

ACCESS ROADS AND WATERCOURSE CROSSINGS WITHIN THE AUTHORISED IZIDULI EMOYENI WIND ENERGY FACILITY

Eastern Cape Province
Basic Assessment Report
January 2018

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BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014 as amended, 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 as amended 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. 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.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. 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.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).
9. 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.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

"Innovation for Sustainable Development"

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VERSION 1 dated 8 December 2014

PROJECT DETAILS

Title	:	Basic Assessment Process: BAR for the Proposed Access Roads and Watercourse Crossings within the authorised Iziduli Emoyeni Wind Energy Facility, Eastern Cape Province
Authors	:	Savannah Environmental Thalita Botha Jo-Anne Thomas Gabriele Stein
Applicant	:	Emoyeni Wind Farm Renewable Energy (Pty) Ltd
Report Status	:	Basic Assessment Report for Public Review
Review Period	:	11 January 2018 – 12 February 2018

When used as a reference this report should be cited as: Savannah Environmental (2018) Basic Assessment Report for the Proposed Access Roads and Watercourse Crossings within the authorised Iziduli Emoyeni Wind Energy Facility, Eastern Cape Province.

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SUMMARY AND OVERVIEW OF THE PROJECT

Windlab Developments South Africa (Pty) Ltd (Windlab)¹ received an Environmental Authorisation (EA) for the proposed Iziduli Emoyeni Wind Energy Facility (previously known as Amakhala Emoyeni Phase 4) on 28 August 2012 from the National Department of Environmental Affairs (DEA Ref: 12/12/20/1754/4). The Wind Energy Facility (WEF) was previously part of the greater project concept known as the Amakhala Emoyeni Wind Energy Facility. The project was split into four phases (in order to align with the Renewable Energy Independent Power Producer Procurement Programme requirements restricting a project size to 140MW).

Emoyeni Wind Farm Renewable Energy (Pty) Ltd is now applying for authorisation for identified Listed Activities in terms of the EIA Regulations, 2014 (as amended in April 2017). The activities entails the infilling and deposition of material within a watercourse (the widening and upgrading of existing watercourse crossings²), the construction of access roads and widening of the existing on-site access roads within the authorised Iziduli Emoyeni Wind Energy Facility project site from the width of 6m to 9 m in width. A previous basic assessment application was submitted by Savannah Environmental Consultants in May 2015. The application was issued an environmental authorisation in July 2015 (Eastern Cape DEDEAT ref: EC02/C/LN1&3/M/75-2014), however the construction did not commence within the 24 months from the date of issue and the EA subsequently lapsed. As such, Savannah Environmental (Pty) Ltd has been appointed by Emoyeni Wind Farm Renewable Energy (Pty) Ltd to obtain an environmental authorisation in terms of the EIA Regulations, 2014 (as amended in April 2017).

The proposed development will entail the following:

- » the construction of a new access roads ~18km in length and ~9m wide;
- » the widening of existing roads from 6m to 9m, ~7,5km in length; and
- » the widening and upgrading existing four (4) watercourse crossings.

The proposed Iziduli Emoyeni Wind Energy Facility is located ~26km south of Bedford and ~36km south east of Cookhouse within the Blue Crane Route Local Municipality which falls within the jurisdiction of the Sarah Baartman District Municipality, Eastern Cape Province (refer to **Figure 1** and **Table 1**). The following farms were authorised for the siting of the wind farm:

- » Remainder of the Farm Brakke Fonteyn No 218;
- » Remainder of Portion 1 of the Farm Brakke Fonteyn No 218;
- » Portion 2 (a Portion of Portion 1) of the Farm Brakke Fonteyn No 218;
- » The Farm Vogel Fonteyn No 219; and
- » Remainder of the Farm Brakfontein No 220.

¹ The holder of the EA was amended from Windlab Developments South Africa (Pty) Ltd to Emoyeni Wind Farm Renewable Energy (Pty) Ltd on 2 July 2015.

² Listed Activity 19 of GN R326 of the 2014 EIA Regulations as amended on 07 April 2017, is applied for to allow for excavation and/or infill of material exceeding 10m³ for the construction of watercourse crossings.

Table 1: Location of the affected properties

Province	Eastern Cape Province	
Local Municipality	Blue Crane Route Local Municipality	
District Municipality	Sarah Baartman District Municipality	
Ward number(s)	1	
Nearest town(s)	The project site is located ~26km south of Bedford and ~36km south east of Cookhouse.	
Farm name(s) and number(s)	<ul style="list-style-type: none"> » Remainder of the Farm Brakke Fonteyn No 218 » Remainder of Portion 1 of the Farm Brakke Fonteyn No 218 » Portion 2 (a Portion of Portion 1) of the Farm Brakke Fonteyn No 218 » The Farm Vogel Fonteyn No 219 » Remainder of the Farm Brakfontein No 220 	
SG 21 Digit Code	<ul style="list-style-type: none"> » Remainder of the Farm Brakke Fonteyn No 218 – C0100000000021800000 » Remainder of Portion 1 of the Farm Brakke Fonteyn No 218 - C01000000000021800010 » Portion 2 (a Portion of Portion 1) of the Farm Brakke Fonteyn No 218 - C01000000000021800020 » The Farm Vogel Fonteyn No 219 - C01000000000021900000 » Remainder of the Farm Brakfontein No 220 -C01000000000022000000 	
Current Land Use	The project site is currently being utilised for game farming and hunting.	
Site Coordinates	Northern-most extent: 32°52.477' S 26°7.894' E Eastern-most extent: 32°54.222' S 26°11.189' E Southern-most extent: 32°57.605' S 26°8.126' E Western-most extent: 32°53.432' S 26°6.664' E	

1. Requirements for a Basic Assessment Process

In terms of the Environmental Impact Assessment (EIA) Regulations of December 2014 as amended, published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998), the applicant requires authorisation for the construction of new access roads, the widening of existing roads and the watercourse crossings. In terms of Sections 24 and 24D of NEMA (No 107 of 1998), as read with the EIA Regulations of GN R327, R325 and R324, a Basic Assessment process is required to be undertaken in support of the application for authorisation.

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 the Project³ is located in the Eastern Cape, the competent authority is the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).

The nature and extent of the Project, and the potential environmental impacts associated with the construction, operation and decommissioning phases are explored in more detail in this Basic Assessment

³ The Project refers to the construction of new access roads and the widening of existing roads and watercourse crossings.

Report. This report has been compiled in accordance with the requirements of the EIA Regulations of 2014, as amended on 07 April 2017 (refer to **Table 2** below) and includes details of the activity description; the site, area and property description; the public participation process; the impact assessment; as well as the recommendations proposed by the Environmental Assessment Practitioner (EAP).

Table 2: Legal Requirements of GN. R. 326, Appendix 1 included in the 2014 EIA Regulations, as amended on 07 April 2017.

NEMA REGULATION GNR 326, 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—	Summary and Overview of the Project, Section 2
(a) details of—	
(i) the EAP who prepared the report; and	Summary and Overview of the Project, Section 2 Appendix G(2)
(ii) the expertise of the EAP, including a curriculum vitae;	
(b) the location of the activity, including:	Section A(1)
(i) the 21 digit Surveyor General code of each cadastral land parcel;	
(ii) where available, the physical address and farm name;	
(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(1)
(c) a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale;	Section A(6), Figure 2, Appendix A1, Appendix A2 and Appendix C
or, if it is—	Section A(6), Figure 2, Appendix A1, Appendix A2 and Appendix C
(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;	
(d) a description of the scope of the proposed activity, including—	Section A(2) and Section A(1)
(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 ;	
(e) a description of the policy and legislative context within which the development is proposed including—	Section A(10), Table 1.2
(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	
(ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;	Section A(10), Table 1.2
(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 A(9b)
(g) a motivation for the preferred site, activity and technology alternative;	Section A(9b) and Section A(2)
(h) a full description of the process followed to reach the proposed	Section A(2)

NEMA REGULATION GNR 326, 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)
<p>preferred alternative within the site, including -</p> <ul style="list-style-type: none"> (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; 	<p>Section C Appendix E</p>
<ul style="list-style-type: none"> (iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; 	<p>Section B</p>
<ul style="list-style-type: none"> (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— <ul style="list-style-type: none"> (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated; 	<p>Section D</p>
<ul style="list-style-type: none"> (vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; 	<p>Section D(1)</p>
<ul style="list-style-type: none"> (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; 	<p>Section D</p>
<ul style="list-style-type: none"> (viii) the possible mitigation measures that could be applied and level of residual risk; 	<p>Section D Appendix F</p>
<ul style="list-style-type: none"> (ix) the outcome of the site selection matrix; 	<p>N/A</p>
<ul style="list-style-type: none"> (x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and 	<p>Section A(2)</p>
<ul style="list-style-type: none"> (xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity; 	<p>Section D(3)</p>
<ul style="list-style-type: none"> (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— <ul style="list-style-type: none"> (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and 	<p>Section D(2) Appendix D1</p>
<ul style="list-style-type: none"> (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; 	<p>Section D(2) Appendix D1</p>
<ul style="list-style-type: none"> (j) an assessment of each identified potentially significant impact and risk, including— <ul style="list-style-type: none"> (i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; 	<p>Section D(2) Appendix D1</p>

NEMA REGULATION GNR 326, 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)
<ul style="list-style-type: none"> (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; 	
(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;	Appendix D(3)
(l) an environmental impact statement which contains— <ul style="list-style-type: none"> (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 (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives; 	Appendix D(3), Appendix A3, Figure 3
(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management outcomes for the development for inclusion in the EMPr;	Section D
(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;	Summary and Overview of the Project Section 3
(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 E
(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: <ul style="list-style-type: none"> (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 G1
(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

NEMA REGULATION GNR 326, 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)
(u) any other matters required in terms of section 24(4)(a) and (b) of the Act.	N/A

2. Details of Environmental Assessment Practitioner and Expertise to Conduct the Basic Assessment

Emoyeni Wind Farm Renewable Energy (Pty) Ltd has appointed Savannah Environmental (Pty) Ltd as the independent environmental consultant to undertake the required Basic Assessment process and to identify and assess all the environmental impacts associated with the project, including proposing appropriate mitigation and management measures in the Construction and Operational Environmental Management Programme (EMPr). Savannah Environmental is not a subsidiary of or affiliated to Emoyeni Wind Farm Renewable Energy (Pty) Ltd. In addition, Savannah Environmental does not have any interest in secondary activities that may arise out of the authorisation.

Savannah Environmental is a specialist environmental consulting company providing holistic environmental management services, including environmental impact assessments 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.

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

- » *Thalita Botha* - the principle author of this report holds a BSc degree with Honours in Environmental Management and has two years of experience in environmental consulting. Her key focus is on environmental impact assessments, public participation, mapping (using ArcGIS), environmental management plans and programmes.
- » *Jo-Anne Thomas* – the principle Environmental Assessment Practitioner (EAP) for this project. She is a registered Professional Natural Scientist (in the practice of environmental science) with the South African Council for Natural Scientific Professions. She has gained extensive knowledge and experience on potential environmental impacts associated with electricity generation and transmission projects through her involvement in related EIA processes over the past nineteen (19) years. She has successfully managed and undertaken EIA processes for infrastructure development projects throughout South Africa.
- » *Gabriele Stein* - the public participation consultant for this project, holds an Honours Degree in Anthropology, obtained from the University of Johannesburg. She has 10 years of consulting experience in public participation and social research. Her experience includes the design and

implementation of public participation programmes and stakeholder management strategies for numerous integrated development planning and infrastructure projects. Her work focuses on managing the public participation component of the Environmental Impact Assessment processes undertaken by Savannah Environmental.

In order to adequately identify and assess potential environmental impacts, the following specialist was appointed as required:

Specialist Studies Undertaken	Specialists
Ecological and Aquatic Impact Assessment	Brain Colloty of Scherman Colloty & Associates

Curriculum vitae for the Savannah Environmental project team are included in **Appendix G2**.

3. Assumptions and Limitations

The following assumptions and limitations are applicable to this Basic Assessment Process:

- » All information provided by the applicant to the environmental team was correct and valid at the time it was provided.
- » It is assumed that the footprint of the new access roads identified by the proponent represent technically suitable for the establishment of the proposed project.
- » Studies assume that any potential impacts on the environment associated with the proposed development will be avoided or mitigated accordingly based on the findings of this Basic Assessment Report and the associated Specialist Studies.
- » This report and its investigations are project-specific, and consequently the environmental team did not evaluate any other activities within the affected properties other than those specified in this report.

BASIC ASSESSMENT REPORT FOR REVIEW

This Basic Assessment Report has been prepared by Savannah Environmental in order to assess the environmental impacts associated with the construction and operation of the project undertaken. This process was undertaken in support of an application for Environmental Authorisation to the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT). The report is available for public review at the following locations:

The 30-day review period for the Basic Assessment Report is from **11 January 2018 to 12 February 2018**. The report is available for public review at the following locations:

- » Bedford Public Library (Cnr. of Van Riebeeck & Donkin Street)
- » www.savannahsa.com

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

<p>Gabriele Stein Savannah Environmental Tel: 011 656 3237 Fax: 086 684 0547 Email: gabriele@savannahsa.com Post: PO Box 148 Sunninghill, 2157</p>
<p>The due date for comments on the Basic Assessment Report is 12 February 2018</p>

SECTION A: ACTIVITY INFORMATION

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

YES	
-----	--

If YES, please complete the specialist declaration form for each specialist thus appointed:

The details of the specialist and declaration of interest for the specialist has been completed and is included in **Appendix G1**.

Any specialist reports must be contained in **Appendix D**.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

Overview:

Windlab Developments South Africa (Pty) Ltd (Windlab)⁴ received an environmental authorisation for the proposed Iziduli Emoyeni Wind Energy Facility (previously known as Amakhala Emoyeni Phase 4) on 28 August 2012 from the National Department of Environmental Affairs (DEA Ref: 12/12/20/1754/4) in accordance with the EIA Regulations of 2006. The proposed Wind Energy Facility (WEF) was previously part of the greater project concept known as the Amakhala Emoyeni Wind Energy Facility. The project was split into four phases (in order to align with the Renewable Energy Independent Power Producer Procurement Programme requirements restricting a project size to 140MW).

Emoyeni Wind Farm Renewable Energy (Pty) Ltd is now applying for authorisation for identified Listed Activities in terms of the EIA Regulations, 2014 (as amended in April 2017), for which no application was previously made but which may be triggered by the construction and operation of the the Iziduli Emoyeni Wind Energy Facility. The activities entails the infilling and deposition of material within a watercourse (the widening and upgrading of existing watercourse crossings), the construction of access roads and widening of the existing on-site access roads within the authorised Iziduli Emoyeni Wind Energy Facility project site from the width of 6m to 9 m in width. A previous basic assessment application was submitted by Savannah Environmental Consultants in May 2015. The application was issued an environmental authorisation in July 2015 (Eastern Cape DEDEAT ref: EC02/C/LN1&3/M/75-2014), however the construction did not commence within the 24 months from the date of issue and the EA subsequently lapsed. As such, Savannah Environmental (Pty) Ltd has been appointed by Emoyeni Wind Farm Renewable Energy (Pty) Ltd to obtain an environmental authorisation in terms of the EIA Regulations, 2014 (as amended in April 2017).

⁴ The holder of the EA was amended from Windlab Developments South Africa (Pty) Ltd to Emoyeni Wind Farm Renewable Energy (Pty) Ltd on 2 July 2015.

The project will entail:

- » the construction of a new access roads ~18km in length and ~9m wide;
- » the widening of existing roads from 6m to 9m, ~7,5km in length; and
- » the widening and upgrading four (4) existing watercourse crossings.

Table 1.1: Location of the affected properties

Province	Eastern Cape Province
Local Municipality	Blue Crane Route Local Municipality
District Municipality	Sarah Baartman District Municipality
Ward number(s)	1
Nearest town(s)	The project site is located ~26km south of Bedford and ~36km south east of Cookhouse.
Farm name(s) and number(s)	<ul style="list-style-type: none"> » Remainder of the Farm Brakke Fonteyn No 218 » Remainder of Portion 1 of the Farm Brakke Fonteyn No 218 » Portion 2 (a Portion of Portion 1) of the Farm Brakke Fonteyn No 218 » The Farm Vogel Fonteyn No 219 » Remainder of the Farm Brakfontein No 220
SG 21 Digit Code	<ul style="list-style-type: none"> » Remainder of the Farm Brakke Fonteyn No 218 – C0100000000021800000 » Remainder of Portion 1 of the Farm Brakke Fonteyn No 218 - C0100000000021800010 » Portion 2 (a Portion of Portion 1) of the Farm Brakke Fonteyn No 218 - C0100000000021800020 » The Farm Vogel Fonteyn No 219 - C0100000000021900000 » Remainder of the Farm Brakfontein No 220 -C0100000000022000000
Current Land Use	The project site is currently being utilised for game farming and hunting.
Site Coordinates	Northern-most extent: 32°52.477' S 26°7.894' E Eastern-most extent: 32°54.222' S 26°11.189' E Southern-most extent: 32°57.605' S 26°8.126' E Western-most extent: 32°53.432' S 26°6.664' E

The existing watercourse crossings situated on the main road are too narrow or structurally inadequate to handle increased daily traffic loads during the construction of the Iziduli Emoyeni Wind Energy Facility (refer to **Figure 1.1** to **Figure 1.4**). Therefore, the watercourse crossings will need to be formalised and widened. The widening of the existing roads and watercourse crossing within the project site will ensure safe and effective transport of the turbine components during construction, and optimise maintenance activities during operations.



Figure 1.1: Watercourse crossing point 1 (WC1).



Figure 1.2: Watercourse crossing point 2 (WC2).



Figure 1.3: Watercourse crossing point 3 (WC3).



Figure 1.4: Watercourse crossing point 4 (WC4).

In order to accommodate the construction of the Iziduli Emoyeni Wind Energy Facility, the newly constructed access roads will be single carriageway gravel roads approximately 18km in total length and will be approximately 9m wide. The existing roads to be widened by an additional 3m from 6m to 9m and will be approximately 7,5km in length. These existing roads are currently single carriageway gravel roads.

Pre-Construction Surveys:

Prior to initiating construction, a number of detailed surveys will be required to be undertaken. A Geotechnical survey, amongst other will be required. The geotechnical study will look at the availability of natural construction materials. This study will serve to inform the extent of earthworks and compaction required as well as the final micro-sitting of the new access roads.

Construction activities:

The new access roads and the sections of the widening of existing roads considered within this Basic Assessment Report will be approximately 25,5km in length. The new access roads will be in accordance with

the Advertising on Roads and Ribbon Development Act No. 21 of 1940 and the Road Ordinance, 19 of 1976 and will be constructed in the following simplified sequence:

- Step 1: Final design and micro-siting of the infrastructure based on geotechnical, topographical conditions and potential environmental sensitivities;
- Step 2: Vegetation clearance within the development footprint (where required);
- Step 3: The development of stormwater control management systems which will divert water from the construction areas and will also be applicable to the operation phase of the road.
- Step 4: Construction of ~18km long and 9m wide gravel road.
- Step 5: Widening of ~7,5km long of existing to 9m in width gravel road.
- Step 6: Widening and upgrade of four watercourse crossings.

The newly constructed access road will be a single carriageway gravel road. Construction of the project will take a maximum of 5 months to complete.

Undertake site rehabilitation:

- Step 1: Areas requiring rehabilitation will include those areas disturbed during the construction phase which are not required for operation. Rehabilitation should be undertaken in an area as soon as possible after the completion of construction activities within that area.
- Step 2: Re-vegetated areas may have to be protected from erosion and maintained until an acceptable plant cover has been achieved.
- Step 3: Erosion control measures (i.e. drainage works and anti-erosion measures) should be used in sensitive areas to minimise loss of topsoil and control erosion.
- Step 4: All temporary facilities, temporary equipment, and waste materials must be removed from site.
- Step 5: Any access points and/or access roads which are not required during the operational phase must be closed as part of the post-construction rehabilitation.

Operation and Maintenance Phase:

Following completion of construction, Emoyeni Wind Farm Renewable Energy (Pty) Ltd will be responsible for the operation and routine maintenance of the road infrastructure.

Requirements for a Basic Assessment Process:

The proposed project requires Environmental Authorisation in terms of Sections 24 and 24D of the National Environmental Management Act (No 107 of 1998), as read with the EIA Regulations of 2014 as amended, and therefore a Basic Assessment (BA) process will be required for the project. The following listed activities will be applied for:

Listed activity as described in GN R 324, GN R 325, GN R25 327	Description of project activity that triggers listed activity
<p>GNR 327 Activity 12 (ii)(a)(c): The development of – (ii) infrastructure or structures with a physical footprint of 100 square metres or more; Where such development occurs – (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</p>	<p>The construction of access roads & watercourse crossings within the authorised Iziduli Wind Energy Facility may impede upon watercourses or within 32 metres of a watercourse.</p>
<p>GNR 327 Activity 19: The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 10 cubic metres from a watercourse.</p>	<p>The construction of access roads & watercourse crossings within the authorised Iziduli Wind Energy Facility will require the removal or infilling of material more than 10 cubic metres from a watercourse.</p>
<p>GNR 327 Activity 24 (ii): The development of a road – (ii) with a reserve wider than 13,5m, or where no reserve exists where the road is wider than 8 metres.</p>	<p>The facility will require the construction of new access roads within the project site that are wider than 8m in width.</p>
<p>GNR 324 Activity 4 (a)(i)(ee): The development of a road wider than 4 metres with a reserve less than 13.5 metres (a) Eastern Cape Province (i) Outside urban areas in: (ee) Critical biodiversity areas identified in systematic biodiversity plans adopted by the competent authority or in the bioregional plans.</p>	<p>A small section of the new access roads to be constructed, falls within a Critical Biodiversity Area (CBA) according the Eastern Cape Biodiversity Conservation Plan which has been adopted by the Eastern Cape Economic Development, Environmental Affairs and Tourism. The new access roads to be constructed within the project site will be wider than 4m in width.</p> <p>It should be noted that this section of the new access roads do not fall within a CBA according to the Addo Biodiversity Plan (which has not been adopted).</p>
<p>GNR 324 Activity 12 (a)(ii): 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 management plan (a) Eastern Cape Province (ii) within critical biodiversity areas identified in bioregional plans.</p>	<p>The construction of access roads and the widening of existing access roads will require the clearance of an area of more than 300 square metres of indigenous vegetation within a critical biodiversity area identified within the Eastern Cape Biodiversity Conservation Plan.</p>

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. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity 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.

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

a) Site and Layout Alternatives:

The proposed access roads and watercourse crossings fall within the development footprint of the authorised Iziduli Emoyeni Wind Farm project site (refer to **Figure 1**). The construction of new access roads and the widening of existing roads are required to be undertaken to accommodate the wind farm and forms part of the wind farm's associated infrastructure. The watercourse crossings are located on an existing main road, and are required to be widened and upgraded to accommodate the existing wider gravel road to be used as an access road for the wind farm. In order to accommodate the wind farm, the construction of the new access roads, the widening of the existing roads and the widening of the watercourse crossings are required in the project site. Therefore, no feasible alternative sites were considered further.

Several layout alternatives were considered at the onset of the process before the final road layout as presented here, were determined. Previous iterations of roads layouts were deemed less favourable than what is currently proposed here due to impacts on the watercourse and engineering complexity. Therefore, no feasible layout alternative were considered further. The construction of the internal roads for the authorised Iziduli Emoyeni Wind Farm will impact upon four watercrossing points⁵. **It should be noted that these watercourse crossings are not alternatives to each other.**

⁵ For the purpose of this BA report these points will be referred to as 1 to 4 (from north to south).

b) Technology Alternatives:

No technology alternatives are applicable for the proposed construction of the new access roads and the widening of the existing roads and watercourse crossings.

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

No other alternatives are applicable for the proposed construction of the new access roads and the widening of the existing roads and watercourse crossings.

d) No-go alternatives

This is the option of not constructing the proposed Project. This option will result in limited or no impacts occurring on the environment. However, this will result in the situation where the authorised Iziduli Emoyeni Wind Farm (to be bid) would not be accessible to the heavy vehicles transporting project components to this site, which would result in a situation where the project would not be constructed. This would also result in a lost opportunity for the development of a renewable energy facility feeding power into the national grid. This is an undesirable option for the project as it will pose negative impacts on the Wind Farm Project which have already undergone significant investment and would then not be able to proceed. In addition, it would be an undesirable option from a socio-economic perspective as it would result in a situation where the employment opportunities which would have been created by the construction of the wind energy facility, will be lost. This would result in negative impacts at a local, regional and national scale from a socio-economic and economic perspective and is not considered desirable.

3. ACTIVITY POSITION

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.

List alternative sites if applicable.

Alternative:	Latitude (S):		Longitude (E):	
Alternative S1 ⁶ (preferred or only site alternative)	WC1) 32°	53.172'	26°	8.187'
	WC2) 32°	53.690'	26°	8.737'
	WC3) 32°	53.925'	26°	8.935'
	WC4) 32°	54.127'	26°	9.012'

⁶ "Alternative S.." refer to site alternatives.

Alternative S2 (if any)	○	i	○	i
Alternative S3 (if any)	○	i	○	i

In the case of linear activities:

A table has been attached as **Appendix G3** detailing the co-ordinates for all the new access roads to be constructed and for the widening of existing roads.

Alternative:

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S):

Longitude (E):

Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

○	i	○	i
○	i	○	i
○	i	○	i

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

○	i	○	i
○	i	○	i
○	i	○	i

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.

4. PHYSICAL SIZE OF THE ACTIVITY

The proposed access roads and watercourse crossings may require the construction of a culvert in order not to impact upon the watercourse during the construction and operation of the wind farm. A typical culvert design is presented in **Appendix C**. Note that these drawings are examples only. They were prepared for another similar project but are representative of the kind of structure that may be required at Iziduli Emoyeni Wind Farm.

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

Alternative:

Alternative A1⁷ (preferred activity alternative)

Size of the activity:

9m x 12m = 108m²

⁷ "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative A2 (if any)	m ²
Alternative A3 (if any)	m ²

and, for linear activities:

Alternative:	Length of the activity:
Alternative A1 (preferred activity alternative) – new access roads	~18km in length, 9m wide
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

Alternative:	Size of the site/servitude:
Alternative A1 (preferred activity alternative)	108m ²
Alternative A2 (if any)	m ²
Alternative A3 (if any)	m ²

5. 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:

The site for both the access roads and watercourse crossings can be accessed via the R350 regional road which is situated on the western boundary of the project site and which connects Bedford (~25km north of the project site) and Grahamstown (~60km south east of the project site) off the N10. Within the wind farm project site itself, there is an existing gravel road (main road) that will be upgraded as part of this BA process.

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.

6. SITE OR 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:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;

- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - 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 invested with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

An A3 Layout Map is included as **Figure 2** and in **Appendix A2**. The map indicates 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 each of the properties adjoining the site or sites was not indicated on the map but detail information has been provided within the report; and
- » the exact position of each element of the application.

Figure 4 provides the layout (**Figure 2**) with labelled access roads (also refer to **Appendix A6**).

An A3 Environmental Sensitivity Map is included as **Figure 3** and in **Appendix A3**. The map indicates the sensitive environmental elements within 100 metres of the site or site. The following was not indicated on the maps but detail information has been provided within the report:

- » the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, stormwater infrastructure and telecommunication infrastructure;
- » all trees and shrubs taller than 1.8 metres;
- » walls and fencing including details of the height and construction material;
- » servitudes indicating the purpose of the servitude; and
- » the positions from where photographs of the site were taken (refer to **Appendix B**).

No alternatives are illustrated in the map as no alternatives have been assessed this project.

Environmental Sensitivity:

- » **Heritage:** Apart from a few isolated stone tools no significant sites/materials were observed within the project site. A farm labourer settlement that consists of three small houses was observed some 40 metres east of the existing Poseidon/Albany 1 132kV power line. Two of the dwellings, one square and the other round, were built from local flat stones and the walls were plastered with clay/mud

and must be older than 60 years. The third house, which may be younger than the stone houses, was built of red clay sun-baked bricks. Refuse dumps were observed and there may be graves in the immediate vicinity of the settlement. The settlement must be regarded as a no-go area and fenced-off before construction starts. As illustrated in the environmental sensitivity map in **Figure 3**, the settlements are avoided by the access roads.

- » **Aquatic:** Several watercourses have been identified within the project site. There are minor non-perennial watercourses and drainage lines present within the project site which include the Goba / eNyara / Biesiesleegta of the Q92F quaternary catchment. All the mainstem systems within the project site are considered to be moderately modified according to the Present Ecological State Scores issued by the Department of Water and Sanitation (DWS). As these watercourses and drainage lines are generally smaller upland streams corresponding to mountain streams and upper foothills, they are assigned the riparian buffer of 32m. The new access road layout avoids all watercourses and the 32m buffer.
- » **Ecology:** The proposed project site falls within the Bedford Dry Grassland and Great Fish Thicket (both classified as Least Threatened). The vegetation types have been categorised according to their conservation status which is, in turn, assessed according to degree of transformation. Most of the study area is still in natural condition, although parts are degraded due to commercial livestock farming. Critical Biodiversity Areas (CBA) are terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecosystem functioning.

According to the Eastern Cape Biodiversity Conservation Plan, which has been adopted by the DEDEAT, a small section of the project site falls within an aquatic CBA 2 (refer to **Figure 5 and Appendix A4**). All rivers and watercourse systems within this CBA are considered to be free-flowing rivers important for fish migration. An area close to the eastern boundary of the CBA is traversed by approximately 1,2km of the existing access roads to be widened. Sections of the newly access roads to be constructed falls within the same area of the aquatic CBA. No rivers or watercourses within this CBA are traversed by the new access roads, access roads to be widened or watercourse crossings. A section of the new access roads to be constructed and the existing access roads to be widened also fall on the boundary of a Terrestrial CBA 2, Corridor 1. Ecological corridors are described by vegetation units mapped in accordance to the Succulent Thicket Ecosystem Planning project. As the access roads are on the boundary of the corridor, the widening of the existing roads and the construction of new roads will not cause disconnection of the corridor.

According to the Addo Biodiversity Plan, the project site falls within an Ecological Support Area (ESA) (refer to **Figure 6 and Appendix A5**). ESAs are considered to prevent degradation within CBAs. A CBA corridor traverses the eastern section of the project site. None of the new access roads, the existing roads to be widened and the watercourse crossings fall within this corridor. A small section of new access roads and roads to be widened traverses one small area considered to be other natural areas (ONA). According to the Biodiversity Sector Plan for the Blue Crane Route Municipality of 2012, these areas include degraded natural areas which are not considered to be CBAs or ESAs. Several areas where no natural areas are remaining (NNR) are present within the project site. These areas have been irreversibly transformed and no longer contribute to the biodiversity of the area. It should be noted that the Addo Biodiversity Plan has not been adopted by the DEDEAT.

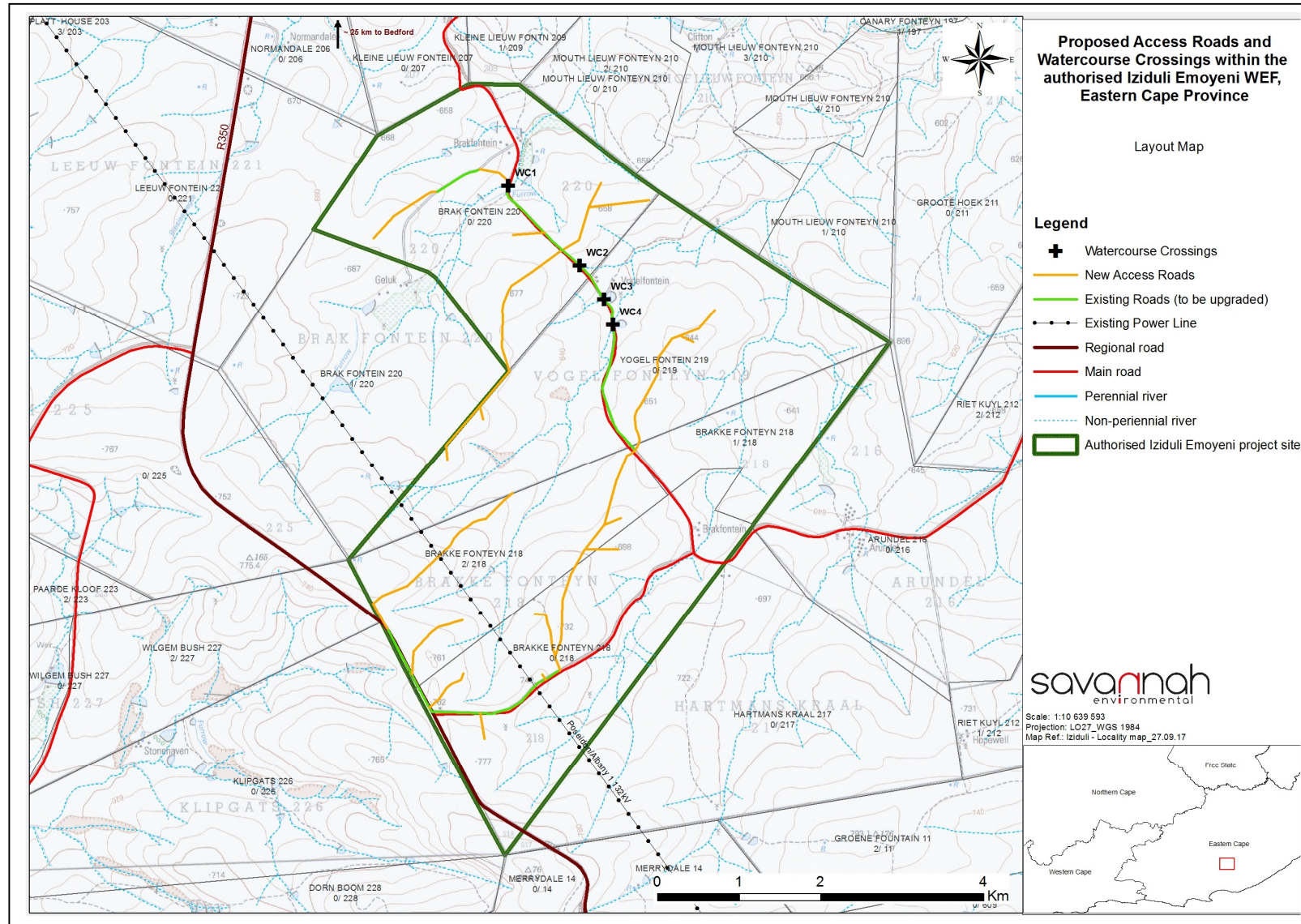


Figure 2: Layout map indicating the location of the proposed project to be developed within the Iziduli Emoyeni Wind Farm project site, Eastern Cape (**Appendix A2**).

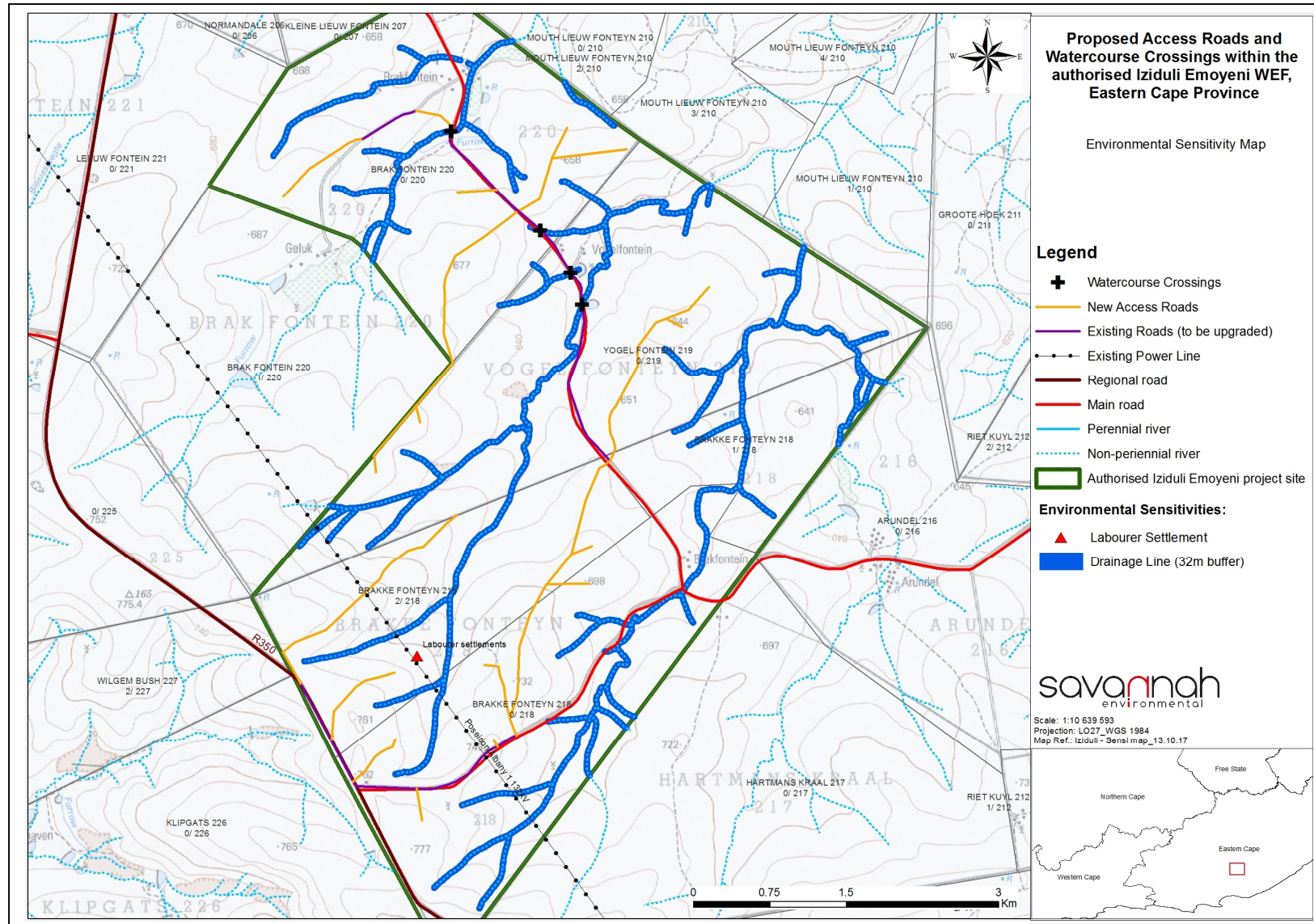


Figure 3: Map illustrating the environmental sensitivity of the project site overlain with the access road and watercourse crossing layout (Appendix A3)

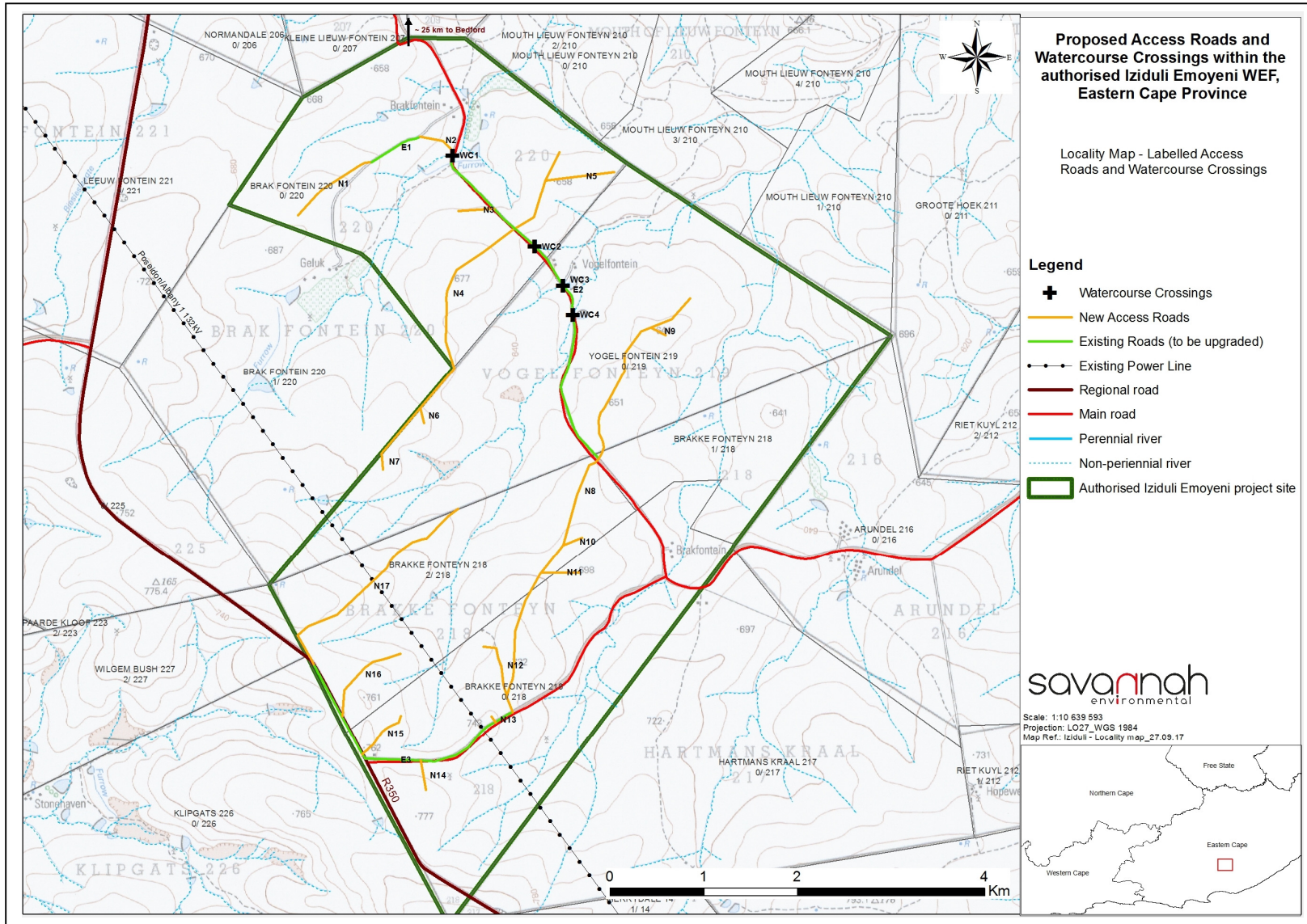


Figure 4: Map indicating the location of the project to be developed within the Iziduli Emoyeni Wind Farm project site, Eastern Cape and the labelled access roads (**Appendix A6**).

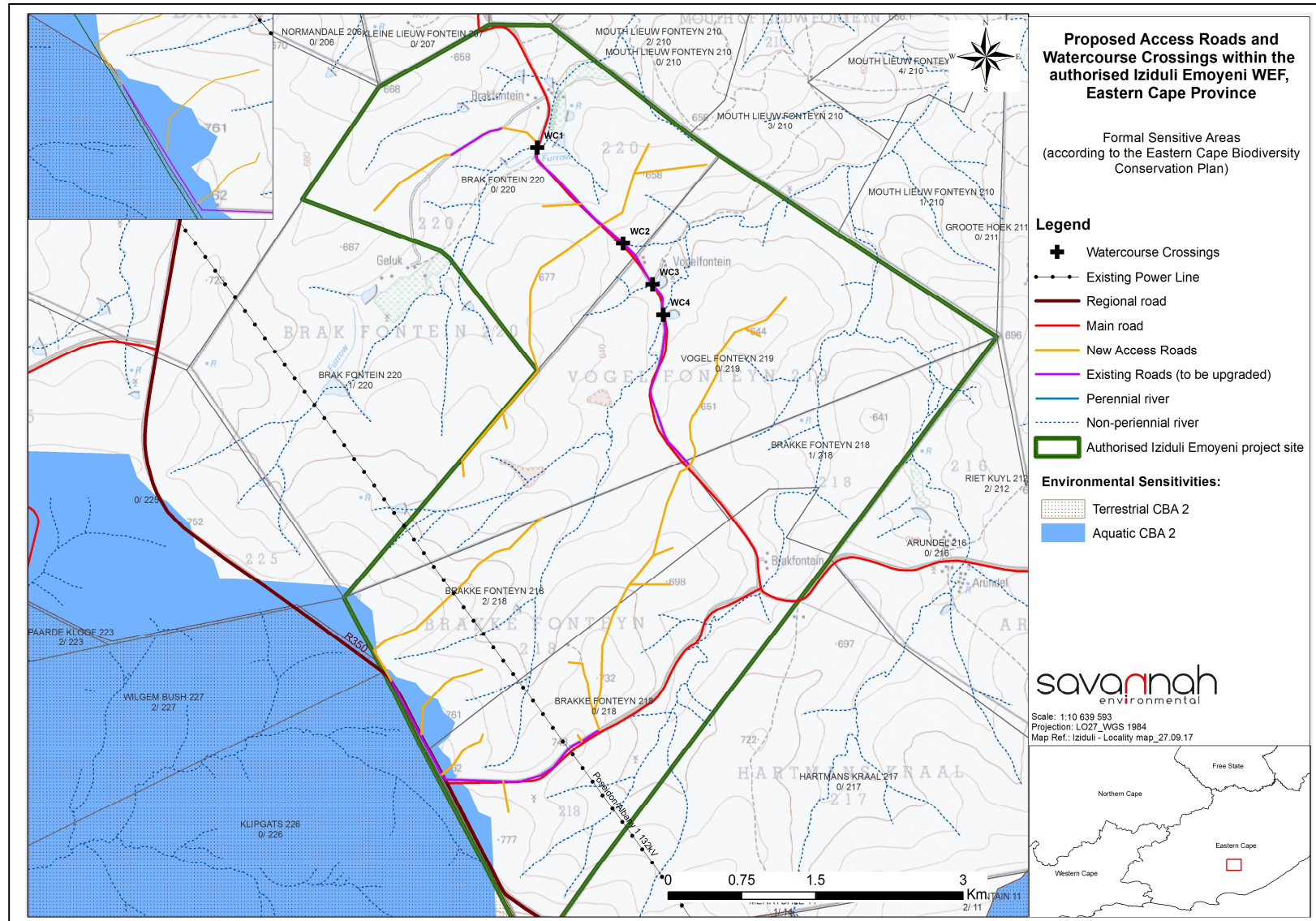


Figure 5: Formal sensitive areas according to the Eastern Cape Biodiversity Conservation Plan within and surrounding the project site (Appendix A4).

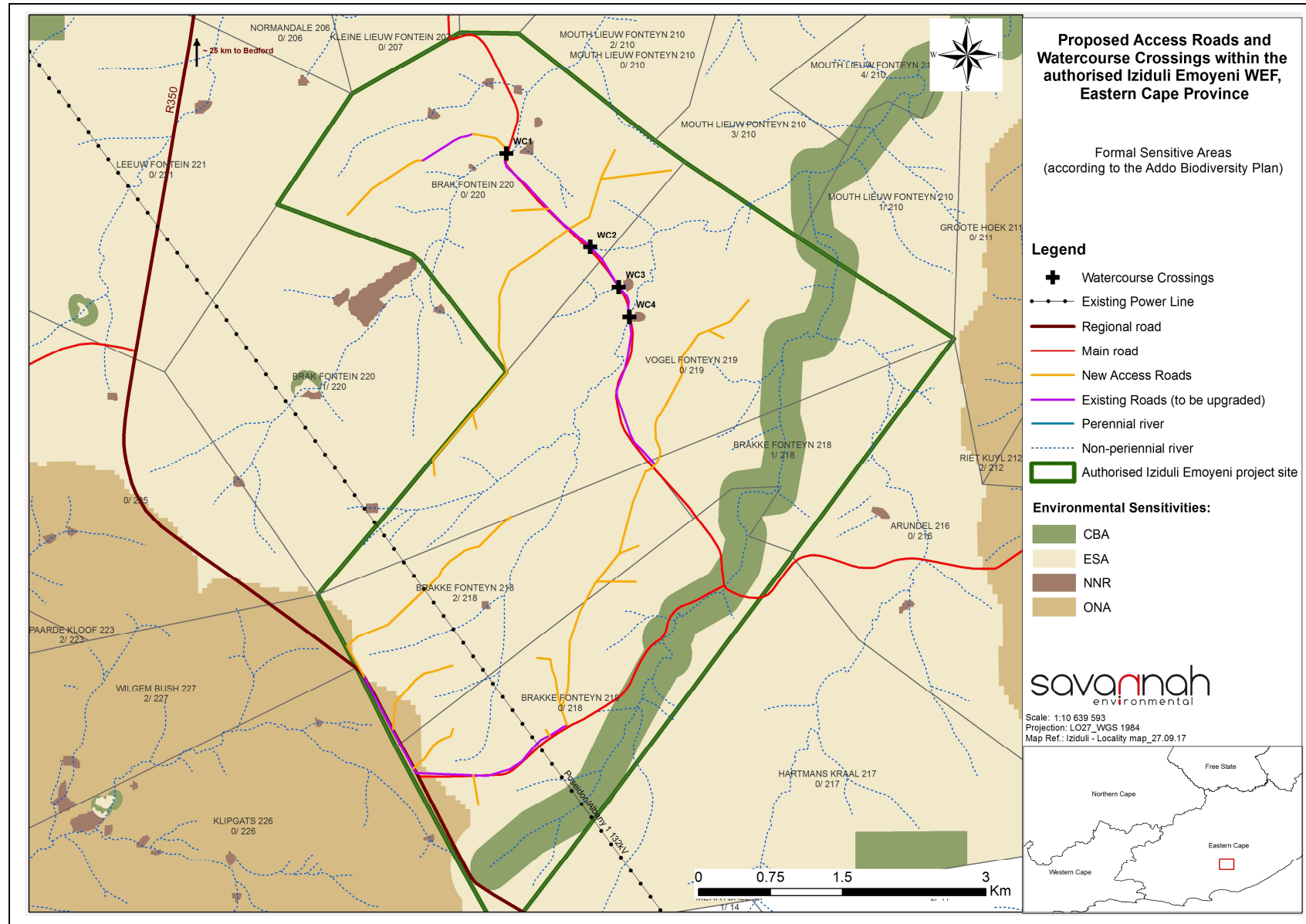


Figure 6: Formal sensitive areas according to the Addo Biodiversity Plan within and surrounding the project site (**Appendix A5**).

7. 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 form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Colour photographs have been taken at each watercourse crossing point, at the centre of the Iziduli Emoyeni Wind Farm project site, at areas that will be impacted by the proposed new access roads and areas where the widening of the existing roads will occur within the Iziduli Emoyeni Wind Farm development footprint. Refer to **Appendix B**.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 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 of the proposed activity has been attached in **Appendix C**. Note that these drawings are examples of watercourse crossing construction method (including a culvert). They were prepared for another similar project but are representative of the kind of structure that may be required at the authorised Iziduli Emoyeni Wind Farm.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

The wind energy facility of which the on-site access roads forms part will result in a CAPEX of approx. R2.5billion.

What is the expected yearly income that will be generated by or as a result of the activity?

The Wind Energy Facility of which the on-site access roads forms part will result in an expected yearly income of approx. R400 million/year.

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 phase of the activity?	The wind energy facility of which the on-site access roads forms part will result in approx. 230-470 and 9-45 job opportunities during construction and operation respectively.
What is the expected value of the employment opportunities during the development phase?	Undetermined at this stage
What percentage of this will accrue to previously disadvantaged individuals?	Undetermined at this stage
How many permanent new employment opportunities will be created during the operational phase of the activity?	Undetermined at this stage
What is the expected current value of the employment opportunities during the first 10 years?	Undetermined at this stage
What percentage of this will accrue to previously disadvantaged individuals?	Undetermined at this stage

It should be noted that the above figures are estimations and speak to the larger set of activities required to develop, construct and operate the entire wind farm. Socio-economic values for just the activities being applied for here have not and cannot be dissociated as they are components of the project as a whole. Significant and far reaching Economic Development commitments have been made by the wind farm project, which are binding and support the employment of local and previously disadvantaged South Africans as well as socio economic and enterprise development of the local area.

9(b) Need and desirability of the activity

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

The proposed access roads and watercourse crossings will be supporting infrastructure to the authorised Iziduli Emoyeni Wind Energy Facility. Without access roads to each turbine or roads which are wide enough, the wind farm could not be constructed or accessible during operation. The road infrastructure within the wind farm has been optimised to utilise existing roads and routes already established on the farms as far as possible, and avoid the need for new watercourse crossings, and will only require the formalisation of four existing crossings.

Indicate any benefits that the activity will have for society in general:

The proposed activities will facilitate the construction of supporting infrastructure to the authorised Iziduli Emoyeni Wind Farm. The formalisation and stabilisation of existing watercourse crossings is beneficial in reducing erosion potential and sedimentation during high flow events. The wind farm represents an investment in infrastructure for the generation of clean, renewable energy, which given the challenges created by climate change and electricity supply shortages within the country, represents a positive high social benefit for society as a whole. Through the generation of renewable energy, society can benefit from

increased energy security, a reduction in greenhouse gas emissions, employment opportunities and reduced pollution levels associated with conventional electricity production.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The proposed activities will facilitate the construction of supporting infrastructure for the authorised Iziduli Emoyeni Wind Farm, which will provide renewable energy to the national grid. Job opportunities will be created during the construction and operation of the proposed wind farm. As part of the Department of Energy Renewable Energy Independent Power Producer Procurement (REIPPP) Programme, Emoyeni Wind Farm Renewable Energy (Pty) Ltd will be required to employ local people for a percentage of the workforce for the Iziduli Emoyeni Wind Farm. In addition, Emoyeni Wind Farm Renewable Energy (Pty) Ltd will be required to identify needs of the surrounding communities and to formulate strategies on how such needs could be met utilising Socio-Economic Development Contributions (as a percentage of the yearly revenue Emoyeni Wind Farm Renewable Energy (Pty) Ltd will obtain by selling the electricity to the designated off-taker). The local community will therefore benefit through job creation, skills development opportunities and training which will reduce levels of unemployment in the local area. In addition, local and regional economic benefits will be realised through the additional revenue generated as a result of the proposed project through direct and indirect job opportunities, local spend, local procurement, etc.

10. 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 (refer to **Table 1.2** below):

Table 1.2: List all legislation, policies and/or guidelines for the proposed access roads and watercourse crossings for the authorised Iziduli Emoyeni Wind Energy Facility

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
National Legislation			
National Environmental Management Act (Act No. 107 of 1998)	<p>EIA Regulations have been promulgated in terms of Chapter 5. Activities which may not commence without an environmental authorisation are identified within these Regulations.</p> <p>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 (the decision-maker) charged by NEMA with granting of the relevant environmental authorisation.</p> <p>In terms of the NEMA EIA Regulations a Basic Assessment Process is required to be undertaken for the proposed Project.</p>	» Eastern Cape DEDEAT	» The listed activities triggered by the proposed project have been identified and assessed. An application has been lodged with the Eastern Cape DEDEAT. The Final Basic Assessment Report is to be submitted to the Eastern Cape DEDEAT for review and decision making.
National Environmental Management Act (Act No. 107 of 1998)	<p>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 a project is avoided, stopped or minimised.</p> <p>In terms of NEMA, it has become the legal duty of a project proponent to consider a project holistically, and to consider the</p>	» Eastern Cape DEDEAT	<p>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.</p> <p>The implementation of mitigation measures are included as part of the EMPr and will continue to apply throughout the life cycle of</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
	cumulative effect of a variety of impacts.		the project.
Environment Conservation Act (Act No 73 of 1989)	<p>In terms of section 25 of the ECA, the national noise-control regulations (GN R154 in Government Gazette No. 13717 dated 10 January 1992) were promulgated. The NCRs were revised under Government Notice Number R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations.</p> <p>» 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 Free State, Western Cape and Gauteng provinces, but the Eastern Cape province have not yet adopted provincial regulations in this regard and Allows the Minister of Environmental Affairs to make regulations regarding noise, among other concerns.</p>	<p>» Eastern Cape DEDEAT</p> <p>» Blue Crane Route Local Municipality</p>	<p>» There is no requirement for a noise permit in terms of the legislation.</p> <p>» Any noisy activities carried out during the construction phase that could present an intrusion impact to the local community should be limited to 6:00am to 6:00pm Monday – Saturday (excluding public holidays).</p> <p>» Should these specific activities need to be undertaken outside of these times, the surrounding communities will need to be notified as well as the DEDEAT and the Local Municipality.</p>
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	<p>» In terms of the Biodiversity Act, the developer has a responsibility for:</p> <p>* The conservation of endangered ecosystems and restriction of activities according to the categorisation of the area (not just by listed activity as specified in the EIA regulations).</p>	<p>» Eastern Cape DEDEAT</p>	<p>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.</p> <p>An ecological and aquatic impact assessment study has</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
	<ul style="list-style-type: none"> * The application of appropriate environmental management tools to ensure integrated environmental management of activities. * Limit further loss of biodiversity and conserve endangered ecosystems. » In terms of GNR 1477 of 2009: Draft National List of Threatened Ecosystems published under S52(1)(a) of the Act provides for the listing of threatened or protected ecosystems based on national criteria. The list of threatened terrestrial ecosystems supersedes the information regarding terrestrial ecosystem status in the National Spatial Biodiversity Assessment (2011). » GNR1187 Amendment of Critically Endangered, Endangered, Vulnerable and Protected Species List published under S56(1) of the Act. 		<p>been undertaken as part of the Basic Assessment process (refer to Appendix D1). As such the potential occurrence of critically endangered, endangered, vulnerable, and protected species and the potential for them to be affected has been considered.</p> <p>A permit may be required should any listed plant species be disturbed or destroyed as a result of the proposed project.</p>
<p>National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)</p>	<p>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. To set standards for waste management on the project</p> <p>The Minister may by notice in the Gazette</p>	<p>» Eastern Cape DEDEAT</p>	<ul style="list-style-type: none"> » 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 is required to be undertaken in accordance with the requirements of the Act, (GN

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
	<p>publish a list of waste management activities that have, or are likely to have, a detrimental effect on the environment.</p> <p>In terms of the regulations published in terms of this Act (GN 921 of 29 November 2013), a Basic Assessment or Environmental Impact Assessment is required to be undertaken for identified listed activities.</p> <p>Any person who stores waste must at least take steps, unless otherwise provided by this Act, to ensure that</p> <p>(a) The containers in which any waste is stored, are intact and not corroded or in any other way rendered unfit for the safe storage of waste;</p> <p>(b) Adequate measures are taken to prevent accidental spillage or leaking;</p> <p>(c) The waste cannot be blown away;</p> <p>(d) Nuisances such as odour, visual impacts and breeding of vectors do not arise; and</p> <p>(e) Pollution of the environment and harm to health are prevented.</p>		<p>R926, of November 2013) and as detailed in the EMPr (refer to Appendix F).</p> <p>» The volumes of waste to be generated and stored on the site during construction of the road will not require a waste license (provided these remain below the prescribed thresholds).</p>
<p>National Environmental Management: Air Quality Act (Act No. 39 of 2004)</p>	<p>» Measures in respect of dust control (S32) and National Dust Control Regulations of November 2013.</p> <p>» Measures to control noise (S34) - no regulations promulgated yet.</p> <p>» The Act provides that an air quality officer may require any person to submit</p>	<p>» Eastern Cape DEDEAT</p>	<p>No permitting or licensing requirements arise from this legislation for the proposed project.</p> <p>Dust Control Regulations describe the measures for control and</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
	<p>an atmospheric impact report if there is reasonable suspicion that the person has failed to comply with the Act.</p>		<p>monitoring of dust, including penalties. These regulations might be applicable during the construction phase of the project. Dust management have also been accounted for in the EMPr (see Appendix F)</p>
<p>National Water Act (Act No. 36 of 1998)</p>	<ul style="list-style-type: none"> » Water uses under Section 21 of the Act must be licensed, unless such water use falls into one of the categories listed in S22 of the Act or falls under the general authorisation (and then registration of the water use is required). » Consumptive water uses may include the taking of water from a water resource and storage - Sections 21a and b. » Non-consumptive water uses may include impeding or diverting of flow in a water course - Section 21c; and altering of bed, banks or characteristics of a watercourse - Section 21i. » In terms of S19, 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. 	<ul style="list-style-type: none"> » Department of Water and Sanitation (DWS) 	<p>A water use license (WUL) is required in terms of sections 21(c) and 21 (i) of the National Water Act, if wetlands or drainage lines are impacted on, or the regulated area of a watercourse (being the riparian zone or the 1:100yr floodline whichever is greatest).</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
<p>National Heritage Resources Act (Act No. 25 of 1999)</p>	<p>Section 38 states that Heritage Impact Assessments (HIAs) are required for certain kinds of development including</p> <ul style="list-style-type: none"> » the construction of a road, power line, pipeline, canal or other similar linear development or barrier exceeding 300 m in length; and » any development or other activity which will change the character of a site exceeding 5000m² in extent. <p>The relevant Heritage Resources Authority must be notified of developments such as linear developments (such as roads and power lines), bridges exceeding 50m, or any development or other activity which will change the character of a site exceeding 5000m²; or the re-zoning of a site exceeding 10 000m² in extent. This notification must be provided in the early stages of initiating the development, and details regarding the location, nature and extent of the proposed development must be provided.</p> <p>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 section 38. In such cases only those components not addressed by the EIA should be covered by the heritage component.</p>	<ul style="list-style-type: none"> » South African Heritage Resources Agency (SAHRA) » Eastern Cape Provincial Heritage Resources Agency (ECPHRA) 	<p>A permit may be required should heritage sites be unearthed on site during the construction phase.</p> <p>The relevant mitigation measures for the protection of heritage resources are included in the EMPr (refer to Appendix F).</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
National Forests Act (Act No. 84 of 1998)	<p>Protected trees: According to this act, the Minister may declare a tree, group of trees, woodland or a species of trees as protected. The prohibitions provide that 'no person may cut, damage, disturb, destroy or remove any protected tree, or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister'.</p> <p>Forests: Prohibits the destruction of indigenous trees in any natural forest without a licence.</p>	<ul style="list-style-type: none"> » Department of Agriculture, Forestry and Fisheries » Eastern Cape DEDEAT 	<p>A permit or license is required for the destruction of protected tree species and/or indigenous tree species within a natural forest.</p> <p>No protected tree species and/or indigenous tree species are likely to occur on site.</p>
Hazardous Substances Act (Act No 15 of 1973)	<p>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.</p> <ul style="list-style-type: none"> » Group I and II: any substance or mixture of a substance that might by reason of its toxic, corrosive etc., nature or 	<ul style="list-style-type: none"> » Department of Health. 	<p>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.</p>

Legislation	Applicable Requirements	Relevant Authority	Compliance requirements
	<p>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;</p> <ul style="list-style-type: none"> » Group IV: any electronic product; » Group V: any radioactive material. <p>The use, conveyance or storage of any hazardous substance (such as distillate fuel) is prohibited without an appropriate license being in force.</p>		
Provincial Legislation			
Nature Conservation Ordinance (Act No. 19 of 1974)	<ul style="list-style-type: none"> » Article 63 prohibits the picking of certain fauna (including cutting, chopping, taking, and gathering, uprooting, damaging, or destroying). » Schedule 3 lists endangered flora and Schedule 4 lists protected flora. » Articles 26 to 47 regulate the use of wild animals. 	» Eastern Cape DEDEAT	Permitting or licensing requirements may arise from this legislation for the proposed activities to be undertaken for the proposed project.

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	<input type="checkbox"/>
-----	--------------------------

If yes, what estimated quantity will be produced per month?

Unknown at this stage. Minimal waste is expected to be generated by the activity and can be managed effectively through the management measures included in the EMPr (refer to Appendix F).

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

An authorised contractor will be appointed by the proponent to remove all waste generated on the project site to be disposed of at a registered landfill site.
--

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

The solid waste generated during the construction phase will be disposed of at authorised registered landfill site within the surrounding areas of Blue Crane Municipality or at the nearest registered site.

Will the activity produce solid waste during its operational phase?

<input type="checkbox"/>	NO
--------------------------	----

If yes, what estimated quantity will be produced per month?

m ³

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

--

Where will the solid waste be disposed 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 relevant legislation?

<input type="checkbox"/>	NO
--------------------------	----

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

<input type="checkbox"/>	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.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

<input type="checkbox"/>	NO
--------------------------	----

If yes, what estimated quantity will be produced per month?

m³

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:

Not applicable

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

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 emissions in terms of type and concentration:

During the construction phase, it is expected that there will be short term dust generation and emissions from vehicles and machinery. However, the dust and emissions will have medium- to short -term duration and have limited impact in terms of extent and severity. Appropriate dust suppression measures (as detailed in the project EMPr and/or determined by the Contractor based on site specific conditions) must be implemented to reduce the impacts. It is recommended that construction vehicles be serviced regularly and be kept in good mechanical condition to minimise possible exhaust emissions. In this regard the EMPr includes the relevant mitigation measures (refer to **Appendix F**).

11(d) 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:

Noise may be generated by vehicular movement during construction, but would be insignificant and would not exceed acceptable limits.

12. 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
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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:

litres

Does the activity require a water use permit from the Department of Water Affairs?

YES

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted⁸.

13. ENERGY EFFICIENCY

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

This activity will not use power/energy.

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

This activity will not use power/energy.

⁸ In Quaternary Drainage Regions Q92F and Q91A this activity is authorised under the General Authorisation issued under the NWA in GN R119 in *Government Gazette* 32805 of 18 December 2009, as amended, and it won't take place within a 500m radius of the boundary of any wetland. Therefore the water use is only required to be registered with DWA.

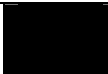
SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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 C and indicate the area, which is covered by each copy No. on the Site Plan.

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

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

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

If YES, please complete the specialist declaration form for each specialist thus appointed:

All specialist reports must be contained in **Appendix D**.

1. GRADIENT OF THE SITE

The proposed access roads⁹ and the four identified watercourse crossings are within areas similar in terms of gradient. Therefore the section below is applicable to all activities within the authorised Iziduli Wind Farm development footprint.

Indicate the general gradient of the site.

Alternative S1:

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
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Alternative S2 (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
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Alternative S3 (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
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2. LOCATION IN LANDSCAPE

⁹ Access roads within the wind farm development footprint.

The proposed access roads and the four identified watercourse crossings are located within a similar location within the landscape. Therefore the section below is applicable to all activities within the authorised Iziduli Wind Farm development footprint.

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

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

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Watercourse crossings:

The four identified water crossings are located within a similar area in terms of groundwater, soil and geological stability of the site. Therefore the section below is applicable to the all four watercourse crossings within the authorised Iziduli Emoyeni Wind Farm development footprint.

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	NO	YES NO	YES NO
Dolomite, sinkhole or doline areas	NO	YES NO	YES NO
Seasonally wet soils (often close to water bodies)	YES	YES NO	YES NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES NO	YES NO
Dispersive soils (soils that dissolve in water)	YES	YES NO	YES NO
Soils with high clay content (clay fraction more than 40%)	NO	YES NO	YES NO
Any other unstable soil or geological feature	YES	YES NO	YES NO

An area sensitive to erosion

YES		YES	NO	YES	NO
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Access roads:

The new and existing access roads are located within a similar area in terms of groundwater, soil and geological stability across the site. Therefore the section below is applicable to the access roads.

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	NO	YES NO	YES NO
Dolomite, sinkhole or doline areas	NO	YES NO	YES NO
Seasonally wet soils (often close to water bodies)	YES	YES NO	YES NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES NO	YES NO
Dispersive soils (soils that dissolve in water)	YES	YES NO	YES NO
Soils with high clay content (clay fraction more than 40%)	NO	YES NO	YES NO
Any other unstable soil or geological feature	YES	YES NO	YES NO
An area sensitive to erosion	YES	YES NO	YES 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

The access roads and the four identified watercourse crossings are within areas similar in terms of groundcover. Therefore the section below is applicable to all activities within the authorised Iziduli Emoyeni Wind Farm development footprint.

Access roads and watercourse crossings:

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition ^E

4.2 Natural veld – scattered aliens ^E

4.3 Natural veld with heavy alien infestation ^E

4.4 Veld dominated by alien species ^E

4.5 Gardens

4.6 Sport field

4.7 Cultivated land

4.8 Paved surface

4.9 Building or other structure

4.10 Bare soil

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. An ecological and aquatic impact assessment has been undertaken for the site (refer to **Appendix D1**).

The authorised Iziduli Emoyeni Wind Farm site falls within two vegetation types namely (refer to **Figure 4.1**):

- » Bedford Dry Grassland is considered to be Least Threatened, with 1% conserved of a target of 23% and 3% transformed (Mucina et al., 2006). This vegetation type is found on the gently undulating plains south of the Winterberg Mountains from Somerset East in the west to Fort Beaufort in the east. It is an open, dry grassland interspersed with Acacia karroo woodland, especially along drainage lines. The grassland is relatively short and contains a dwarf shrubby component of karroid origin. This is the most widespread vegetation type within the study area and occurs on all the farm portions under assessment.
- » Great Fish Thicket is considered to be Least Threatened, with 11% conserved of a target of 19% and 4% transformed (Hoare et al. 2006). This vegetation type occurs mainly in the lower Great Fish River and Keiskamma River valleys, extending up the Great Fish River to Cookhouse and into the southern-most part of the Cradock District. It is found on the steep slopes of deeply dissected rivers. The vegetation is a short, medium or tall thicket. Woody trees and shrubs and succulents are common to dominant and

there are many spinescent shrubs. This vegetation type is found along the steep slopes on the western side of the study area overlooking the Great Fish River and is the dominant vegetation type in at least one of the farm portions under assessment.

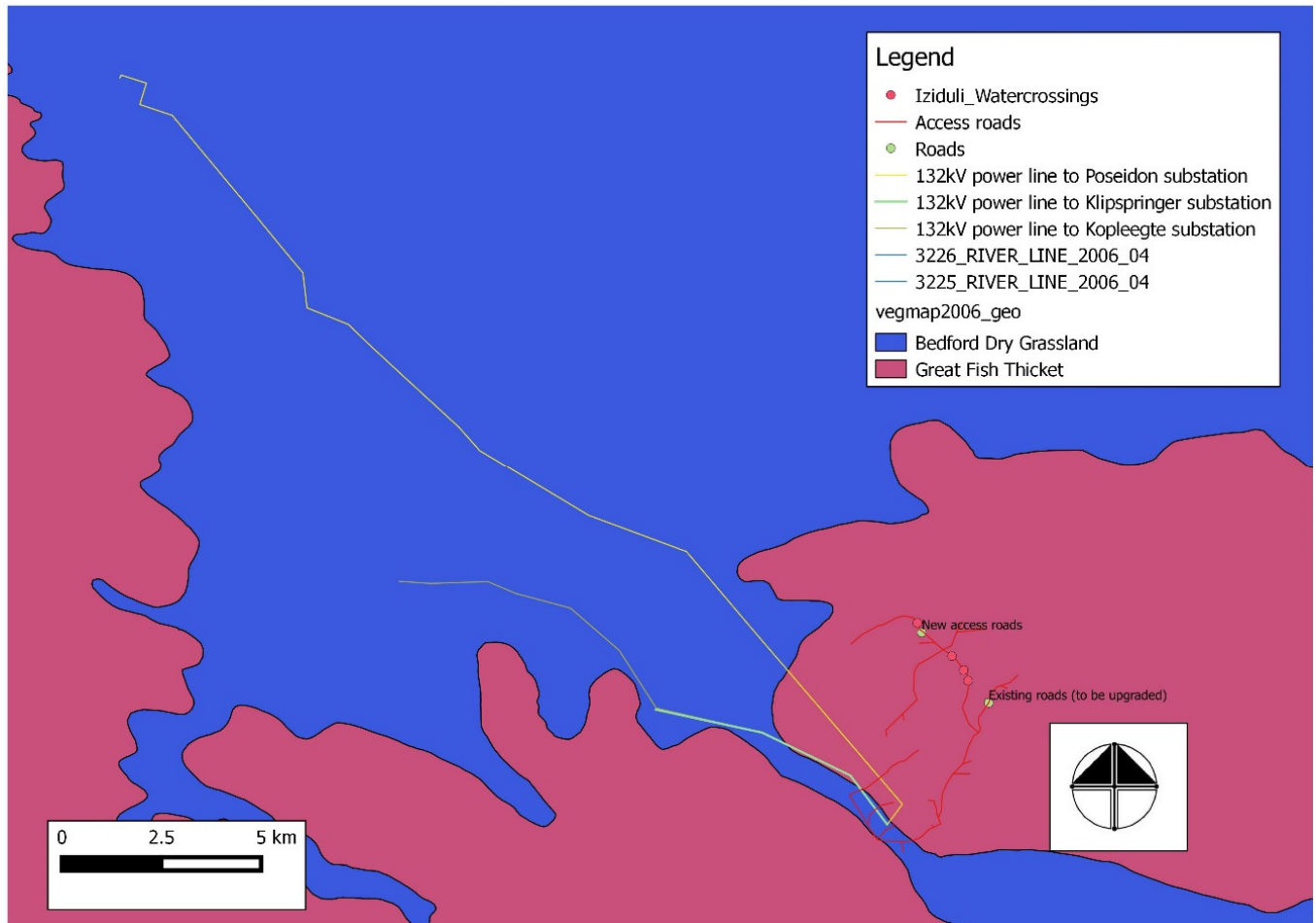


Figure 4.1: Vegetation types within the project site and surrounding area.

5. LAND USE CHARACTER OF SURROUNDING AREA

The access roads and the four identified watercourse crossings are within areas similar in terms of land use character of the surrounding area. Therefore the section below is applicable to all activities within the authorised Iziduli Emoyeni Wind Farm development footprint.

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:

Access roads and watercourse crossings:

5.1 Natural area

- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial ^{AN}
- 5.9 Heavy industrial ^{AN}
- 5.10 Power station
- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam^A
- 5.14 Quarry, sand or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant^A
- 5.22 Train station or shunting yard ^N
- 5.23 Railway line ^N
- 5.24 Major road (4 lanes or more) ^N
- 5.25 Airport ^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station ^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation

5.33 Agriculture

5.34 River, stream or wetland

- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site

5.42 Other land uses (describe)

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

Not applicable.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

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 palaeontological sites, on or close (within 20m) to the site?

NO

If YES, explain:

A heritage impact assessment was undertaken as part of the EIA process for the Iziduli Emoyeni Wind Farm (previously known as the Amakhala Emoyeni Wind Farm) and a subsequent heritage walkthrough survey was conducted. The assessment included the footprint of the wind farm and therefore also the footprint of the access roads and watercourse crossings. The following was concluded, and is relevant to the Iziduli Emoyeni Wind Farm development footprint within which the access road and watercourse crossings are proposed:

- » No significant sites/materials were observed within the development footprint. Only one historical structure, a dry packed stone kraal was observed within the Msenge Emoyeni Wind Farm site (north east of this study area). It is not affected by this development.
- » Apart from a few isolated stone tools no significant sites/materials were observed, but a farm labourer settlement that consists of three small houses was observed some 40 metres east of the existing power within the authorised Iziduli Wind Farm. Two of the dwellings, one square and the other round, were built from local flat stones and the walls were plastered with clay/mud and must be older than 60 years. These two stone houses are significant examples of the distinct architectural characteristic of the region and represent the shared and combined heritage skills of all the people of the region (European farmers, KhoiSan and Bantu speakers) in the past and must be conserved and protected. The third house, which may be younger than the stone houses, was built of red clay sun-baked bricks. Refuse dumps were observed and there may be graves in the immediate vicinity of the settlement. The settlement must be regarded as a no-go area and fenced-off before construction starts.

The majority of the historical built environment, graveyards and other features are concentrated at settlements along the main gravel roads and in the valleys and these will not be impacted on by the proposed access roads and the four watercourse crossings.

If uncertain, conduct a specialist investigation by a recognised specialist in the field 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?	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made.

Contents of advertisements and notices were drafted as stipulated above. Refer to **Appendix E1**.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

An advertisement was placed in one local newspaper, The Somerset Budget, informing the public of the project, the Basic Assessment process and the 30-day review period of the Basic Assessment Report on 11 January 2018. In addition, A2 site notices were placed at the entrance of the site on the 20th October 2017 (i.e. Remainder of the Farm Brakkefonteyn 218) as well as on the boundary fence of each affected property (refer to **Appendix E1** for proof of placement of the advertisement and site notices).

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw

any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

No public meeting were held due to the scale and nature of the project, the fact that this project has previously been authorised and that the project forms part of a larger project for which an extensive public participation process was undertaken. Impacted and adjacent landowners were consulted telephonically prior to the release of the Basic Assessment Report. No objections were made to the proposed activities (refer to **Appendix E2** for records of telephonic conversations). Interested and Affected Parties (I&APs) have been invited to submit written comment on the Basic Assessment Report during the 30-day review period. In addition, follow-up consultation (written and telephonic) will take place during the review period of the Basic Assessment Report.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application 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 this application. The comments and response report must be attached under Appendix E.

No comments have been received to date. All comments received during the 30-day review period will be included in **Appendix E5** of this report.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

Organisation	Contact Person	Designation	Contact Details
Blue Crane Route Local Municipality	Thabiso Klaas	Municipal Manager	Tel: 042-243-6402 Address: PO Box 21, Somerset East, 5850
Blue Crane Route Local Municipality	Mpumelele Steve Kwatsha	Ward Councillor (Ward 1)	Tel: 042 243 6400 Address: PO Box 21, Somerset East, 5850
Department of Agriculture, Forestry and Fisheries	Mashudu Marubini	Delegate to the Minister (Act 70 of 1970)	Tel: 012-319-7619 Address: Private Bag X120, Pretoria, 0001
Department of Water and Sanitation	Marisa Bloem	Water Use Authorisation Section	Tel: 041-501-0717 Address: Private Bag X6041, Port Elizabeth, 6000
Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	Alan Southwood	Environmental Officer Specialised Production	Tel: 041-508-5813 Address: Private Bag X5001, Greenacres, 6057
Eastern Cape Department of Rural Development & Agrarian Reform	Thembani Nyokana	Sarah Baartman District Director: Western District	Tel: 041-402-2746 Address: 9 Somels Road, Sydenham, 6001
Eastern Cape Provincial Heritage Resources Authority (EPHRA)	Sello Mokhanya	Heritage Officer	Tel: 043-745-0888 Address: Corner Scholl and Amalinda Drive, East London, 5247
Eskom Holdings SOC Ltd	George Vokwana	Land Development Manager: Southern Region	Tel: 043-703-2399 Address: Cnr Bonza Bay & Quenera Drive Beacon Bay, 5205, East London
Sarah Baartman District Municipality	Ted Pillay	Municipal Manager	Tel: 041-508-7114 Address: PO Box 318, Port Elizabeth, 6000

List of authorities from whom comments have been received:

No written comments have been received from authorities to date. All comments received will be incorporated into the Basic Assessment report to be submitted to the Department for decision-making.

7. CONSULTATION WITH OTHER STAKEHOLDERS

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

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

No comments or objections have been received to date. Copies of all correspondence and telephonic discussions held are included in **Appendix E**.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, 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. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

From telephonic consultation undertaken, no objections have been raised. All comments and issues raised during the 30-day review period of the Basic Assessment Report will be included and addressed in the final Basic Assessment Report and the comments and response report (**Appendix E6**) to be submitted to the competent authority.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

All comments and issues raised during the 30-day review period of the Basic Assessment Report will be included and addressed in the final Basic Assessment Report and the Comments and response report to be submitted to the competent authority.

2. 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

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) 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.

The following criteria were considered within the assessment of potential environmental impacts associated with this proposed project:

- » The **nature**, a description of what causes the effect, what will be affected, and how it will be affected.
- » The **extent**, wherein it is indicated whether the impact will be local (limited to the immediate area or site of development), regional, national or international. A score of between 1 and 5 is assigned as appropriate (with a score of 1 being low and a score of 5 being high).
- » The **duration**, wherein it is indicated whether:
 - * The lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
 - * The lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
 - * Medium-term (5–15 years) – assigned a score of 3;
 - * Long term (> 15 years) - assigned a score of 4; or;
 - * Permanent - assigned a score of 5.

- » The **magnitude**, quantified on a scale from 0-10, where a score is assigned:
 - * 0 is small and will have no effect on the environment;
 - * 2 is minor and will not result in an impact on processes;
 - * 4 is low and will cause a slight impact on processes;
 - * 6 is moderate and will result in processes continuing but in a modified way;
 - * 8 is high (processes are altered to the extent that they temporarily cease); and
 - * 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- » The **probability** of occurrence, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale, and a score assigned:
 - * Assigned a score of 1–5, where 1 is very improbable (probably will not happen);
 - * Assigned a score of 2 is improbable (some possibility, but low likelihood);
 - * Assigned a score of 3 is probable (distinct possibility);
 - * Assigned a score of 4 is highly probable (most likely); and
 - * Assigned a score of 5 is definite (impact will occur regardless of any prevention measures).
- » The **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high.
- » The **status**, which is described as positive, negative or neutral.
- » The degree to which the impact can be reversed.
- » The degree to which the impact may cause irreplaceable loss of resources.
- » The degree to which the impact can be mitigated.

The **significance** is determined by combining the criteria in the following formula:

$S = (E+D+M) P$; where

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The **significance** weightings for each potential impact are as follows:

- » **< 30 points**: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- » **30-60 points**: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- » **> 60 points**: High (i.e. where the impact must have an influence on the decision process to develop in the area).

a) Planning and/or Design Phase

Activities associated with the design and pre-construction phase pertains mostly to feasibility assessments undertaken at a desktop level. Geotechnical surveys are usually undertaken in this phase and could result in impacts mainly associated with disturbance of vegetation and soils at localised areas where the development activities are said to commence.

b) Construction and Operation Phase

Table 4.1: Assessment of access roads

The table below assesses both the new access roads and widening of the existing on-site access roads to a width of 9m, and due to the similarities of the impacts across the site these are assessed as one entity.

Activity	Impact summary	Significance (with mitigation)	Proposed mitigation
Alternative 1 (Technically preferred alternative)			
Direct Impacts			
Construction and widening of access roads Applicable Listed activity included for the construction of access road includes: GN 327, Activity 12(ii)(a)(c) and Activity 24 (ii), GN 324, Activity	<u>Ecology</u> » Destruction/permanent loss of individuals of rare or protected plant species » Loss of terrestrial habitat within indigenous natural vegetation types » Establishment and spread of declared weeds and alien invader plants.	Low	<ul style="list-style-type: none"> » Keep disturbance of indigenous vegetation to a minimum. » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established. » The final development footprint/alignments must be surveyed as part of a search and rescue programme (plants, small mammals and reptiles) before commencement. These species should be translocated to available habitat adjacent to the site.

4(a)(i)(ee) and Activity 12(a)(ii)	<p><u>Soil</u></p> <ul style="list-style-type: none"> » Loss of topsoil » Soil degradation » Soil erosion 	Low	<ul style="list-style-type: none"> » Minimise disturbance areas. » Implement effective erosion control measures.
	Indirect Impacts		
	<p><u>Ecology</u></p> <ul style="list-style-type: none"> » Increased runoff due to removal of vegetation » Habitat fragmentation <p><u>Soil</u></p> <ul style="list-style-type: none"> » Localised movement of sediment <p><u>Heritage</u></p> <ul style="list-style-type: none"> » Loss of archaeological and cultural sites » Depletion of archaeological record of the area. 	Low	<ul style="list-style-type: none"> » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants on site immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established.
	Cumulative Impacts		
<p><u>Ecology</u></p> <ul style="list-style-type: none"> » Loss of habitat/corridors (CBA) » Increased soil erosion » Increased alien invasions <p><u>Aquatic</u></p> <ul style="list-style-type: none"> » Downstream alteration of hydrological regimes due to the increased run-off from the area. However due to low mean annual runoff within the region this is not anticipated due to the nature of the development together with the proposed layout 	Low	<ul style="list-style-type: none"> » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants on site immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established. » During the operational phase, monitor culverts to determine if erosion issues arise and if any erosion control if required. » Any stormwater within the site must be handled in a suitable manner, i.e. trap sediments, and reduce flow velocities. 	

	<p>» The increase in surface run-off velocities and the reduction in the potential for groundwater infiltration is likely to occur, considering that the site is near the main drainage channels and however the annual rainfall figures are low and this impact is not anticipated.</p> <p>» Downstream erosion and sedimentation of the downstream systems and farming operations. During flood events, any unstable banks (eroded areas) and sediment bars (sedimentation downstream). However due to low mean annual runoff within the region this is not anticipated due to the nature of the development together with the proposed layout</p> <p><u>Soil</u></p> <p>» Temporary increased run-off during the construction of roads</p> <p><u>Heritage</u></p> <p>» Archaeological and cultural sites are non-renewable and impact on any archaeological context or material will be permanent and destructive. Multiple developments in an area could result in cumulative impacts on</p>		
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	this resource.		
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Table4.2: Assessment of the watercourse crossings 1, 2, 3 and 4

The table below assesses the four watercourse crossings (the crossings are not alternatives to each other but rather to be regarded as one entity and are assessed accordingly due to the similarities of their impact).

Activity	Impact summary	Significance	Proposed mitigation
Construction of watercourse crossing structures (culverts, widening of roads over a watercourse). Applicable Listed activity includes: GN 327, Activity 12 (ii) (a) (c), and 19	<p><u>Ecology</u></p> <ul style="list-style-type: none"> » Destruction/permanent loss of individuals of threatened plant species » Loss of habitat within indigenous natural vegetation types » Establishment and spread of declared weeds and alien invader plants 	<p>Low</p>	<p><i>Direct Impacts:</i></p> <ul style="list-style-type: none"> » Keep disturbance of indigenous vegetation to a minimum. » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established
	<p><u>Aquatic</u></p> <ul style="list-style-type: none"> » Loss of riparian systems » Impact on riparian systems through the possible increase in surface water runoff on riparian form and function » Increase in sedimentation and erosion within the development footprint » Impact on localized surface water quality » Potential loss of wetland habitat 		<p>Low</p>

Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> » Strict management of potential sources of pollution (e.g. litter, hydrocarbons from vehicles & machinery, cement during construction, etc.). » Containment of all contaminated water by means of careful run-off management on the development site. » Implement strict controls over the behaviour of construction workers in terms of activities taking place in watercourse areas. » Working protocols incorporating pollution control measures (including approved method statements by the contractor) should be clearly set out in the Construction Environmental Management Programme (CEMP) for the project and strictly enforced.
	<p><u>Soil</u></p> <ul style="list-style-type: none"> » Loss of topsoil » Soil degradation » Soil erosion 	Low	<ul style="list-style-type: none"> » Minimise disturbance areas. » Rehabilitate vegetation once construction is completed in an area. » Implement effective erosion control measures.
Indirect Impacts			
	<p><u>Ecology</u></p> <ul style="list-style-type: none"> » Increased runoff due to removal of vegetation <p><u>Aquatic</u></p> <ul style="list-style-type: none"> » Possible impact on the remaining catchment due to changes in run-off characteristics within the development site. » During flood events, any unstable banks (eroded areas) and sediment bars (sedimentation downstream) already deposited downstream. However due to 	Low	<ul style="list-style-type: none"> » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants on site immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established. » During the operational phase, monitor culverts to determine if erosion issues arise and if any erosion control is required. » Any stormwater within the site must be handled in a suitable manner, i.e. trap sediments, and reduce flow velocities.

Activity	Impact summary	Significance	Proposed mitigation
	<p>low mean annual runoff within the region this is not anticipated due to the nature of the development together with the proposed layout.</p> <p><u>Soil</u></p> <ul style="list-style-type: none"> » Localised movement of sediment 		
Cumulative Impacts			
	<p><u>Ecology</u></p> <ul style="list-style-type: none"> » Loss of habitat » Increased soil erosion » Increased alien invasions <p><u>Soil</u></p> <ul style="list-style-type: none"> » Temporary increased run-off during the construction of roads <p><u>Heritage</u></p> <ul style="list-style-type: none"> » Archaeological and cultural sites are non-renewable and impact on any archaeological context or material will be permanent and destructive. Multiple developments in an area could result in cumulative impacts on this resource. 	Low	<ul style="list-style-type: none"> » Rehabilitate disturbed areas as quickly as possible. » Do not translocate soil stockpiles from areas with alien plants. » Control any alien plants on site immediately to avoid establishment of a soil seed bank that would take decades to remove. » Establish an ongoing monitoring programme to detect and quantify any aliens that may become established. » During the operational phase, monitor culverts to determine if erosion issues arise and if any erosion control is required. » Any stormwater within the site must be handled in a suitable manner, i.e. trap sediments, and reduce flow velocities.

c) Decommissioning Phase

The access roads and watercourse crossings would only be decommissioned in the event that the infrastructure is no longer required. Maintenance of the private access road to the wind farm will no longer be the responsibility of the Developer once the wind farm has reached the end of its lifespan. The project is expected to have a life span of more than 30 years. At the time where decommissioning would be applicable, all activities would need to comply with the legislation relevant at the time.

No-go Alternative

This is the option of not constructing the proposed access road and watercourse crossings infrastructure for the authorised Iziduli Emoyeni Wind Farm. This option will result in limited or no impacts occurring on the environment due to the proposed activities.

The proposed activities would facilitate the construction of supporting structures (i.e. access roads to a width of 9m) to the authorised Iziduli Emoyeni Wind Farm. The option of not establishing formalised structures at the identified watercourse crossings will hinder the best practicable development of the wind farm. The activities are required to ensure the technical functionality of the authorised project and are expected to minimise environmental impacts in the long-term as 9m wide roads will be formalised and ensure off-road driving is not required, and watercourse crossings will be controlled, strengthened and maintained, thereby reducing the potential for erosion in these areas.

The no-go option would result in not establishing some of the wind turbines, connection to the grid and inaccessibility as a result of unavailability of access roads. This will impact on the technical feasibility of the authorised Iziduli Emoyeni Wind Farm, and may result in environmental impacts in the long term, specifically in terms of erosion potential along the roads. This could result in portions of the wind farm not being feasible to construct, which would present a lost opportunity in terms of the provision of additional clean energy to the electricity grid.

Negative impacts in this regard would include:

- » Loss of employment and business opportunities
- » Loss of the opportunity to develop a climate friendly development
- » Loss of the potential for pollution reduction in the power generation process (through use of a renewable resource as opposed to a fossil fuel)

The negative impacts associated with the no go options are considered to outweigh the positive impacts of implementing the activity. Therefore, the no-go alternative is not preferred.

3. 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.

Alternative A (preferred alternative)

Based on the outcome of this Basic Assessment, the following conclusions are drawn regarding the construction of and widening of access road to a width of 9m and the four watercourse crossings within the authorised Iziduli Emoyeni Wind Energy Facility.

- » Terrestrial Ecology: The proposed Project falls within the Bedford Dry Grassland and Great Fish Thicket (both classified as Least Threatened). The vegetation types have been categorised according to their conservation status which is, in turn, assessed according to degree of transformation. According to the Eastern Cape Biodiversity Conservation Plan, which has been adopted by the DEDEAT, a small section of the project site fall within an aquatic CBA 2 and are on the boundary of a terrestrial CBA 2 Corridor 1. According to the Addo Biodiversity Plan, the site is also falls within an area classified as an ESA. Most of the study area is still in natural condition, although parts are degraded due to commercial livestock farming. Taking rates of transformation and conservation into account, which have already been used to classify all national vegetation types, none of the vegetation in the study area is considered to be threatened. Minimal vegetation clearing is expected for the proposed access road and watercourse crossings within the Iziduli Wind Farm, therefore the overall impact on vegetation and fauna will be Low.
- » Aquatic Systems: The overall impact of the watercourse crossings associated with the authorised Iziduli Emoyeni Wind Farm will have limited impact on the aquatic environment. No protected species or species of special concern (fauna or flora) were observed within the aquatic areas during the site visit. Therefore based on the site visit the significance of the impacts assessed for the aquatic systems after mitigation would be Low.
- » Heritage: The impacts to heritage resources by the proposed access road and watercourse crossings within the Iziduli Wind Farm are considered to be of Low significance as the heritage sites identified are located well outside of the proposed impact area.
- » Cumulative Impacts: The area is already characterised by wind energy facilities, therefore cumulative impacts from watercourse crossings and widening of the access roads is not expected to be significant. Cumulative impacts from the widening and formalisation of the existing watercourse crossings on the aquatic systems are considered to be low. The project may improve aquatic conditions during the formalisation of the existing watercourse crossings by improving flow regimes and erosion protection. Considering the nature and extent of the planned infrastructure, the contribution of this infrastructure to the cumulative impacts in the area are considered to be low and

acceptable.

The proposed access road layout for the Iziduli Wind Farm will have limited impact on the environment and watercourse crossing infrastructure. Therefore based on the site visit and assessment undertaken by both the EAP and the specialist consultants, the significance of the impacts assessed for ecology, aquatic, and heritage after mitigation would be low (refer to **Figure 3**). It is concluded that the project is acceptable from an environmental perspective and the Project should be issued authorisation to be developed as planned. This is in line with the conclusions drawn for the larger wind energy facility project which concluded that there were no environmental fatal flaws that should prevent the proposed wind energy facility and associated infrastructure from proceeding on the identified site, provided that the recommended mitigation and management measures are implemented.

No-go alternative (compulsory)

This is the option of not constructing the proposed access road and watercourse crossings infrastructure for the authorised Iziduli Emoyeni Wind Farm. This option will result in limited or no impacts occurring on the environment due to the proposed activities.

The proposed activities would facilitate the construction of supporting structures (i.e. access roads to a width of 9m) to the authorised Iziduli Emoyeni Wind Farm. The option of not establishing formalised structures at the identified watercourse crossings will hinder the best practicable development of the wind farm. The activities are required to ensure the technical functionality of the authorised project and are expected to minimise environmental impacts in the long-term as 9m wide roads will be formalised and ensure off-road driving is not required, and watercourse crossings will be controlled, strengthened and maintained, thereby reducing the potential for erosion in these areas.

The no-go option would result in not establishing some of the wind turbines, connection to the grid and inaccessibility as a result of unavailability of access roads. This will impact on the technical feasibility of the authorised Iziduli Emoyeni Wind Farm, and may result in environmental impacts in the long term, specifically in terms of erosion potential along the roads. This could result in portions of the wind farm not being feasible to construct, which would present a lost opportunity in terms of the provision of additional clean energy to the electricity grid.

The negative impacts associated with the no go option are considered to outweigh the positive impacts of implementing the activity. Therefore, the no-go alternative is not preferred.

SECTION E. RECOMMENDATIONS 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	
YES	

Is an EMPr attached?

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

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:

It is the conclusion of the Environmental Assessment Practitioner that the proposed access road and watercourse crossings are considered acceptable from an environmental perspective provided the recommended mitigation measures are implemented. Based on the nature and extent of the proposed project, the potential impacts associated with the proposed project can be mitigated to an acceptable level.

The following mitigation and management measures should be implemented:

- » A stormwater management and erosion control plan should be developed and implemented for the construction of access road and watercourse crossings within the Iziduli Wind Farm.
- » Suitable erosion protection must be installed along the new access roads and widening of the existing on-site access roads.
- » The Environmental Management Programme (EMPr) as contained within **Appendix F** of this report should form part of the contract with the Contractors appointed to construct and maintain the proposed project, and will be used to ensure compliance with environmental specifications and management measures. The implementation of this EMPr for all life cycle phases of the proposed project is considered to be the main key in achieving the appropriate environmental management standards as detailed for this project.
- » An Environmental Control Officer should be employed to ensure the implementation of the stormwater management and erosion control plan and the environmental monitoring programme. This ECO must be the same individual as that employed on the Iziduli Emoyeni Wind Farm.
- » Limit the removal of indigenous vegetation to the construction footprint and implement a rehabilitation plan as soon as cleared areas are available for planting and seeding with indigenous plants. Vegetation clearing should occur in parallel with the construction progress to minimise erosion and/or run-off.
- » Where feasible, construction activities on watercourses should take place during the drier seasons.
- » An alien plant control programme should be initiated as part of the development.

Applications for all other relevant and required permits required to be obtained by the developer must be submitted to the relevant regulating authorities if necessary.

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix A1: Locality Map

Appendix A2: Layout Map

Appendix A3: Environmental Sensitivity Map

Appendix A4: Formal Sensitive Areas (according to ECBCP)

Appendix A5: Formal Sensitive Areas (according to Addo Biodiversity Plan)

Appendix A6: Locality Map (with labelled access roads)

Appendix B: Photographs

Appendix C: Facility Illustration

Appendix D: Specialist Reports

Appendix D1: Ecology and Aquatic Impact Assessment

Appendix E: Public Participation Information

Appendix E1: Site Notices and Newspaper adverts

Appendix E2: Proof of Stakeholder Correspondence and Consultation

Appendix E3: Authority Consultation

Appendix E4: I&AP Database

Appendix E5: Comments Received

Appendix E6: Comments and Responses Report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix G1: EAP Declaration and Affirmation, Specialist Declaration

Appendix G2: Project Team CVs

Appendix G3: List of Coordinates

