4m in width) will be constructed along the servitude where required. The power line will be owned and operated by Eskom.

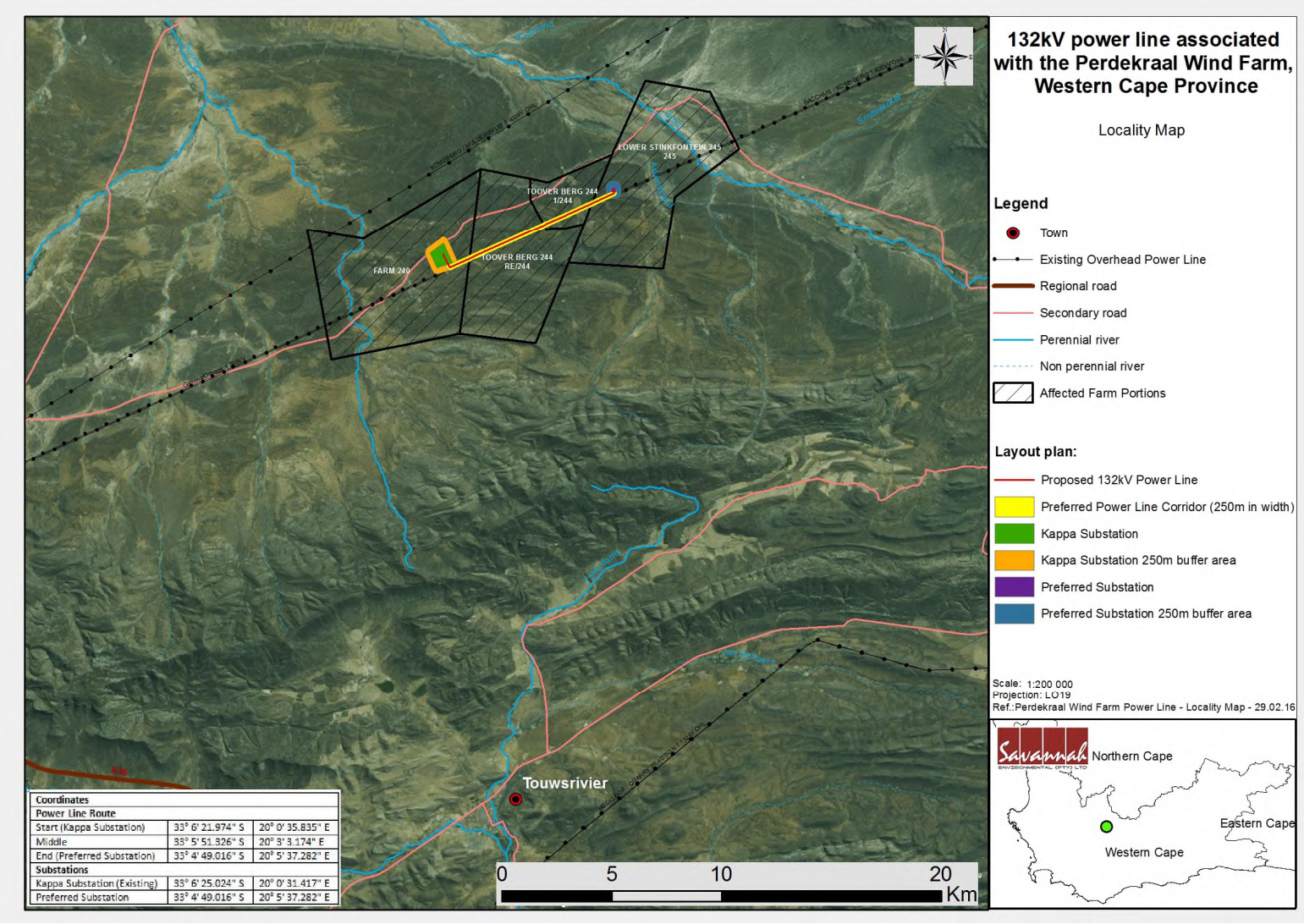

Figure 1.1: Locality map showing the location of the power line route

1.1. Requirements for a Basic Assessment Process

In terms of the Environmental Impact Assessment (EIA) Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998), Perdekraal West Wind Farm (Pty) Ltd requires authorisation for the construction and operation of the power line. In terms of sections 24 and 24D of the National Environmental Management Act (No 107 of 1998), as read with the EIA Regulations of GN R982 – R985 a Basic Assessment process is triggered by the proposed project.

In terms of Section 24(1) of NEMA, the potential impact on the environment associated with these activities must be considered, investigated, assessed and reported on to the competent authority that has been charged by NEMA with the responsibility of granting environmental authorisations. As this power line is linked to a proposed electricity generation project (the Perdekraal West Wind Energy Facility) and relates to power transmission from this facility, the National Department of Environmental Affairs (DEA) is the competent authority[1] and the Western Cape Department of Environmental Affairs and Development Planning (WC DEA&DP) will act as the commenting authority.

The nature and extent of the proposed grid infrastructure is explored in more detail in this Basic Assessment Report. This report has been compiled in accordance with the requirements of the EIA Regulations and includes details of the activity description; the site, area and property description; the public participation process; the impact assessment; and the recommendations of the EAP (as per Table 1.1).

Table 1.1: Legal Requirements of the EIA Regulations

NEMA REGULATION GNR 982, SECTION 19 REQUIREMENTS FOR THE CONTENT OF BASIC ASSESSMENT REPORTS AS PER APPENDIX 1	**CROSS REFERENCE IN THIS REPORT (refer to the following parts in the report)**
(1) A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include— (a) details of— (i) the EAP who prepared the report; and	Section 1.2
(ii) the expertise of the EAP, including a curriculum vitae;	Section 1.2 Appendix H
(b) the location of the activity, including: (i) the 21 digit Surveyor General code of each cadastral land parcel;	Section B
(ii) where available, the physical address and farm name;	Section B
(iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section A (2) (a)
(c) a plan which locates the proposed activity or activities applied for	Appendix A1 and A2

[1] In terms of the Energy Response Plan, the DEA is the competent authority for all energy related applications.

NEMA REGULATION GNR 982, SECTION 19 REQUIREMENTS FOR THE CONTENT OF BASIC ASSESSMENT REPORTS AS PER APPENDIX 1	CROSS REFERENCE IN THIS REPORT (refer to the following parts in the report)
as well as associated structures and infrastructure at an appropriate scale;	Appendix C
or, if it is— (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	Appendix J1
(d) a description of the scope of the proposed activity, including— (i) all listed and specified activities triggered and being applied for; and (ii) a description of the activities to be undertaken including associated structures and infrastructure ;	Section A (1) a, b
(e) a description of the policy and legislative context within which the development is proposed including— (i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and	Section 11
(ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;	Section 11
(f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section 1.1
(g) a motivation for the preferred site, activity and technology alternative;	Section 1.1 Section 2
(h) a full description of the process followed to reach the proposed preferred alternative within the site, including: (i) details of all the alternatives considered; (ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; (iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	Section 2 Section C Appendix E
(iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Section B Section D
(v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts— (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;	Section D Appendix F
(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with	Appendix F

NEMA REGULATION GNR 982, SECTION 19 REQUIREMENTS FOR THE CONTENT OF BASIC ASSESSMENT REPORTS AS PER APPENDIX 1	CROSS REFERENCE IN THIS REPORT (refer to the following parts in the report)
the alternatives;	
(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Appendix F Section D
(viii) the possible mitigation measures that could be applied and level of residual risk;	Appendix F Section D
(ix) the outcome of the site selection matrix;	N/A
(x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	Section 2
(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity;	Section D2
(i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including— (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and	Appendix F Appendix D
(ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	Appendix F Appendix D
(j) an assessment of each identified potentially significant impact and risk, including— (i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; (iv) the probability of the impact and risk occurring; (v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be avoided, managed or mitigated;	Appendix F Appendix D
(k) where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report;	Section D2
(l) an environmental impact statement which contains— (i) a summary of the key findings of the environmental impact assessment; (ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and	Section D2 Appendix F

NEMA REGULATION GNR 982, SECTION 19 REQUIREMENTS FOR THE CONTENT OF BASIC ASSESSMENT REPORTS AS PER APPENDIX 1	CROSS REFERENCE IN THIS REPORT (refer to the following parts in the report)
(iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	
(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr;	Section D2 Appendix F
(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Section E
(o) a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;	Section 1.4
(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Section D
(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	N/A
(r) an undertaking under oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties; and	Appendix H
(s) where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	N/A
(t) any specific information that may be required by the competent authority; and	N/A
(u) any other matters required in terms of section 24(4)(a) and (b) of the Act.	N/A

1.2. Details of Environmental Assessment Practitioner and Expertise to conduct the Basic Assessment

Perdekraal West Wind Farm (Pty) Ltd has appointed Savannah Environmental as the independent environmental consultant to undertake the required Basic Assessment process and to identify and assess all the potential environmental impacts associated with the proposed project and propose appropriate mitigation and management measures in an Environmental Management Programme (EMPr). As part of these

environmental studies, I&APs have been actively involved through the public involvement process. Neither Savannah Environmental nor any of the specialist sub-consultants on this project are subsidiaries of or are affiliated to Perdekraal West Wind Farm (Pty) Ltd. In addition, Savannah Environmental does not have any interest in secondary developments that may arise out of the authorisation of the proposed project.

Savannah Environmental is a specialist environmental consulting company providing holistic environmental management services, including environmental impact assessment and planning to ensure compliance and evaluate the risk of development and the development and implementation of environmental management tools. Savannah Environmental benefits from the pooled resources, diverse skills and experience in the environmental field held by its team that has been actively involved in undertaking environmental studies for a wide variety of projects throughout South Africa and neighbouring countries. Strong competencies have been developed in project management of environmental processes, as well as strategic environmental assessment and compliance advice, and the assessment of environmental impacts, the identification of environmental management solutions and mitigation/risk minimising measures.

The Savannah Environmental team has considerable experience in environmental impact assessments and environmental management, and have been actively involved in undertaking environmental studies for a wide variety of projects throughout South Africa, including those associated with electricity generation and transmission.

The Environmental Assessment Practitioners (EAPs) and Public Participation consultants from Savannah Environmental who are responsible for this project are:

» *John von Mayer* – a registered Professional Natural Scientist and the principal author of this report. He holds an Honours Bachelor of Science degree in Environmental Science and has 8 years of experience in environmental management and environmental impact assessment.
» *Jo-Anne Thomas* - a registered Professional Natural Scientist and holds a Master of Science degree. She has 18 years' experience consulting in the environmental field. Her key focus is on strategic environmental assessment and advice; management and co-ordination of environmental projects, which includes integration of environmental studies and environmental processes into larger engineering-based projects and ensuring compliance to legislation and guidelines; compliance reporting; the identification of environmental management solutions and mitigation/risk minimising measures; and strategy and guideline development. She is currently involved in undertaking siting processes as well as EIAs for several renewable energy projects across the country.

Savannah Environmental has gained extensive knowledge and experience on potential environmental impacts associated with electricity generation projects through their

involvement in related EIA processes. Savannah Environmental has completed the EIA process and received environmental authorisations for numerous renewable energy projects and their associated infrastructure. Curricula vitae for the Savannah Environmental project team consultants are included in **Appendix H**.

DRAFT BASIC ASSESSMENT REPORT FOR PUBLIC REVIEW

This Draft Basic Assessment Report has been prepared by Savannah Environmental in order to assess the potential environmental impacts associated with proposed power line for the Perdekraal West Wind Energy Facility. This process is being undertaken in support of an application for environmental authorisation to the National Department of Environmental Affairs (DEA). The 30-day period for review is from **22 March 2016- 25 April 2016**. The report is available for public review at the following locations:

» Touws River Public Library (cnr Jane and Logan Streets, Touws River. Tel: 023-358-1192)
» www.savannahsa.com

To obtain further information, register on the project database, or submit written comment please contact:

Gabriele Wood of **Savannah Environmental**
Post: PO Box 148, Sunninghill, 2157 Johannesburg
Tel: 011 656 3237
Fax: 086 684 0547
Email: gabriele@savannahsa.com
www.savannahsa.com

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	**YES**	NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

The original EA (DEA reference: 12/12/20/1783) for the Perdekraal Renewable Energy Facility and associated infrastructure was originally authorised on 04 January 2012 for a total potential output of between 230-300MW. A 132kV power line and substation connecting the wind energy facility to the Eskom Kappa Substation was also authorised under the original application (DEA Reference Number: 12/12/20/1783).

The authorisation was then split into two separate wind energy facilities namely: Perdekraal East Wind Project (DEA Reference Number: 12/12/20/1783/2) and Perdekraal West Wind Project (DEA Reference Number: 12/12/20/1783/1).

The authorised power line and substation was included in both the Perdekraal West and Perdekraal East Wind Energy Facilities split EAs, however, Perdekraal East Wind Energy Facility has been selected as a Preferred Bidder project under round 4 of the Department of Energy's (DoE) Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) and have begun planning to construct the power line and substation. Due to additional costs associated with a double-circuit power line and the fact that the Perdekraal West Wind Energy Facility is not a Preferred Bidder, Perdekraal East Wind Energy Facility opted for a single-circuit 132kV power line. The servitude registered for the power line will be 100m wide and will include the provision for three potential power lines.

Perdekraal West Wind Farm (Pty) Ltd is the holder of the Perdekraal West Wind Energy Facility EA (DEA Reference Number: 12/12/20/1783/1) and in order to secure a connection to the Eskom Kappa Substation for the Perdekraal West Wind Energy Facility a separate authorisation is now requird for the power line with a voltage of 132kV. This is the subject of this application. The proposed power line corridor is located to the west of the Perdekraal West Wind Energy Facility adjacent to the authorised power line route, and will be approximately 8km in length.

Perdekraal West Wind Farm (Pty) Ltd is the holder of the Perdekraal West Wind Energy Facility EA (DEA Reference Number: 12/12/20/1783/1) and in order to secure a connection to the Eskom Kappa Substation for the Perdekraal West Wind Energy

Facility a separate environmental authorisation is required for the power line with a voltage of 132kV. This is the subject of this application. The proposed power line corridor is located to the west of the Perdekraal West Wind Energy Facility adjacent to the authorised power line route being constructed for the Perdekraal East Wind Project, and will be approximately 8km in length. Perdekraal East Wind Project was selected as a Preferred Bidder project under round 4 of the DoE REIPPPP. Perdekraal East Wind Project will construct the entire footprint of the authorised substation (Adamskraal Substation). The Perdekraal West IPP on-site substation will then fall within the existing authorised footprint of the Adamskraal Substation and will occupy one of the IPP feeder bays.

Due to the short length of the power line and the location thereof adjacent to an authorised power line, no alternatives are being considered within this Basic Assessment Report (refer to Figure 1.3). A corridor of 250m in width is being considered within this Basic Assessment process. For the placement of the power line access roads (of up to 4m in width) will be constructed along the servitude where required. The power line will be owned and operated by Eskom.

The proposed power line route falls within the Breede River Local Municipality, Western Cape Province.

The power line will comprise of the following activities:

Construction of the Power Line:

Following completion of the EIA process, a final route will be negotiated with affected landowners within the assessed corridor, taking cognisance of any identified environmental sensitivities. The activities associated with the construction of the power line will include site clearance and construction of access roads to facilitate access to the site where required (where existing access roads associated with the existing Eskom power line do not already exist). Power lines are constructed in the following simplified sequence:

Step 1: Survey of the route
Step 2: Determination of the conductor type
Step 3: Selection of best-suited conductor, towers, insulators, foundations
Step 4: Final design of line and placement of towers
Step 5: Issuing of tenders, and award of contract to construction companies
Step 6: Vegetation clearance and construction of access roads (where required)
Step 7: Tower pegging
Step 8: Construction of foundations
Step 9: Assembly and erection of towers
Step 10: Stringing of conductors
Step 11: Rehabilitation of disturbed area and protection of erosion sensitive areas

Step 12: Testing and commissioning

Construction of the power line will take approximately 15 months to complete.

Operation Phase

The power line will be operational for more than 20 years and will require routine maintenance work throughout this period. The site will be accessed using the access roads established during the construction phase. Access roads for the existing 400kV line will be utilised as far as possible. Operation and maintenance of the power line will be undertaken by Eskom.

Decommissioning Phase

The power line would only be decommissioned once it has reached the end of its economic life or is no longer required. At this stage, the power line would be completely decommissioned and removed from site. The following decommissioning activities are expected to be undertaken:

a) Site Preparation

Site preparation activities will include confirming the integrity of the access to the site to accommodate the required equipment and the mobilisation of decommissioning equipment.

b) Disassemble Components

The components would be disassembled, and reused and recycled (where possible), or disposed of in accordance with regulatory requirements.

c) Rehabilitation

Disturbed areas (where infrastructure has been removed) will be rehabilitated, if required, depending on the future land-use of the power line servitude.

b) Provide a detailed description of the listed activities associated with the project as applied for

Activities relevant to the current application have been identified and are listed in the table below.

Activity listed in GNR 983 - 985	Relevance to the project
GN983, activity 11 (i) The development of facilities or infrastructure for the transmission and distribution of electricity- (i) outside urban areas or industrial complexes	The proposed 132 kV power line. These will be located outside an urban area and will be connecting to the existing Eskom Kappa substation. The power line is approximately 8 km in length.

Activity listed in GNR 983 - 985	Relevance to the project
with a capacity of more than 33 but less than 275 kilovolts	
GN983, activity 12 The development of (xii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs-(a) within a watercourse; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; -	The power line infrastructure or structures will be located within 32m of a watercourse.
GN983, activity 19: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from-(i) a watercourse	This activity will be triggered where the construction access roads are proposed to cross a watercourse.
GN R.983, Activity 28: Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.	The current land use in the area is for agriculture and the total land to be developed is bigger than 1 hectare.
GN983, activity 56: The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre- (i) where the existing reserve is wider than 13,5 meters	The construction of the 132 kV power line will require the lengthening of existing roads for access purposes in some instances.
GN985, activity 4: The development of a road wider than 4 metres with a reserve less than 13,5 metres. f) in the Western Cape i) Outside urban areas aa) Areas containing natural vegetation	Access roads will be required to access the power line during construction and operation. These will be 4m or wider and will fall outside of urban areas.
GN985, activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance	The site falls within an ecological support area within the western Cape and will require > 300 meters of indigenous vegetation to be cleared.

Activity listed in GNR 983 - 985	Relevance to the project
management plan.	
GN 985, activity 14 The development of: (xii) infrastructure or structures with a physical footprint of 10 square metres or more. f) in the Western Cape i) Outside urban areas in: ff) critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans	This activity will be triggered where the construction of towers and access roads along the power line route are proposed to be situated within 32m from a watercourse. The site is situated with an Ecological Support Area.
GN 985, activity 18: The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre. f) In Western Cape i) All areas outside urban areas: (aa) Areas containing indigenous vegetation;	The project would require the lengthening of existing roads for access purposes. The study area includes areas of natural vegetation.
GN 985, activity 23: The expansion of- (x) infrastructure or structures where the physical footprint is expanded by 10 square metres or more where such development occurs (a) within a watercourse (g) In Western Cape: i. Outside urban areas, in: (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;	This activity will be triggered where the widening of access roads along the power line route is required within 32m from or within a watercourse. The study area includes ESA areas.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Regulation 22(2) (h) of GN R.982. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1: technically preferred alternative		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

No alternatives are considered in this Basic Assessment report.

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative 1A (Preferred):		
• Starting point of the activity	33° 4'51.71"S	20° 5'39.27"E

• Middle/Additional point of the activity	33° 5'47.58"S	20° 3'9.81"E
• End point of the activity	33° 6'34.92"S	20° 0'52.57"E

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

A table has been attached as **Appendix J1** with the power line coordinates for the whole length of the corridor.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Layout alternatives

The design of the power line is required to conform to Eskom's technical standards as it forms part of the national electricity supply network and must fit in with the existing network systems, technology and infrastructure. The broader corridor being assessed within this Basic Assessment allows for the avoidance of identified environmental sensitivities to some extent through the appropriate placement of the 31m wide servitude within this **250m wide corridor**.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

No technological alternative to a power line exists for the transmission of electricity.

Alternative 1 (preferred alternative)
Alternative 2

Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

In all likelihood, use will be made of monopole structures for the proposed power line, which is preferable over the existing self-supporting lattice tower structures. This will however be dictated by the site-specific conditions. The power line must be constructed according to the authorised standards for a power line approved by Eskom Holdings SoC Ltd.

No other feasible alternatives were identified.

Alternative 1 (preferred alternative)
.
Alternative 2
Alternative 3

e) No-go alternative

This is the option of not constructing the power line. This option is assessed as the "no go alternative" in this Basic Assessment Report.

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	Size of the activity:
Alternative SS1[2] (technically preferred activity alternative)	m^2
Alternative SS22 (if any)	m^2
Alternative SS33 (if any)	m^2

or, for linear activities:

[2] "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:	**Length of the activity:**
Alternative 1A	±8km

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur)

Alternative:	**Size of servitude:**
Alternative 1A **(preferred route)**	Servitude = 31m

4. SITE ACCESS

Does ready access to the site exist?	**YES**
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

Access to the project site will be from existing service roads along the existing power line and from existing farm roads in the area as far as possible. In some areas new access roads may be required to be established for construction and maintenance purposes.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 km, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s;)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);

- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

An A3 Locality map has been attached as **Appendix A1**

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

Refer to **Appendix A1**

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and

- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

An A3 Sensitivity map has been attached as **Appendix A2**

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Site photographs are attached within **Appendix B.**

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

A facility illustration is included within **Appendix C.**

10.ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	**YES**		Please explain
The power line corridor passes through land which is zoned as agricultural land. An existing Eskom servitude is located parallel to the proposed line.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES**		Please explain
The Western Cape PSDF notes that greenhouse gas emissions are partially responsible for global warming, which is resulting in major negativities and even disasters in the short and medium term. In line with national government's Climate Change Response Strategy, the PSDF makes provisions for a strategy based on demand management and the development of renewable resources, such as solar and wind. With regard to renewable sources, the PSDF proposes that 25% of the Western Cape Province's energy generation should consist of renewables by 2020. The proposed power line is essential supporting infrastructure to the authorised Perdekraal West			

Wind Energy Facility, which once developed, will generate power from renewable resources and subsequently reduce carbon emissions locally and globally.			
(b) Urban edge / Edge of Built environment for the area		**NO**	Please explain
The power line falls outside the urban edge. Therefore the proposed power line does not impact upon the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	**YES**		Please explain
The Breede River IDP (2012-2017) indicates a spatial management concept that provides a broad overarching guide to future developments and land use management to accommodate long term sustainable growth in the Local Municipality. The proposed power line corridor falls within Ward 12. The project and the associated wind farm will create employment and opportunities for locals and the benefits of the community in line with IDP and SDF principals of the municipality. This project will therefore be in line with the IDP and SDF of the municipality.			
(d) Approved Structure Plan of the Municipality	**YES**		Please explain
The structure planning of the Breede River Municipality promotes the development of renewable energy. The proposed power line is essential supporting infrastructure to the authorised Perdekraal West Wind Energy Facility, a renewable energy facility.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	**YES**		
The approval of this application will be in line with the Cape Winelands District Municipality Environmental Management Framework. The power line will connect the authorised Perdekraal West Wind Energy Facility to the electricity grid, and will indirectly contribute to clean energy generation as a sustainable resource which holds significant benefits for the local region and the country as a whole. Renewable power generation facilities generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future.			
(f) Any other Plans (e.g. Guide Plan)		**Not applicable**	Please explain
None			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?		**NO**	Please explain
The main purpose of the power line is to connect the authorised Perdekraal West Wind Energy Facility to the electricity grid at Kappa Substation. The wind project or associated power line is not specifically considered within any approved SDF or IDP.			

4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)		**NO**	Please explain
The main purpose of the power line is to connect the authorised Perdekraal West Wind Energy Facility to the electricity grid. The proposed activity is not necessarily a societal priority for the local community in this area. However the wind farm development and associated infrastructure will benefit the local community through job creation, skills development opportunities and training, which will in turn reduce poverty levels that the area is currently facing.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	**YES**		Please explain
Eskom has confirmed that the Kappa Substation has the capacity to accommodate the power from the authorised Perdekraal West Wind Energy Facility. The power line is required infrastructure which would support the connection of the wind farm to the Eskom grid. No services are required for the construction or operation of the power line. The construction of the power line infrastructure will therefore not place additional pressure on the local area or Municipalities during construction or operation.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)		**NO**	Please explain
The proposed project is to be developed by a private developer. The power line will be owned and operated by Eskom. It therefore does not fall within the infrastructure planning of the municipality. The construction of the power line infrastructure will not place additional pressure on the Municipality's infrastructure during construction or operation. The project will not have any implications for the municipality but will assist them in their infrastructural planning priorities through increased electricity capacity.			
7. Is this project part of a national programme to address an issue of national concern or importance?	**YES**		Please explain
The current electricity imbalances in South Africa highlight the significant role that renewable energy can play in terms of power supplementation. Given that renewables can generally be deployed in a decentralised manner close to consumers, they offer the opportunity for improving grid strength and supply quality, while reducing expensive transmission and distribution losses. At present, South Africa is some way off from exploiting the diverse gains from renewable energy and from achieving a considerable market share in the industry. In order to meet the long-term goal of a sustainable renewable energy industry, a target of 17.8 GW of renewables by 2030 has been set by the Department of Energy (DoE) within the Integrated Resource Plan (IRP) 2010 and incorporated in the IPP Procurement Programme. This energy will be produced from various renewable energy technologies including wind energy facilities. The Perdekraal West			

Wind Energy Facility has been authorised and will contribute 140MW to the electricity grid. In order to integrate the power generated at this facility into the electricity grid, the facility is required to be connected to the Kappa substation as described in this report.			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	**YES**		Please explain
The Perdekraal West Wind Energy Facility is an environmentally authorised project. In terms of Eskom's requirements, the wind energy facility is required to connect to the Kappa Substation. The proposed power line corridor is considered to be the most feasible option for the location of this infrastructure, taking technical and environmental (social and biophysical) issues into consideration.			
9. Is the development the best practicable environmental option for this land/site?	**YES**		Please explain
The Perdekraal West Wind Energy Facility is an environmentally authorised facility. In terms of Eskom's requirements, the wind energy facility is required to connect to the Kappa Substation. The proposed power line corridor is considered to be the most feasible option for the location of this infrastructure, taking technical and environmental (social and biophysical) issues into consideration. The proposed corridor runs parallel to an existing registered Eskom servitude for most of the route. The consolidation of similar infrastructure in the landscape is considered the best practicable option to minimise environmental impacts.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	**YES**		Please explain
The specialist studies undertaken as part of this Basic Assessment conclude that the development of the 132kV power line within the proposed corridor investigated will have environmental impacts of overall low significance with the implementation of appropriate mitigation. The proposed project will facilitate the connection of the Perdekraal West Wind Energy Facility to the national grid thereby facilitating the transmission of renewable energy into the national grid and the upliftment of the local community through social economic development initiatives. This will have a positive impact at a local, regional and national level. The benefit of constructing the power line and thereby connecting the Perdekraal West Wind Energy Facility to the electricity grid outweighs and negative aspects relating to the impacts associated with the construction and operation of the power line.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		**NO**	Please explain
The proposed power line is associated with the authorised Perdekraal West Wind Energy Facility. Any other similar activities in the area would depend on the feasibility of developing additional wind energy facilities in this area (thus requiring power lines).			
12. Will any person's rights be negatively affected by the proposed activity/ies?		**NO**	Please explain
Private landowners will be affected by the proposed project. These landowners have been consulted by the developer and the environmental team and are aware of the proposed project.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		**NO**	Please explain
The power line falls outside the urban edge. Therefore the proposed power line does not impact upon the urban edge.			

14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	**YES**		Please explain
The proposed power line will **indirectly** support the objectives for Strategic Infrastructure Projects (SIP): » SIP 8: Green energy in support of the South African economy – support sustainable green energy initiatives on a National scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP 2010)-**the proposed power line is supporting infrastructure to the Perdekraal West Wind Energy Facility which is a potential green initiative project** should it achieve preferred bidder status.			
15. What will the benefits be to society in general and to the local communities?			Please explain
The main purpose of the power line is to connect the authorised Perdekraal West Wind Energy Facility to the electricity grid. The wind farm will be bid under the REIPPP program of the Department of Energy and that program is significantly considering the benefit brought by projects to local communities as part of the overall assessment. Therefore, the construction and operation of the wind energy facility will create employment opportunities for members of local communities. The requirements of the Socio Economic criteria of the REIPPP process will also have a positive impact on local communities. The increased economic benefit to the local community will contribute towards improving the sustainability of the area and reducing the unemployment rate. In addition, a community trust will be established during the operational phase of the wind energy facility in terms of the requirements of the Department of Energy. This will benefit the local community.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
None			
17. How does the project fit into the National Development Plan for 2030?			Please explain
One of the plans for National Development Plan for 2030 is the transition to low carbon energy through fast-tracking and expanding renewable energy. This power line will assist in reducing the carbon footprint, as it will be transmitting energy gathered from a renewable energy project (Wind) and it will facilitating the infrastructure growth in the area, through employment and increasing infrastructure.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
The general objectives of Integrated Environmental Management have been taken into account for this Basic Assessment report by means of identifying, predicting and evaluating the actual and potential impacts on the environment. The risks, consequences, alternatives as well as options for mitigation of activities have also been considered with a view to minimise negative impacts, maximise benefits, and promote compliance with the principles of environmental management.			
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.			
The principles of NEMA have been considered in this assessment through compliance with the requirements of the relevant legislation in undertaking the assessment of potential impacts, as well as through the implementation of the principle of sustainable development where appropriate mitigation measures have been recommended for impacts which cannot be avoided. In addition, the successful implementation and appropriate management of this proposed			

project will aid in achieving the principle of minimisation of pollution and environmental degradation. This process has been undertaken in a transparent manner and all effort has been made to involve interested and affected parties, stakeholders and relevant Organs of State such that an informed decision regarding the project can be made by the Regulating Authority.

11.APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Table 1.1: Applicable Legislation, Policies and/or Guidelines

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	National Legislation		
National Environmental Management Act (Act No 107 of 1998)	NEMA requires, inter alia, that: » Development must be socially, environmentally, and economically sustainable." » Disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied." » A risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions." EIA Regulations have been promulgated in terms of Chapter 5. Activities which may not commence without an environmental authorisation are identified within these Regulations. In terms of S24(1) of NEMA, the potential impact on the environment associated with these listed activities must be considered, investigated, assessed and reported on to the competent authority charged by NEMA with granting of the relevant environmental	National Department of Environmental Affairs – lead authority. Western Cape DEA&DP	This Basic Assessment report is to be submitted to the National DEA in support of the application for authorisation for the power line. The Provincial DEA&DP will act as a commenting authority.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	authorisation. In terms of GNR 983 of 2014, a Basic Assessment Process is required to be undertaken for the proposed project.		
National Environmental Management Act (Act No 107 of 1998)	In terms of the Duty of Care provision in S28(1) the project proponent must ensure that reasonable measures are taken throughout the life cycle of this project to ensure that any pollution or degradation of the environment associated with this project is avoided, stopped or minimised. In terms of NEMA, it has become the legal duty of a project proponent to consider a project holistically, and to consider the cumulative effect of a variety of impacts.	Department of Environmental Affairs (as regulator of NEMA).	While no permitting or licensing requirements arise directly, the holistic consideration of the potential impacts of the proposed project has found application in the BA process. The implementation of mitigation measures are included as part of the Draft EMPr and will continue to apply throughout the life cycle of the project.
National Environmental Management: Waste Act (Act No 59 of 2008)	The purpose of this Act is to reform the law regulating waste management in order to protect health and the environment by providing for the licensing and control of waste management activities. The Act provides listed activities requiring a waste license (GNR921).	Hazardous Waste – National DEA General Waste – WC DEA&DP	As no waste disposal site is to be associated with the proposed project, no permit is required in this regard. Waste handling, storage and disposal during construction and operation is required to be undertaken in accordance with the requirements of this Act and associated Standards, as detailed in the project EMP.
Environment Conservation Act (Act No 73 of 1989)	In terms of Section 25 of the ECA, the national noise-control regulations (GN R154 in	National Department of Environmental Affairs	There is no requirement for a noise permit in terms of the legislation.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	Government Gazette No. 13717 dated 10 January 1992) were promulgated. The NCRs were revised under Government Notice No R55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations. Subsequently, in terms of Schedule 5 of the Constitution of South Africa of 1996, legislative responsibility for administering the noise control regulations was devolved to provincial and local authorities. Provincial Noise Control Regulations exist in the Western Cape Province. Allows the Minister of Environmental Affairs to make regulations regarding noise, among other concerns.	Western Cape (DEA&DP) Local Municipality	
National Water Act (Act No 36 of 1998)	Water uses must be licensed unless such water use falls into one of the categories listed in S22 of the Act or falls under general authorisation in terms of S39 and GN 1191 of GG 20526 October 1999. In terms of Section 19, the project proponent must ensure that reasonable measures are taken throughout the life cycle of this project to prevent and remedy the effects of pollution to water resources from occurring, continuing or recurring.	Department of Water and Sanitation	A water use license is required to be applied for or obtained, if infrastructure such as access roads or cabling cross watercourses, or for infrastructure within 500m of a wetland or watercourse (Section 21 c and i).
Minerals and Petroleum	A mining permit or mining right may be	Department of Mineral	If borrow pits are required for the

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
Resources Development Act (Act No 28 of 2002)	required where a mineral in question is to be mined (i.e. materials from a borrow pit) in accordance with the provisions of the Act. Requirements for Environmental Management Programmes and Environmental Management Plans are set out in S39 of the Act. S53 Department of Mineral Resources: Approval from the Department of Mineral Resources (DMR) may be required to use land surface contrary to the objects of the Act in terms of section 53 of the Mineral and Petroleum Resources Development Act, (Act No 28 of 2002): In terms of the Act approval from the Minister of Mineral Resources is required to ensure that proposed activities do not sterilise a mineral resources that might occur on site.	Resources	construction of the power line, a mining permit or right is required to be obtained. A S53 application is required to be submitted to DMR Western Cape.
National Environmental Management: Air Quality Act (Act No 39 of 2004)	S18, S19 and S20 of the Act allow certain areas to be declared and managed as "priority areas" Declaration of controlled emitters (Part 3 of Act) and controlled fuels (Part 4 of Act) with relevant emission standards. Dust Control Regulations promulgated in November 2013 requires the implementation	Local Municipality	While no permitting or licensing requirements arise from this legislation, this Act will find application during the construction phase of the project, specifically with regards to dust management and control (as required by the Dust Control Regulations).

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	of a dust monitoring plan should this be deemed necessary by the air emissions officer. The Act provides that an air quality officer may require any person to submit an atmospheric impact report if there is reasonable suspicion that the person has failed to comply with the Act.		
National Heritage Resources Act (Act No 25 of 1999)	S38 states that Heritage Impact Assessments (HIAs) are required for certain kinds of development including » The construction of a road, power line, pipeline, canal or other similar linear development or barrier exceeding 300 m in length; » Any development or other activity which will change the character of a site exceeding 5 000 m^2 in extent The relevant Heritage Authority must be notified of developments such as linear developments (i.e. roads and power lines), bridges exceeding 50 m, or any development or other activity which will change the character of a site exceeding 5 000 m^2; or the re-zoning of a site exceeding 10 000 m^2 in extent. This notification must be provided in the early stages of initiating that	South African Heritage Resources Agency (SAHRA) – National heritage sites (grade 1 sites) as well as all historic graves and human remains. Heritage Western Cape – Issue of permits for removal or destruction of heritage resources in the Western Cape.	The project is not expected to impact on heritage resources. Should heritage sites be unearthed during construction, permits may be required to be obtained, depending on the significance of the find.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	development, and details regarding the location, nature and extent of the proposed development must be provided. Standalone HIAs are not required where an EIA is carried out as long as the EIA contains an adequate HIA component that fulfils the provisions of S38. In such cases only those components not addressed by the EIA should be covered by the heritage component.		
National Environmental Management: Biodiversity Act (Act No 10 of 2004)	Provides for the MEC/Minister to identify any process or activity in such a listed ecosystem as a threatening process (S53). A list of threatened and protected species has been published in terms of S 56(1) - Government Gazette 29657. Three government notices have been published, i.e. GN R 150 (Commencement of Threatened and Protected Species Regulations, 2007), GN R 151 (Lists of critically endangered, vulnerable and protected species) and GN R 152 (Threatened or Protected Species Regulations). Provides for listing threatened or protected ecosystems, in one of four categories: critically endangered (CR), endangered (EN),	National Department of Environmental Affairs CapeNature	Specialist flora studies have been undertaken as part of the BA process. A permit may be required should any listed plant or animal species on site be disturbed or destroyed as a result of the proposed development.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	and vulnerable (VU) or protected. The first national list of threatened terrestrial ecosystems has been gazetted, together with supporting information on the listing process including the purpose and rationale for listing ecosystems, the criteria used to identify listed ecosystems, the implications of listing ecosystems, and summary statistics and national maps of listed ecosystems (National Environmental Management: Biodiversity Act: National list of ecosystems that are threatened and in need of protection, (G 34809, GN 1002), 9 December 2011). This Act also regulates alien and invader species. Under this Act, a permit would be required for any activity which is of a nature that may negatively impact on the survival of a listed protected species.		
Conservation of Agricultural Resources Act (Act No 43 of 1983)	Prohibition of the spreading of weeds (S5). Classification of categories of weeds & invader plants (Regulation 15 of GN R1048) & restrictions in terms of where these species may occur. Requirement & methods to implement control	Department of Agriculture, Forestry and Fisheries	While no permitting or licensing requirements arise from this legislation, this Act will find application during the BA and will continue to apply throughout the life cycle of the project. In this regard, soil erosion prevention and soil conservation strategies must be

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	measures for alien and invasive plant species (Regulation 15E of GN R1048).		developed and implemented. In addition, a weed control and management plan must be implemented. The permission of agricultural authorities will be required if the Project requires the draining of vleis, marshes or water sponges on land outside urban areas.
National Veld and Forest Fire Act (Act 101 of 1998)	Provides requirements for veldfire prevention through firebreaks and required measures for fire-fighting. Chapter 4 places a duty on landowners to prepare and maintain firebreaks, and Chapter 5 places a duty on all landowners to acquire equipment and have available personnel to fight fires. In terms of S21 the landowner would be obliged to burn firebreaks to ensure that should a veldfire occur on the property, that it does not spread to adjoining land. In terms of S12 the firebreak would need to be wide and long enough to have a reasonable chance of preventing the fire from spreading, not causing erosion, and is reasonably free of inflammable material.	Department of Agriculture Forestry and Fisheries	While no permitting or licensing requirements arise from this legislation, this act will find application during the operational phase of the project in terms of fire prevention and management.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	In terms of Section 17, the applicant must have such equipment, protective clothing, and trained personnel for extinguishing fires.		
National Forests Act (Act No 84 of 1998)	In terms of S5 (1) no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree, except under a license granted by the Minister to an (applicant and subject to such period and conditions as may be stipulated". GN 1042 provides a list of protected tree species.	Department of Agriculture Forestry and Fisheries	A permit would need to be obtained for any protected trees that are affected by the proposed project.
Aviation Act (Act No 74 of 1962) 13th amendment of the Civil Aviation Regulations (CARS) 1997	Any structure exceeding 45m above ground level or structures where the top of the structure exceeds 150m above the mean ground level, the mean ground level considered to be the lowest point in a 3km radius around such structure. Structures lower than 45m, which are considered as a danger to aviation shall be marked as such when specified. Overhead wires, cables etc., crossing a river, valley or major roads shall be marked and in addition their supporting towers marked and lighted if an aeronautical study indicates it	Civil Aviation Authority (CAA)	CAA approval will be required regarding the placement of the power line.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	could constitute a hazard to aircraft. Section 14 of Obstacle limitations and marking outside aerodrome or heliport – CAR Part 139.01.33 relates specifically to appropriate marking of wind energy facilities.		
Hazardous Substances Act (Act No 15 of 1973)	This Act regulates the control of substances that may cause injury, or ill health, or death by reason of their toxic, corrosive, irritant, strongly sensitising or inflammable nature or the generation of pressure thereby in certain instances and for the control of certain electronic products. To provide for the rating of such substances or products in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, modification, disposal or dumping of such substances and products. Group I and II: Any substance or mixture of a substance that might by reason of its toxic, corrosive etc., nature or because it generates pressure through decomposition, heat or other means, cause extreme risk of injury etc., can be declared to be Group I or Group II hazardous substance; » Group IV: any electronic product; » Group V: any radioactive material.	Department of Health	It is necessary to identify and list all the Group I, II, III and IV hazardous substances that may be on the site and in what operational context they are used, stored or handled. If applicable, a license is required to be obtained from the Department of Health.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	The use, conveyance or storage of any hazardous substance (such as distillate fuel) is prohibited without an appropriate license being in force.		
	Provincial Policies / Legislation		
Western Cape Noise Control Regulations: PN 627 of 1998	The control of noise in the Western Cape Province is legislated in the form of Noise Control Regulations promulgated in terms of section 25 of the Environment Conservation Act No. 73 of 1989.	Western Cape DEA&DP	In terms of Regulation 4 of the Noise Control Regulations: "No person shall make, produce or cause a disturbing noise (greater than 5 dBA), or allow it to be made, produced or caused by any person, animal, machine, device or apparatus or any combination thereof".
Western Cape Nature and Environmental Ordinance 19 of 1974, (as amended by the Western Cape Nature Conservation Laws Amendment Act, Act 2 of 2000	The Nature and Environmental Ordinance 19 of 1974, (as amended by the Western Cape Nature Conservation Laws Amendment Act, Act 2 of 2000) defines the protection status of plants as follows: » **''endangered flora''** means flora of any species which is in danger of extinction and is specified in Schedule 3 or Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include flora of any species specified in such Appendix and Schedule 4; (thus all Schedule 3 species).	Cape Nature	Removal or relocation of protected plant or animal species requires a permit to be obtained from the Cape Nature.

Legislation / Policy / Guideline	Applicable Requirements	Relevant Authority	Compliance requirements
	» **''protected flora''** means any species of flora specified in Schedule 4 or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973; provided that it shall not include any species of flora specified in such Appendix and Schedule 3. » **''indigenous unprotected flora''** means any species of indigenous flora not specified in Schedule 3 or 4;		

12.WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**
If YES, what estimated quantity will be produced per month?	Unknown at this stage

How will the construction solid waste be disposed of (describe)?

It is anticipated that construction waste will be comprised mainly of soil material from excavation activities as well as metal and cabling offcuts. Non-recyclable waste will be removed from site by a suitable contractor and will be transported to the nearest registered waste disposal facility for appropriate disposal.

Where will the construction solid waste be disposed of (describe)?

In order to comply with legal requirements, should there be excess solid construction waste after recycling options have been exhausted, the waste will be transported to the nearest registered waste disposal facility for appropriate disposal.

Will the activity produce solid waste during its operational phase?	**NO**
If YES, what estimated quantity will be produced per month?	

How will the solid waste be disposed of (describe)?

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? **NO**

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? **NO**

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? **NO**

If YES, what estimated quantity will be produced per month? m^3

Will the activity produce any effluent that will be treated and/or disposed of on site? **NO**

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility? **NO**

If YES, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		**Cell:**	
E-mail:		**Fax:**	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?	**NO**
If YES, is it controlled by any legislation of any sphere of government?	

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

During the construction phase, it is expected that there will be short term, localised dust generation and emissions from vehicles and machinery. However the dust and emissions will be of short term duration and have limited impact in terms of extent and severity. Appropriate dust suppression measures must be implemented to reduce the impacts. It is recommended that construction vehicles be serviced and kept in good mechanical condition in order to minimise possible exhaust emission.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?	**NO**

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?	**NO**
If YES, is it controlled by any legislation of any sphere of government?	

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the noise in terms of type and level:

Short term noise impacts are anticipated during the construction phase of the project. It is however anticipated that the noise will be localised and contained within the construction area and its immediate surroundings. The operation phase will not generate any noise.

13.WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	**The activity will not use water**

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	**NO** It may be required if watercourses are affected by road crossings

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14.ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in **Appendix I**. All specialist reports must be contained in **Appendix D**.

Property description/ physical address:

Province	Western Cape Province
District Municipality	Cape Winelands District Municipality
Local Municipality	Breede River Local Municipality
Ward Number(s)	Ward 12
Farm Name & Portion number	Farm Lower Stinkfontein No 245 Farm Platfontein No 240 Farm Toover Berg No 244 Potion 1 Farm Toover Berg No 244 Potion RE
SG Code	C01900000000024000000 C01900000000024400000 C01900000000024500000 C01900000000024400001

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:	Agriculture

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?		**NO**

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative 1A: (Preferred Alternative)

Flat	**1:50 – 1:20**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative 1B (if any):

Flat	**1:50 – 1:20**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative 1C

Flat	**1:50 – 1:20**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline		2.4 Closed valley		**2.7 Undulating plain / low hills**	**X**
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain		2.9 Seafront	

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative 1A
Shallow water table (less than 1.5m deep)	**NO**
Dolomite, sinkhole or doline areas	**NO**
Seasonally wet soils (often close to water bodies)	**NO**
Unstable rocky slopes or steep slopes with loose soil	**NO**

	Alternative 1A
Dispersive soils (soils that dissolve in water)	NO
Soils with high clay content (clay fraction more than 40%)	NO
Any other unstable soil or geological feature	NO
An area sensitive to erosion	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	**Natural veld with scattered aliens[E]**	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	**Cultivated land**	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

Specialist ecology investigations were undertaken for the proposed project. The findings are presented in a Ecology Impact Assessment included within **Appendix D1**, and are summarised below:

The vegetation in the area is used mostly for low intensity livestock grazing (sheep and game), and there is very little invasive alien vegetation (<0.1% cover). There are known to be about ten plant Species of Conservation Concern (SCC) within the greater study area (Mucina & Rutherford 2012), although there is a moderate likelihood that

others could be found with a short period of fieldwork, especially in the appropriate spring or winter season. The vegetation and faunal sensitivity along the proposed power line corridor is regarded as being extremely homogenous, and is rated as Low. No sensitivity map is provided as this sensitivity applies to the entire route.

Low sensitivity areas present no significant constraints to the proposed development.

The proposed power line is likely to have a Low negative botanical impact before and after mitigation, with no significant issues associated with its construction.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River		**NO**	
Non-Perennial River		**NO**	
Permanent Wetland		**NO**	
Seasonal Wetland		**NO**	
Artificial Wetland		**NO**	
Estuarine / Lagoonal wetland		**NO**	

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

N/A

LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	**Dam or reservoir**	Polo fields
Low density residential	Hospital/medical centre	Filling station [H]
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential[A]	Church	**Agriculture**
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant[A]	Nature conservation area
Medium industrial [AN]	Train station or shunting	**Mountain, koppie or ridge**

	yard [N]	
Heavy industrial [AN]	Railway line [N]	Museum
Power station	Major road (4 lanes or more) [N]	Historical building
Office/consulting room	Airport [N]	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam[A]	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other:

If any of the boxes marked with an "[N] "are ticked, how will this impact / be impacted upon by the proposed activity?

If any of the boxes marked with an "[An]" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

If any of the boxes marked with an "[H]" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Does the proposed site fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	**YES** (Ecological Support Area area)	
Core area of a protected area?		**NO**
Buffer area of a protected area?		**NO**
Planned expansion area of an existing protected area?		**NO**
Existing offset area associated with a previous Environmental Authorisation?		**NO**
Buffer area of the SKA?		**NO**

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	**YES** [redacted]

Comment from Heritage Western Cape is included in Appendix E2. There is reason to believe that the proposed power line would have no impact on heritage resources in the area. No specialist study is required in this regard.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?	[redacted] **NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	[redacted] **NO**

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

7. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The employment rate of the Local Municipality was not mentioned in the current Integrated Development Plan; however the unemployment rate in 2001 was 12.2 percent of the population (approximately 3,637 people). The high unemployment rate for both the District and Local Municipalities can be explained by the high illiteracy of the population and the population's dependency on seasonal employment brought on by the agricultural sector.

Economic profile of local municipality:

Within the Local Municipality 10.59 percent of the households did not have any income (approximately 2,240) in 2011. The average household income during this period was R8,811. The majority of the population's income was concentrated in people earning

between R 4,812 – R 9,600 at (43.7 percent), followed by people whose income ranges from R 9,612 – R 19,200 at (19.1 percent), and with (12.2 percent) earning between R12 and R4,800.

Level of education:

In the Local Municipality there are 55 schools (both primary and high). The educator-learner ratio was 1:36. Approximately 38 percent of the total population over the age of 14 years were illiterate (2014 data).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R38.6	
What is the expected yearly income that will be generated by or as a result of the activity?	Power line- N/A	
Will the activity contribute to service infrastructure?	**YES**	
Is the activity a public amenity?		**NO**
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	±20 Local temporary staff No of permanent staff unknown at this stage	
What is the expected value of the employment opportunities during the development and construction phase?	Unknown at this stage	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown at this stage	
How many permanent new employment opportunities will be created during the operational phase of the activity?	Very few, as the power line will be handed over to Eskom and Eskom field staff will inspect the line as needed.	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown at this stage	

8. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant

biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
Critical Biodiversity Area (CBA)	**Ecological Support Area (ESA)**	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	The study area is located within the planning domain of the Central Karoo District Municipality (Skowno et al 2009), which has identified and mapped as Critical Biodiversity Areas (CBAs) throughout the region. Critical Biodiversity Areas are regarded as essential areas for the achievement of regional conservation targets, and are designed to ensure minimum land take for maximum result (Maree & Vromans 2010). Ecological Support Areas (ESAs) are less critical areas that still provide valuable habitat and support the CBAs. The relevant map is not shown, as effectively the entire study area is mapped as an ESA. This large mapped unit (i.e. much larger than just the study area) supports a significant number of rare and localised plant species, and provides ecological connectivity in all directions, at a regional scale. Both these factors are reasons for its selection as an ESA.

b) Indicate and describe the habitat condition on site

Habitat Condition	**Percentage of habitat condition class (adding up to 100%)**	**Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc.).**
Natural	0%	

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc.).
Near Natural (includes areas with low to moderate level of alien invasive plants)	**20%**	Some natural vegetation, low levels of alien invasives.
Degraded (includes areas heavily invaded by alien plants)	%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	**80%**	Agricultural land

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and

(ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and un-channelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary	Coastline
	Endangered			
	Vulnerable			
	Least Threatened	**NO**	**NO**	**NO**

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The vegetation and faunal sensitivity along the proposed power line corridor is regarded as being extremely homogenous, and is rated as Low.

According to the SA vegetation map (Mucina & Rutherford 2012) the entire study area supports a single, widespread vegetation type – Tankwa Karoo, and hence no

vegetation map is shown.

This vegetation type is listed as Least Threatened in the National List of Threatened Ecosystems (DEA 2011), based on the fact that it is still largely intact (99% of original extent; Rouget et al 2004) throughout its total original range. About 10% has been formally conserved within the Tankwa Karoo National Park, and another 4% is informally conserved, with a target of 19% (Mucina & Rutherford 2012).

Two mammals of Conservation Concern may occur in the study area. The Critically Endangered Riverine Rabbit (*Bunolagus monticularis*) may occur in the general area, but prefers alluvial areas with soft sediments, a habitat not really present in the study areas. The habitat is suitable for the Vulnerable Black Footed Cat (*Felis nigripes*).

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Witzenberg Herald (published every Friday and requires copy by Tuesdays).	
Date published	March 2016	
Site notice position	**Latitude**	**Longitude**
	33° 4'25.08"S	20° 4'14.87"E
	33° 5'26.89"S	20° 1'38.61"E
Date placed	16 March 2017	

Include proof of the placement of the relevant advertisements and notices in **Appendix E1.**

2. DETERMINATION OF APPROPRIATE MEASURES

The public consultation process has included the publishing of notices regarding the proposed project as well as the distribution of notification letters to identified I&APs. Affected and neighbouring landowners were consulted through one-on-one consultation sessions. A focus group meeting with impacted landowners will be held.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.942 – ***Refer to I&AP database contained in Appendix E4***.

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)

Include proof that the key stakeholder received written notification of the proposed activities as **Appendix E2**. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

No comments have been received on this proposed project to date under the current application. All comments received during the review period of the draft Basic Assessment report, as well as responses provided will be captured and recorded within the Comments and Response Report attached as **Appendix E** in the final Basic Assessment Report.

Summary of main issues raised by I&APs	Summary of response from EAP

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

No comments have been received on the proposed project to date under the current application. All comments received during the review period of the draft Basic Assessment report, as well as responses provided will be captured and recorded within the Comments and Response Report attached as Appendix E in the final Basic Assessment Report.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders - ***Refer to I&AP database contained in Appendix E4***.

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address

Include proof that the Authorities and Organs of State received written notification of the proposed activities as **Appendix E3.**

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as **Appendix E4**.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A (2) of this report.

A summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the Construction Phase, Operation Phase, Decommissioning Phase and the No-Go Option of the proposed power line between the Perdekraal West Wind Energy Facility and the Kappa Substation are provided in the tables which follow.

Table 1: Assessment of impacts associated with the Construction Phase

Activity	Impact summary	Significance (with mitigation)	Proposed mitigation
	Ecological impacts		
Vegetation clearing and construction activities	***Direct impacts:*** » Loss of sensitive natural vegetation and faunal habitat » Loss of species of special concern.	Low	» Loss of habitat can only be effectively mitigated by a biodiversity offset, which is not recommended in this particular case, due to Low overall levels of impact, due to nature of development. Minimising the extent of the new power line access tracks, and removal of alien invasive vegetation in the servitudes is the primary mitigation required.
	Indirect impacts: » Degradation and minor loss of >1ha of Tanqua Karoo vegetation, mostly by use of heavy offroad vehicles required to put in pylons	Low	» Same as for direct impacts
	Cumulative impacts: » Degradation and minor loss of >1ha of Tanqua Karoo vegetation, mostly by use of heavy offroad vehicles required to put in pylons	Low	» Keep vegetation clearance to a minimum. » Control soil erosion. » Control alien invasive plants.
	Visual impacts		
The potential visual impact of power line and associated infrastructure construction on observers in close proximity to the proposed project	***Direct impacts:*** » Potential visual impact of construction on sensitive visual receptors in close proximity to the proposed power line (refer to Figure 2.1 at the end of this section)	Low	» Planning: Retain / re-establish and maintain natural vegetation in all areas outside of the development footprint/servitude. » Ensure that vegetation is not unnecessarily removed during the construction period. » Reduce the construction period as far as possible through careful logistical planning and productive implementation of resources. » Plan the placement of lay-down areas and temporary construction equipment camps in order to minimise vegetation clearing (i.e. in

Activity	Impact summary	Significance (with mitigation)	Proposed mitigation
			already disturbed areas) wherever possible. » Restrict the activities and movement of construction workers and vehicles to the immediate construction site and existing access roads. » Ensure that rubble, litter, and disused construction materials are appropriately stored (if not removed daily) and then disposed of regularly at appropriately licensed waste facilities. » Reduce and control construction dust using approved dust suppression techniques as and when required. » Restrict construction activities to daylight hours whenever possible in order to reduce lighting impacts. » Rehabilitate all disturbed areas immediately after the completion of construction works.
	Indirect impacts: » None	-	» N/A
	Cumulative impacts: » Construction activities associated with several developments in the area at one time is likely to increase the potential cumulative visual impact within the region.	Medium	» Ensure that vegetation is not unnecessarily removed during the construction period. » Reduce the construction period as far as possible through careful logistical planning and productive implementation of resources. » Plan the placement of lay-down areas and temporary construction equipment camps in order to minimise vegetation clearing (i.e. in already disturbed areas) wherever possible. » Restrict the activities and movement of

Activity	Impact summary	Significance (with mitigation)	Proposed mitigation
			construction workers and vehicles to the immediate construction site and existing access roads. » Ensure that rubble, litter, and disused construction materials are appropriately stored (if not removed daily) and then disposed of regularly at appropriately licensed waste facilities. » Reduce and control construction dust using approved dust suppression techniques as and when required. » Restrict construction activities to daylight hours whenever possible in order to reduce lighting impacts. » Rehabilitate all disturbed areas immediately after the completion of construction works.
Avifauna impacts			
Construction of the power line and associated infrastructure	***Direct impacts:*** » Habitat loss – destruction, disturbance and displacement	Low - Medium	» A pre-construction walk through survey of the final power line route must be undertaken by a qualified ornithologist in order to identify bird sensitive areas where mitigation is required. » Minimise disturbance to vegetation as far as possible. » Restrict construction activities to development footprint areas (i.e. tower footprints and any new access roads). » New road construction must be kept to a minimum.
	Indirect impacts:	Low	» None possible

Activity	Impact summary	Significance (with mitigation)	Proposed mitigation
	» Displacement of birds from the area		
	Cumulative impacts: » Construction activities associated with several developments in the area at one time is likely to increase the potential cumulative impact on avifauna within the region.	Medium- Low	» Minimise disturbance to vegetation as far as possible. » Restrict construction activities to development footprint areas (i.e. tower footprints and any new access roads). » All vehicles to adhere to low speed limits (40km/h max) on the site, to reduce disturbance to avifauna in the area. » New road construction must be kept to a minimum.

Table 2: Assessment of impacts associated with the operational phase

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
	Ecological impacts		
Maintenance and operation of the power line and associated infrastructure	***Direct impacts:*** » Servitude bush-cutting would results in loss of species of conservation concern. » Removal of woody alien invasive vegetation from within the servitudes (positive impact).	Medium-Low	» Alien invasive vegetation must be removed from the servitude within one year of power line construction, and follow-ups conducted once every two years thereafter.
	Indirect impacts: » None	-	» N/A
	Cumulative impacts: » Cumulative impacts associated with vegetation clearance will result in disturbance of soils, increased soil erosion, reduced habitat for plant and animal species, spread of alien invasive species and a reduction of	Medium-Low	» Alien invasive vegetation must be removed from the servitude within one year of power line construction, and follow-ups conducted once every two years thereafter.

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
	ecosystem services.		
	Visual impacts		
Maintenance and operation of the power line and associated infrastructure	***Direct impacts:*** » Visual impact of the proposed power line on the visual quality of the landscape and sense of place of the region. The lline will run along existing lines. Perhaps that the areas is already degraded by existing infrastructure. » There is only one local road that is potentially affected. It is located between 1.3km and 1.7km to the north of the proposed project. The road runs nearly parallel with the proposed power line over its entire length of approximately 8.5km. » Views of the eastern section of the line may be possible from one homestead to the east of the affected area. This however will be viewed at a distance of approximately 4km through a WEF turbine field and in the context of two HV overhead power lines. » The only protected area that could be affected is the Vaalkloof Private Nature reserve which is located approximately 12km from the western end of the proposed 132kV power line.	Low	» Maintain the general appearance of the power line servitude as a whole.
	Indirect impacts: » None	-	» N/A
	Cumulative impacts: » The additional power line will increase the potential cumulative visual impact of industrial	Low	» Maintain the general appearance of the power line servitude as a whole.

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
	type infrastructure within the region.		
	Avifauna impacts		
Bird collisions, particularly priority species, with the proposed power line	***Direct impacts:*** » Bird mortality due to collision with the proposed power line and electrocution.	Medium - low	» Bird flight diverters must be installed as soon as the conductors are strung in identified bird sensitive areas. » Line inspections should be ongoing for the operational life of the line. » Install Eskom-approved bird diverters on all lines that occur within 500 m of any wetland, roost site or flyway to make them more visible to birds. » Utilise bird-friendly tower designs (as approved by Eskom) to minimise impacts associated with electrocutions.
	Indirect impacts: » Decrease in avifauna species in the study area due to collision and electrocution.	Medium	» After mitigation, direct mortality through collision or area avoidance by the species identified (blue cranes and flamingos) may still occur. Further research and mitigation for any problematic sections of line will be needed.
	Cumulative impacts: » An extensive power line network features prominently within the study area. Any additional power lines will undoubtedly increase the already high collision risk to power line sensitive species (i.e. Ludwig's Bustard, Secretarybird, Karoo Korhaan and various waterbird species) that is present the broader study area. Additional collisions, in combination with the existing collision impact,	Medium	» Investigate other methods to reduce bird mortality.

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
	will have a high cumulative impact. The technical aspects of power line design and siting also play a big part in collision risk. Grouping similar power lines on a common servitude, or locating them along other features such as tree lines, are both approaches thought to reduce risk (Bevanger 1994).		

Table 3: Assessment of impacts associated with the Decommissioning and Closure Phase (All Alternatives)

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
Decommissioning of the power line and associated infrastructure	***Direct impacts:*** » Ecological Impacts. » Impacts associated with erosion and alien vegetation invasion. » Visual Impacts.	Medium-Low	» Remove all alien plants in the servitude area. » Remove infrastructure not required for the post-decommissioning use of the servitude. » Rehabilitate all areas. » Monitor rehabilitated areas post-decommissioning and implement remedial actions. » Any fauna encountered during decommissioning should be removed to safety by the environmental manager or other suitably qualified person. » All vehicles to adhere to low speed limits (40km/h max) on the site, to reduce risk of faunal collisions as well as reduce dust. » Electrical cables and other power line components should be removed and no parts should be left behind.
	Indirect impacts:	Low	» Establish an on-going monitoring programme

Activity	Impact Summary	Significance (with mitigation)	Proposed Mitigation
	» Impacts associated with erosion and alien vegetation invasion.		to detect and quantify any aliens that may become established.
	Cumulative Impacts: » N/A	N/A	N/A

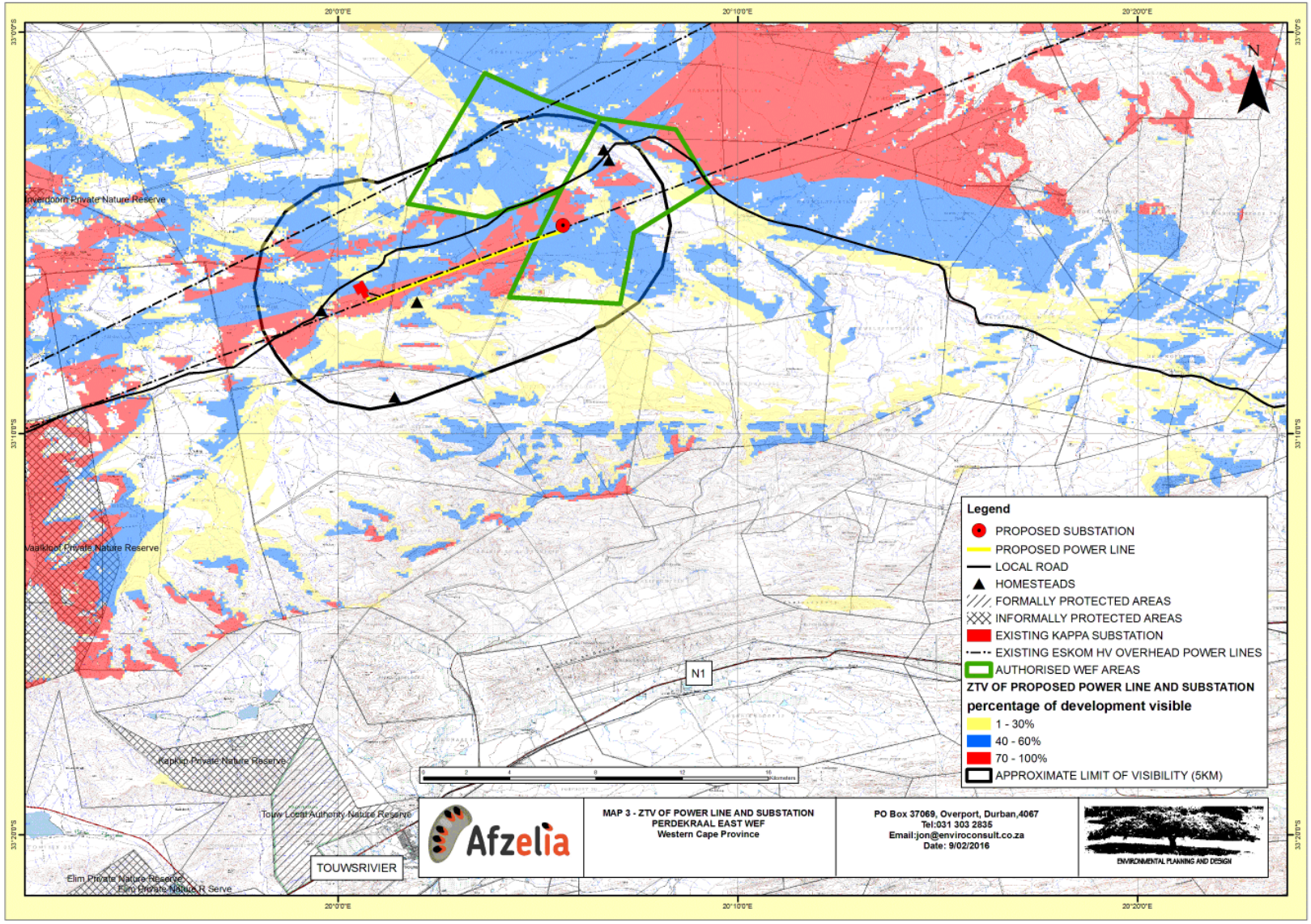

Figure 2.1 Zone of Theoretical Visibility of the power line and on-site substation

Table 6: Assessment of impacts associated with the No-Go Option

This is the option of not constructing the proposed power line. This option will result in limited or no impacts occurring on the environment. However, this will result in the situation where the authorised Perdekraal West Wind Energy Facility cannot be connected to the electricity grid (as the current authorised power line corridor is no longer feasible). This is an undesirable option for the project as it will pose negative impacts on the Wind Facility Project. This option also represents a lost opportunity for renewable energy production within the country as the wind energy facility will not be connected to the electricity grid. The negative impacts of the no go option are therefore considered to outweigh the positive impacts of implementing the project.

A complete impact assessment in terms of the 2014 EIA regulations is included as **Appendix F**.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

This section provides a summary of the environmental assessment and conclusions drawn for the construction and operation of a 132kV power line connecting the authorised Perdekraal West Wind Energy Facility to the Eskom electricity grid via the Kappa Substation. In doing so, it draws on the information gathered as part of the Basic Assessment process and the knowledge gained by the environmental consultants during the course of the process and presents an informed opinion of the environmental impacts associated with the proposed project. The following conclusions can be drawn from the specialist studies undertaken within this Basic Assessment.

Impact on ecology: The proposed power line corridor crosses very homogenous Tankwa Karoo vegetation, which is a Least Threatened vegetation type, and the entire route is of Low botanical sensitivity, with no special habitats (no wetlands or quartz patches). The corridor crosses a relatively low level ESA (Environmental Support Area), but not a CBA (Critical Biodiversity Area). Although up to five plant Species of Conservation Concern may be found within the study area, no regionally significant loss of any of these species is expected as a result of the proposed activity, which has a relatively low overall footprint, especially because there is an existing access track for the entire route. The overall botanical impact of the proposed development is Low negative, before and after mitigation. The study area presents no significant constraints to the proposed development.

Visual Impact: The character of the rural landscape is already affected by strategic electrical infrastructure. The proposed line and substation is comparatively small and will use a corridor that is already affected by HV power lines. The proposed line and substation is unlikely to be highly obvious against existing infrastructure and it will not expand the current impact. It is likely that it will not be obvious to most sensitive receivers.

Impact on Avifauna: In general, the habitat through which the proposed corridor passes is moderately sensitive from a potential bird impact perspective. A significant proportion of the study area extends over a single primary vegetation division, namely the Succulent Karoo and consists predominantly of the Tanqua Karoo vegetation type. Other avifaunal habitats include drainage lines, dams, rocky outcrops and existing

transmission lines which together with the Succulent Karoo habitat are likely to support a number of Red List power line sensitive species. The construction and operation of the proposed Perdekraal West 132kV power line and substation will result in moderately significant threats to the birds occurring in the vicinity of the new infrastructure. It can be noted that the grouping similar power lines on a common servitude, as is proposed, or locating them along other features such as tree lines, are both approaches thought to reduce risk (Bevanger 1994).

Mitigation could reduce the impacts to low in all instances. Through the implementation of the EMPr (refer to **Appendix G**), it is expected that impacts associated with the construction and operation of the power line and on-site substation can be mitigated to acceptable levels due largely to the limited footprint of the power line (being limited to the tower footprints and access roads in some areas). It is the conclusion of the Environmental Assessment Practitioner that the establishment of the power line is considered acceptable from an environmental perspective and the project should be authorised, given that the recommended mitigation measures are implemented.

No-go alternative (compulsory)

The 'Do nothing' alterative is the option of not constructing the 132kV power within the corridor proposed. This option will result in no impacts occurring on the biophysical environment (i.e. biodiversity), and will result in no visual impact. However, this will result in the situation where the authorised Perdekraal West Wind Energy Facility cannot be connected to the electricity grid.

The 'Do nothing' alterative for the power line will result in a lost opportunity for renewable energy production within the country, and will impact on the local community as no employment would be generated. **The 'Do nothing' alternative is, therefore, not a preferred alternative.**

SECTION E: RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	**YES**

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

The construction and operation of the proposed power line should be implemented according to the conclusions of this report and the specifications of the EMPr to adequately mitigate and manage potential impacts associated with construction activities. The construction and operation/maintenance activities and relevant rehabilitation of disturbed areas should be monitored against the approved EMPr, the Environmental Authorisation (once issued) and all other relevant environmental legislation.

Construction Phase:

- All relevant practical and reasonable mitigation measures detailed within this report and within the EMPr must be implemented.
- The implementation of this EMPr for all life cycle phases of the proposed project is considered key in achieving the appropriate environmental management standards as detailed in this report.
- An independent Environmental Control Officer (ECO) should be appointed to monitor compliance with the specifications of the EMPr for the duration of the construction period.
- Creation of new access tracks should be minimised as far as possible.
- All declared alien plants must be identified and managed in accordance with the relevant legislation. The implementation of an on-going monitoring programme in this regard is recommended.
- Erosion control measures must be utilised during construction, operations, decommissioning and rehabilitation of power line.
- Re-vegetation of the site as it is before construction must be undertaken after decommissioning of the power line.
- The developer should obtain all necessary permits prior to the commencement of construction.
- Bird flight diverters must be installed on the full span length of the earth-wires

(according to Eskom guidelines). Light and dark colour devices must be alternated so as to provide contrast against both dark and light backgrounds respectively. These devices must be installed as soon as the conductors and earth-wires are strung. This requirement will be confirmed by the specialist walk down of the powerline.

» Construction activities must be limited to the shortest time possible and confined to the site footprint to avoid any additional disturbance impacts on bird species residing outside the footprint.

Operation Phase:

The mitigation and management measures previously listed in this Basic Assessment Report should be implemented in order to minimise potential environmental impacts. The following mitigation measures should also be implemented.

» On-going maintenance of the power line infrastructure and servitude to minimise the potential for visual impacts.
» On-going monitoring of the development sites to detect and restrict the spread of alien plant species.
» Undertake regular monitoring of the power line to detect any areas where high avifauna impacts are experienced and recommend any additional mitigation which may be required to be implemented.
» The grid connection should be inspected once every quarter for collision mortalities, to assess the efficacy of the Bird Flight Diverters.

Is an EMPr attached?	**YES**	

The EMPr must be attached as **Appendix G.**

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as **Appendix H.**

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in **Appendix I.**

Any other information relevant to this application and not previously included must be attached in **Appendix J.**

JO-ANNE THOMAS

NAME OF EAP

_____ _____

SIGNATURE OF EAP DATE

SECTION F: APPENDICES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information