SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT

for the

Proposed Development of the 240 MW Kaladokhwe Wind Energy Facility 3 and associated infrastructure near Nxuba (previously Cradock) in the Eastern Cape

FINAL SCOPING REPORT

November 2022

Prepared for:
Kaladokhwe Wind 3 (Pty) Ltd

Prepared by:
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Final Scoping Report: Scoping and Environmental Impact Assessment for the proposed development of the 240 MW Kaladokhwe Wind Energy Facility 3 and associated infrastructure, near Nxuba (previously Cradock) in the Eastern Cape

Purpose of this report:
The purpose of this Final Scoping Report is to:

- Present the details of and the need for the proposed project;
- Describe the affected environment at a sufficient level of detail based on scoping level specialist input to facilitate informed decision-making;
- Provide an overview of the Scoping and EIA Process being followed, including public consultation;
- Provide an overview of the potential positive and negative impacts of the proposed project on the environment;
- Provide recommendations to avoid or mitigate negative impacts and to enhance the positive benefits of the project; and
- Provide the Plan of Study for the EIA Phase for the proposed project.

The Draft Scoping Report was made available to all Interested and/or Affected Parties (I&APs), Organs of State and relevant stakeholders for a 30-day review period extending from 21 October 2022 to 21 November 2022, excluding public holidays. All comments submitted during the 30-day review have been incorporated in a detailed Comments and Responses Report, and addressed, as applicable and where relevant, and included with this Final Scoping Report. This Final Scoping Report has been submitted to the National Department of Forestry, Fisheries and the Environment (DFFE) for decision-making.

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Date: November 2022
DFFE Reference No: 14/12/16/3/2/2226
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### Key Changes Made from the Draft Scoping Report that was Issued for I&AP, Stakeholder and Organ of State Review from 21 October to 21 November 2022

<table>
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<th>Section of Report</th>
<th>Key Change</th>
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<tr>
<td>Scoping Report and Appendices</td>
<td>• The term “Draft Scoping Report” has been updated to “Final Scoping Report”, where applicable.</td>
</tr>
</tbody>
</table>
| Scoping Report – Executive Summary | • Updated Table A correcting the list of affected farm portions by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.  
• Updated Figure A with a revised locality map of the proposed WEF 1-3 project cluster with additional information provided in the map legend. |
| Scoping Report – Chapter 1 | • Updated Figure 1.1 with a revised locality map of the proposed WEF 1-3 project cluster with additional information provided in the map legend.  
• Updated the list of affected farm portions in Section 1 by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.  
• Updated Figure 1.2 providing a revised locality map of the proposed WEF 3 project showing turbine numbers and additional information in the map legend. |
| Scoping Report – Chapter 2 | • Updated Table 2.1 with additional information about the coordinates of the corner points of the preferred WEF project site.  
• Updated Figure 2.2 with a revised locality map of the proposed WEF 1-3 project cluster with additional information provided in the map legend.  
• Added Figure 2.3 which is a map showing the coordinate of the corner points of the proposed WEF 3 project site as was assessed during the Scoping Phase.  
• Added Table 2.2 in Section 2.1.2.4 with the coordinate points (i.e., start, middle and end points) of the proposed site access road off the R390 provincial tar road to the proposed WEF 3 project site. |
| Scoping Report – Chapter 3 | • Updated the list of affected farm portions in Section 3.1 by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.  
• Updated Figure 3.1 with a revised locality map of the proposed WEF 1-3 project cluster with additional information provided in the map legend.  
• Updated Figure 3.14 with a revised Aquatic and Terrestrial Biodiversity and Species Combined Sensitivity map of the proposed WEF 3 project site with additional information provided in the map legend.  
• Updated Figure 3.19 with a revised Aquatic and Terrestrial Biodiversity and Species Combined Sensitivity map of the proposed WEF 3 project site with additional information provided in the map legend.  
• Updated Figure 3.21 with a revised Bats (Wind) Combined Sensitivity map of the proposed WEF 3 project site with additional information provided in the map legend.  
• Updated Figure 3.24 with a revised Avifauna Combined Sensitivity map of the proposed WEF 3 project site with additional information provided in the map legend.  
• Added Figure 3.28 indicating the identified Visual Sensitivity within the proposed WEF 3 project site with additional information provided in the map legend.  
• Updated Figure 3.31 with a revised Noise Sensitivity Receptors map of the proposed WEF 3 project site with additional information provided in the map legend.  
• Updated Figure 3.35 with a revised Combined Environmental Sensitivity map of the proposed WEF 3 project site based on scoping level inputs received from the specialist team with additional information provided in the map legend. |
| Scoping Report – Chapter 4 | • Updated with additional information regarding the status and progress made on the Scoping Reports, the submission of the Application for Environmental Authorisation to the DFFE, as well as DFFE’s acknowledgment of receipt of the Scoping Reports, and the assignment of reference numbers for the Scoping and EIA projects.  
• Updated with details of the Public Participation Process undertaken thus far. |
**Scoping Report – Chapter 5**
- Updated the list of affected farm portions in Section 5.1.5.1 by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.
- Updated Section 5.1.6.2 by removing the reference to substation alternatives as each WEF will have two on-site substation hubs and no alternative locations have been assessed during the Scoping Phase.
- Updated Figure 5.5 with a revised preliminary combined environmental features map of the proposed WEF 3 project site with additional information provided in the map legend.
- Updated Figure 5.6 with a revised preliminary combined environmental sensitivity map of the proposed WEF 3 project site with additional information provided in the map legend.
- Added Figure 5.7 with a map showing the indicative road infrastructure layout planned for the proposed Kaladokhwe WEF 1-3 project sites, which will be subject to detailed specialist assessment during the EIA Phase. This map was included based on comments received from DFFE during the review of the Draft Scoping Report.
- Updated the list of affected farm portions in Section 5.3 by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.
- Updated Section 5.3 by removing the reference to substation alternatives as each WEF will have two on-site substation hubs and no alternative locations have been assessed during the Scoping Phase.

**Scoping Report – Chapter 7**
- Updated the list of affected farm portions in Section 7.7 by adding/correcting/removing property descriptions that are applicable to the proposed WEF 3 development.

**Comments and Responses Report**
- The comments and/or issues raised by stakeholders and Interested and Affected Parties (I&APs) following the release of the Draft Scoping Report for the 30-day comment period, extending from 21 October 2022 to 21 November 2022 (excluding public holidays), together with the responses from the Environmental Impact Assessment (EIA) project team were collated into a Comments and Responses Report that was compiled in terms of Annexure 1 of the DFFE comments letter (DFFE Reference No: 14/12/16/3/3/2/2226), and which was submitted separately from the main Final Scoping Report as per the requirements from the DFFE.

**Appendix C**
- Updated the database of I&APs, Stakeholders and Organs of State to reflect stages of consultation, commenting, as well as additions to the database.

**Appendix D**
- Updated with proof of placement of the newspaper advertisement for the release of the Draft Scoping Reports for comment (Appendix D.2).
- Added Appendix D.3 (Copies and Proof of Correspondence Sent to Stakeholders for the Release of the Draft Scoping Report for Comment); and Appendix D.4 (Correspondence received from Stakeholders during the 30-day review of the Draft Scoping Report).
F I N A L  S C O P I N G  R E P O R T :  S c o p i n g  a n d  E n v i r o n m e n t a l  I m p a c t  A s s e s s m e n t  f o r  t h e  p r o p o s e d  d e v e l o p m e n t  o f  t h e  2 4 0  M W  K a l a d o k h w e  W i n d  E n e r g y  F a c i l i t y  3  a n d  a s s o c i a t e d  i n f r a s t r u c t u r e ,  n e a r  N x u b a ( p r e v i o u s l y  C r a d o c k )  i n  t h e  E a s t e r n  C a p e

PROJECT OVERVIEW

Kaladokhwe Wind 3 (Pty) Ltd (hereinafter referred to as “the Project Applicant”) is proposing the development of a commercial Wind Energy Facility (WEF) and associated infrastructure approximately 20 km northeast of the town of Nxuba (previously Cradock) in the Eastern Cape Province in the Chris Hani District Municipality.

Two additional WEF’s are concurrently being considered on the surrounding properties and are assessed by way of separate impact assessment processes. These projects are known as Kaladokhwe WEF 1 and Kaladokhwe WEF 2. It is proposed that each WEF will have a contracted generation capacity of up to 240 MW.

The proposed Kaladokhwe WEF 3 will have a permanent development footprint of about 61 hectares, approximately 1.2% of the total assessed study area. This excludes access roads leading to the site. The proposed project will make use of wind technology to generate electricity from wind energy. Once a Power Purchase Agreement (PPA) is awarded, the proposed WEF will generate electricity for a minimum period of 20 years. The construction phase for the proposed project is expected to extend approximately 24-30 months.

The project details are provided in Table A below. It must be noted that this report only covers the proposed 240 MW Kaladokhwe Wind Energy Facility 3 (‘Kaladokhwe WEF 3’), as detailed below. Separate reports are provided for the remaining WEF projects.

Table A. Project Name, Applicant and the main Affected Farm Portions

<table>
<thead>
<tr>
<th>WEF Project Name</th>
<th>Project Applicant</th>
<th>Affected Farm Portions</th>
</tr>
</thead>
</table>
| Kaladokhwe WEF 3 | Kaladokhwe Wind 3 (Pty) Ltd | • Farm Ossen Kraal No. 40 / 1  
• Farm No. 150 / RE, 1, 3 (Ruigte Fontein)  
• Farm No. 168 / RE (De Bruins Requist)  
• Farm No. 165 / 1 (RE) (Gunsteling)  
• Farm No. 171 / 7 (Lange Hoek)  
• Farm No. 183 / RE (Lange Hoek)  
• Farm No. 166 / 1, 2  
• Farm No. 607 / RE (0) |

The proposed Kaladokhwe WEF 3, which can be accessed via an existing public road off the R61 provincial tar road connecting Nxuba (previously Cradock) and Tarkastad, will be located within the Inxuba Yethemba Local Municipality. The proposed Kaladokhwe WEF 1 and Kaladokhwe WEF 2 will be located within both the Inxuba Yethemba Local Municipality and the Enoch Mgijima Local Municipality.

The proposed project does not fall within any of the Renewable Energy Development Zones (REDZs), which were promulgated in Government Gazette 41445, Government Notice (GN) R114 on 16 February 2018. The proposed Kaladokhwe WEF 3 project site is located approximately 30 km away (at its closest point) from the Stormberg REDZ. In addition, the proposed Kaladokhwe WEF 3 project site is located approximately 2.5 km away (at its closest point) from the Eastern Strategic Transmission Corridor (as gazetted on 16 February 2018, GN R113). Therefore, the project’s proximity to the Stormberg REDZ and the Eastern Strategic Transmission Corridor supports the development of a large-scale renewable energy project at the proposed location. The proposed project is therefore linked to the national planning vision for large-scale wind and solar development in South Africa. As a result, a full Scoping and EIA Process in terms of Appendix 2 and 3...
of the 2014 NEMA EIA Regulations (as amended) is being undertaken for each of the three proposed WEFs with a 107-day decision-making timeframe, as opposed to a Basic Assessment Process and 57-day decision-making timeframe allowed for in the REDZs and strategic transmission corridors. The Competent Authority for this proposed project is the National Department of Forestry, Fisheries and the Environment (DFFE). An integrated Public Participation Process is being undertaken for the proposed project.

The Draft Scoping Report was released to all Interested and/or Affected Parties (I&APs), Organs of State and relevant stakeholders for a 30-day review period, extending from 21 October 2022 to 21 November 2022, excluding public holidays. All comments received during the 30-day review have been incorporated into a detailed Comments and Responses Report, and addressed, as applicable and where relevant, and has been included with the Final Scoping Report. The Final Scoping Report has been submitted to the DFFE, in accordance with Regulation 21 (1) of the 2014 NEMA EIA Regulations (as amended), for decision-making.

PROJECT LOCATION

The locality of the proposed Kaladokhwe WEF 3 project is shown in Figure A. The co-ordinates of the proposed project site are detailed in Chapter 2 of this Scoping Report.

PROJECT ENVIRONMENTAL IMPACT ASSESSMENT TEAM

In accordance with Regulation 12 (1) of the 2014 NEMA EIA Regulations (as amended), the Project Applicant has appointed the Council for Scientific and Industrial Research (CSIR) to undertake the required Scoping and EIA Process in order to determine the potential biophysical, social and economic impacts associated

Figure A. Locality Map of the Proposed Kaladokhwe WEF 1-3 Projects, near Nxuba (previously Cradock) in the Eastern Cape.
with undertaking the proposed development. The project team, including the relevant specialists, is indicated in Table B below.

### Table B. Project Team for the Kaladokhwe WEF 3 Scoping and EIA Process

<table>
<thead>
<tr>
<th>NAME</th>
<th>ORGANISATION</th>
<th>ROLE/STUDY TO BE UNDERTAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Management Services (CSIR)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul Lochner (Registered EAP (2019/745))</td>
<td>CSIR</td>
<td>Technical Advisor and Quality Assurance</td>
</tr>
<tr>
<td>Rohaida Abed (Registered EAP (2021/4067))</td>
<td>CSIR</td>
<td>Project Review</td>
</tr>
<tr>
<td>Lizande Kellerman (Pr.Sci.Nat.)</td>
<td>CSIR</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Suvasha Ramcharan</td>
<td>CSIR</td>
<td>Project Officer</td>
</tr>
<tr>
<td>Dhiveshni Moodley (Cand.Sci.Nat.)</td>
<td>CSIR</td>
<td>GIS Specialist</td>
</tr>
<tr>
<td><strong>Specialists</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johann Lanz (Pr.Sci.Nat.)</td>
<td>Private</td>
<td>Agriculture and Soils Compliance Statement</td>
</tr>
<tr>
<td>Jaco van der Walt</td>
<td>Beyond Heritage</td>
<td>Heritage Impact Assessment (Archaeology, Palaeontology and Cultural Landscape)</td>
</tr>
<tr>
<td>Jon Smallie</td>
<td>Wildskies Ecological Services</td>
<td>Avifauna Impact Assessment</td>
</tr>
<tr>
<td>Werner Marais</td>
<td>Animalia</td>
<td>Bat Impact Assessment</td>
</tr>
<tr>
<td>Gerhard Botha</td>
<td>Nkurenkuru Ecological and Biodiversity</td>
<td>Aquatic Biodiversity</td>
</tr>
<tr>
<td>Tarryn Martin and Amber Jackson</td>
<td>Biodiversity Africa</td>
<td>Terrestrial Biodiversity and Species</td>
</tr>
<tr>
<td>Morné De Jager</td>
<td>Enviro Acoustic Research</td>
<td>Noise Impact Assessment</td>
</tr>
<tr>
<td>Lourens du Plessis</td>
<td>LOGIS</td>
<td>Visual Impact Assessment</td>
</tr>
<tr>
<td>Iris Wink</td>
<td>Iris Wink Consulting</td>
<td>Traffic Impact Assessment</td>
</tr>
<tr>
<td>Tony Barbour</td>
<td>Tony Barbour Environmental Consulting</td>
<td>Socio-Economic Impact Assessment</td>
</tr>
<tr>
<td>Lizande Kellerman (Pr.Sci.Nat.) and Suvasha Ramcharan</td>
<td>CSIR</td>
<td>Civil Aviation Site Sensitivity Verification</td>
</tr>
<tr>
<td>Lizande Kellerman (Pr.Sci.Nat.) and Suvasha Ramcharan</td>
<td>CSIR</td>
<td>Defence Site Sensitivity Verification</td>
</tr>
</tbody>
</table>

### PROJECT DESCRIPTION

It is important to point out at the outset that the exact specifications of the proposed project components will be determined during the detailed design and engineering phase prior to construction (subsequent to the issuing of EA, should EA be granted for the proposed project).

A summary of the key components of the proposed Kaladokhwe WEF 3 project is provided in Table C below.
Table C. Summary of the proposed Kaladokhwe WEF 3 project components and associated infrastructure

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of turbines:</td>
<td>32</td>
</tr>
<tr>
<td>Turbine Capacity:</td>
<td>Up to 8 MW</td>
</tr>
<tr>
<td>Hub Height:</td>
<td>Up to 160 m</td>
</tr>
<tr>
<td>Rotor (Blade) Diameter:</td>
<td>Up to 200 m</td>
</tr>
<tr>
<td>Blade length:</td>
<td>Up to 100 m</td>
</tr>
<tr>
<td>WEF Project Size / Generation Capacity:</td>
<td>Up to 240 MW</td>
</tr>
<tr>
<td>Reinforced foundation diameter:</td>
<td>32 m per turbine</td>
</tr>
<tr>
<td>Crane hardstand:</td>
<td>70 m x 45 m per turbine</td>
</tr>
<tr>
<td>Blade hardstand:</td>
<td>80 m x 45 m per turbine</td>
</tr>
<tr>
<td>On-site substation hubs:</td>
<td>The proposed project will include two on-site substation hubs incorporating the facility substation, switchyard, collector infrastructure, BESS and associated O&amp;M buildings. Each substation hub will comprise an area of 4 ha. The substation-built infrastructure will have a maximum height of 10 m. Two locations for placement of the on-site substation hubs have been identified and will be assessed during the EIA Phase.</td>
</tr>
<tr>
<td>Capacity of on-site substation:</td>
<td>33 kV / 132 kV</td>
</tr>
<tr>
<td>Area occupied by construction compound and lay down area:</td>
<td>Size = Six (6) ha (i.e. 300 m x 200 m) Two possible locations or placement alternatives for the construction compound and laydown area have been identified and will be assessed during the EIA Phase.</td>
</tr>
<tr>
<td>Internal service roads:</td>
<td>The Kaladokhwe WEF 3 will have a total internal service road network of up to 40 km. Permanent service roads will be 6 m wide and may require side drains on one or both sides. All service roads will be gravel and may have underground cables running alongside them. During construction, a 12 m road corridor may be temporarily impacted upon which will be rehabilitated to a width of 6 m after construction has been completed. Temporary clearing of up to 50 m may be required in areas where cut and fill may be required as well for the construction of the bell mouth road junction, turning circles and temporary passing lanes on site. The existing internal service road network, in addition to whether additional internal service roads are to be constructed on the project site will be confirmed by the Project Developer during the EIA Phase. The specialists will assess all proposed internal service roads during the EIA Phase.</td>
</tr>
<tr>
<td>Concrete batching plant:</td>
<td>One (1) ha</td>
</tr>
<tr>
<td>Operational and Maintenance (O&amp;M) Building:</td>
<td>Two (2) ha</td>
</tr>
</tbody>
</table>
### Battery Energy Storage System (BESS):

The BESS will cover an area of approximately five (5) ha, have a maximum height of 8 m (as recommended) and have a storage capacity of at least 1000 MWh. The BESS technologies that are being considered include:
- Lead Acid and Advanced Lead Acid
- Lithium ion, NiCd, NiMH-based Batteries
- High Temperature (NaS, Na-NiCl₂, Mg/PB-Sb)

### Site Access:

The proposed Kaladokhwe WEF and associated infrastructure will be located approximately 20 km northeast of the town of Nxuba (previously Cradock) in the Eastern Cape Province. Access to the proposed Kaladokhwe WEF 3 project site will be facilitated via an existing public road off the R390 road connecting Nxuba (previously Cradock) and Hofmeyr. The main access road to the WEF will comprise a gravel road with a maximum width of 10 m. The length of the main access road is yet to be confirmed.

### Proximity to grid connection:

To facilitate the connection of the proposed Kaladokhwe WEF 3 project to the national electrical grid network, the Project Applicant is proposing the construction of a 132 kV overhead transmission powerline, to be located within a 300 m assessment corridor, and its associated electrical infrastructure. This 132 kV overhead transmission powerline will connect at the on-site substations at the Kaladokhwe WEF 3 and extends approximately 60 km in a north-westerly direction to connect at a newly proposed 132 kV / 400 kV Main Transmission Substation (MTS) located to the west of the N10 national road including from the newly proposed MTS, the connection into the two existing Hydra and Poseidon 400 kV overhead transmission powerlines will be facilitated through a 400 kV Loop-In-Loop-Out (LILO) connection, all of which will form part of a separate Application for Environmental Authorisation (EA).

**Note from the CSIR:** A separate Environmental Assessment Process will be undertaken once the grid connection and the 132 kV power line routing for the proposed Kaladokhwe WEF 3 has been confirmed, and hence does not form part of this S&EIA Process.

### Fencing:

For various reasons such as security, public protection and lawful requirements, the proposed built infrastructure on site will be secured via the installation of appropriate fencing. Existing livestock fencing on the affected farms portions may be upgraded in places where deemed insufficiently secure, whereas permanent fencing will be required around the O&M areas and on-site substation hubs. Access points will be managed and monitored by an appointed security service provider. The type and height of fencing to be installed will be

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NEED FOR THE ENVIRONMENTAL IMPACT ASSESSMENT

As noted above, in terms of the 2014 NEMA EIA Regulations (as amended) published in GN R326, R327, R325 and R324, a full Scoping and EIA Process is required for the proposed project. The need for the Scoping and EIA is triggered by, amongst others, the inclusion of Activity 1 listed in GN R325 (Listing Notice 2):

• “The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs (a) within an urban area; or (b) on existing infrastructure”.

Chapter 4 of the Scoping Report contains the detailed list of activities contained in GN R327, R325 and R324 which are triggered by the various project components and thus form part of this Scoping and EIA Process.

The purpose of the Scoping and EIA Process is to identify, assess and report on any potential impacts the proposed project, if implemented, may have on the receiving environment. The Scoping and EIA therefore needs to show the Competent Authority, the National DFFE; and the Project Applicant, Kaladokhwe Wind 3 (Pty) Ltd, what the consequences of their choices will be in terms of impacts on the biophysical and socio-economic environment and how such impacts can be, as far as possible, enhanced or mitigated and managed as the case may be.

POTENTIAL ISSUES AND HIGH-LEVEL IMPACT ASSESSMENT

Potential issues and impacts associated with the proposed Kaladokhwe WEF 3 project have been identified based on scoping level assessment of the environmental status quo of the receiving environment (environmental, social and heritage features present on site – as discussed in Chapter 3 of this Scoping Report) as well as input from specialists that form part of the EIA project team. These potential issues and impacts, summarised in Table D below, will be assessed in further detail during the EIA Phase through the specialist assessments and are included in Chapter 6 of this Scoping Report. It must be noted that additional issues may be raised during the Scoping Phase, which could potentially be assessed during the EIA Phase. The Terms of Reference (ToRs) for the various Specialist Assessments are included in Chapter 7 of this Scoping Report.

Table D. Summary of Issues to be addressed during the EIA Phase as part of the Specialist Assessments

<table>
<thead>
<tr>
<th>Specialist Assessment / Input</th>
<th>Key issues to be addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Soils</td>
<td>Construction and Operational Phases:</td>
</tr>
<tr>
<td></td>
<td>▪ Loss of agricultural land use;</td>
</tr>
<tr>
<td></td>
<td>▪ Soil degradation including erosion, topsoil loss and contamination; and</td>
</tr>
<tr>
<td></td>
<td>▪ Increased financial security for farming operations¹.</td>
</tr>
<tr>
<td>Aquatic Biodiversity</td>
<td>Construction Phase:</td>
</tr>
</tbody>
</table>

¹ This potential issue is considered to have a positive impact because of the proposed development.
**Specialist Assessment / Input**

<table>
<thead>
<tr>
<th>Key issues to be addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Disturbance and possible loss of aquatic habitats within the watercourses with the associated impact to sensitive aquatic biota;</td>
</tr>
<tr>
<td>▪ The removal of indigenous riparian and instream vegetation that has the potential to reduce the ecological integrity and functionality of the watercourses;</td>
</tr>
<tr>
<td>▪ Water demand for construction could place stress on the existing available water resources should external water sources not be utilised;</td>
</tr>
<tr>
<td>▪ Road crossing structures if not adequately designed could impede flow in the watercourses;</td>
</tr>
<tr>
<td>▪ Alien vegetation infestation within the aquatic features due to disturbance; and</td>
</tr>
<tr>
<td>▪ Increased sedimentation and risks of contamination of surface water runoff during construction.</td>
</tr>
</tbody>
</table>

**Operational Phase:**
- Ongoing disturbance of aquatic features and associated vegetation along access roads or adjacent to the infrastructure that needs to be maintained;
- Modified runoff characteristics from hardened surfaces at the turbines and the substations, as well as along the access roads that have the potential to result in erosion of hillslopes and watercourses; and
- Possible increased potential for water quality impacts such as contamination from sewage generated on site because of the operation on site.

**Decommissioning Phase:**
- An increased disturbance of aquatic habitat due to the increased activity on the site; and
- Increased sedimentation and risks of contamination of surface water runoff.

**Terrestrial Biodiversity and Species (including Animal and Plant Species)**

<table>
<thead>
<tr>
<th>Construction Phase:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ The clearing of natural vegetation and resultant loss of faunal habitat;</td>
</tr>
<tr>
<td>▪ The loss of endangered, threatened, protected and endemic plants/animals;</td>
</tr>
<tr>
<td>▪ Direct faunal mortalities due to construction activities and increased vehicle traffic;</td>
</tr>
<tr>
<td>▪ Increased human activity, noise and light levels;</td>
</tr>
<tr>
<td>▪ Increased dust deposition;</td>
</tr>
<tr>
<td>▪ Establishment of alien vegetation as a result of the clearing of the vegetation;</td>
</tr>
<tr>
<td>▪ Increased stormwater run-off and erosion; and</td>
</tr>
<tr>
<td>▪ Changes in animal behaviour.</td>
</tr>
</tbody>
</table>

**Operational Phase:**
- Direct faunal mortalities;
- Increased human activity, light and noise levels;
- Establishment of alien vegetation will continue; and
- Changes in animal behaviour.

**Decommissioning Phase:**
### Specialist Assessment / Input

<table>
<thead>
<tr>
<th>Key issues to be addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Some clearing of natural vegetation due to removal of infrastructure;</td>
</tr>
<tr>
<td>▪ Possible ingestion or ensnarement of animals due to waste material lying around;</td>
</tr>
<tr>
<td>▪ Establishment of alien invasive vegetation; and</td>
</tr>
<tr>
<td>▪ Increased erosion and stormwater run-off.</td>
</tr>
</tbody>
</table>

### Avifauna

#### Construction Phase:
- Total or partial displacement of avifauna due to habitat transformation associated with the presence of the wind turbines and associated infrastructure;
- The noise and movement associated with the construction activities at the project footprint will be a source of disturbance, which would lead to the displacement of avifauna from the area.

#### Operational Phase:
- Avifauna mortality and injury through collisions with the wind turbines; and
- Electrocution of priority species on the internal electrical grid network.

#### Decommissioning Phase:
- The noise and movement associated with the activities at the study area will be a source of disturbance, which would lead to the displacement of avifauna from the area.

### Bats

#### Construction Phase:
- Displacement of bats due to habitat loss / habitat transformation;
- Roost disturbance; and
- Roost destruction.

#### Operational Phase:
- Mortality of bats due to turbine collisions while commuting/foraging and/or due to barotrauma;
- Mortality of bats due to turbine collisions during migrations; and
- Light pollution associated risks including loss of insect prey and increased collision risks for bats foraging closer to turbines.

#### Decommissioning Phase:
- Displacement of bats due to disturbance associated with the decommissioning activities.

### Heritage (including Archaeology and Cultural Landscape)

#### Construction and Decommissioning Phases:
- The destruction or disturbance of archaeological artefacts or sites;
- The destruction or disturbance of graves or burial sites;
- The destruction or disturbance of historic built infrastructure;
- Visual intrusion of visually sensitive heritage resources and/or cultural landscape features, which might erode its association with intangible heritage.

### Palaeontology

#### Construction and Decommissioning Phases:
- Damage and/or destruction of scientifically valuable fossils preserved at or beneath the ground due to surface clearance or excavations.

### Noise

#### Construction and Decommissioning Phases:
- Noise pollution i.e. increase in ambient sound levels due to construction activities (e.g. equipment and vehicle noise).
## Specialist Assessment / Input

### Key issues to be addressed

**Operational Phase:**
- Mechanical and aerodynamic noise from the operation of the wind turbine components.

**Socio-Economic**

**Construction Phase:**
- Investment and the contribution to the national, regional and local economy;
- Generation of employment, income and skills; and
- Pressures on community fabric and resources due to an influx of jobseekers.

**Operational Phase:**
- Lower national CO\textsubscript{2} emissions per unit of energy generated;
- Investment and the contribution to the national, regional and local economy;
- Generation of employment, income and skills; and
- Improvement of community facilities and prospects through funding of social upliftment projects.

**Decommissioning Phase:**
- Loss of employment due to decommissioning of the facility.

**Traffic**

**Construction and Decommissioning Phases:**
- Increase in vehicle traffic due to construction activities – Potential traffic congestion and delays on the surrounding road network and associated noise and dust pollution.

**Operational Phase:**
- Potential traffic congestion and delays on the surrounding road network due to increased vehicle traffic.

**Visual**

**Construction Phase:**
- Visual intrusion and potential flicker effect by wind turbines and associated structures and infrastructure on visual receptors;
- Visual intrusion by wind turbines and associated structures and infrastructure on landscape receptors;
- Potential visual impact of security and construction lighting on the nightscape of the region;
- Potential scarring in the landscape caused by earthworks and excavations; and
- Increased dust emissions from heavy machinery and vehicle traffic.

**Operational Phase:**
- Visual intrusion and potential flicker effect by wind turbines and associated structures and infrastructure on visual receptors;
- Visual intrusion by wind turbines and associated structures and infrastructure on landscape receptors; and
- Potential visual impact of on-site security lighting and red-flashing warning lights on top of the turbine hubs on the rural nightscape of the region.

**Decommissioning Phase:**

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\textsuperscript{2} Note that the traffic generated because of the development during the operational phase will be minimal and will not have a significant impact on the surrounding road network in light of the remote and rural setting of the area.
### Specialist Assessment / Input

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>▪ Visual intrusion and increased dust emissions due to decommissioning activities including disassembly of project components, heavy machinery, increased vehicle traffic and rehabilitation; and</td>
</tr>
<tr>
<td>▪ Potential visual impact of security and construction lighting on the nightscape of the region.</td>
</tr>
</tbody>
</table>

The effect of potential on-site impacts can be limited or reduced to acceptable levels through avoidance, minimisation and the implementation of appropriate mitigation measures and management actions during the construction, operational and decommissioning phases of this proposed development.

Therefore, based on the scoping level specialist input assessed and provided during the Scoping Phase, potential negative impacts associated with the proposed Kaladokhwe WEF 3 project are anticipated to be generally of **Moderate to Low significance after mitigation**, whilst some positive socio-economic impacts of moderate significance are expected.

CONTENTS & SUMMARY, pg 16
## Summary of where requirements of Appendix 2 of the 2014 NEMA EIA Regulations (as amended, GN R326) are provided in this Scoping Report

<table>
<thead>
<tr>
<th>Section of the EIA Regulations</th>
<th>Requirements for a Scoping Report in terms of Appendix 2 of the 2014 NEMA EIA Regulations (as amended, GN R326)</th>
<th>Chapter / Appendix</th>
<th>YES / NO</th>
</tr>
</thead>
</table>
| Appendix 2 - (1)(a)            | Details of -  
  i. the EAP who prepared the report; and  
  ii. the expertise of the EAP, including a curriculum vitae; | Appendix A and Appendix B | Yes |
| Appendix 2 - (1)(b)            | The location of the activity, including -  
  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; | Chapter 1 and Chapter 2 | Yes |
| Appendix 2 - (1)(c)            | A plan which locates the proposed activity or activities applied for at an appropriate scale, or if it is -  
  i. a linear activity, a description, and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or  
  ii. on land where the property has not been defined, the coordinates within which the activity is to be undertaken; | Chapter 2 | Yes |
| Appendix 2 - (1)(d)            | A description of the scope of the proposed activity, including –  
  i. all listed and specified activities triggered;  
  ii. a description of the activities to be undertaken, including associated structures and infrastructure; | Chapter 2 and Chapter 4.2 | Yes |
| Appendix 2 - (1)(e)            | A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process; | Chapter 4.1 | Yes |
| Appendix 2 - (1)(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; | Chapter 1.7 | Yes |
| Appendix 2 - (1)(g)            | A full description of the process followed to reach the proposed preferred activity, site and location of the development footprint within the site, including -  
  i. details of all the alternatives considered;  
  ii. details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; | i) Chapter 5.1  
  ii) Chapter 4.4; and Appendix D; and Appendix E  
  iii) Chapter 6.1 to 6.16  
  iv) Chapter 3 and Appendix F | Yes |
<table>
<thead>
<tr>
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<th>Chapter / Appendix</th>
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</table>
| 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; | v) Chapter 6 and Appendix F  
vi) Chapter 7.5  
vii) Chapter 6 and Appendix F  
viii) Chapter 6.14 and 6.15  
ix) Chapter 5.2 and 5.3  
x) Chapter 5.1 and 5.3  
x) Not applicable. The preferred alternatives will be confirmed during the EIA Phase following detailed specialist assessment. | |
| iv.                           | the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; | |
| v.                            | the impacts and risks which have informed the identification of each alternative, including nature, significance, consequence, extent, duration, and probability of such identified impacts, including the degree to which these impacts –  
(aa) can be reversed;  
(bb) may cause irreplaceable loss of resources; and  
(cc) can be avoided, managed or mitigated; | |
| vi.                           | the methodology used in identifying and ranking the nature, significance, consequences, extent, duration, and probability of potential environmental impacts and risks associated with the alternatives; | |
| vii.                          | positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; | |
| viii.                         | the possible mitigation measures that could be applied and level of residual risk; | |
| ix.                           | the outcome of the site selection matrix; | |
| x.                            | if no alternatives, including alternative locations for the activity, were investigated, the motivation for not considering such and | |
| xi.                           | a concluding statement indicating the preferred alternatives, including the preferred location of the activity; | |
| Appendix 2 - (1)(h)          | A plan of study for undertaking the environmental impact assessment process to be undertaken, including -  
i. a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;  
ii. a description of the aspects to be assessed as part of the environmental impact assessment process;  
iii. aspects to be assessed by specialists; | Section 7.1 - 7.8 | Yes |
### Section of the EIA Regulations

<table>
<thead>
<tr>
<th>Requirements for a Scoping Report in terms of Appendix 2 of the 2014 NEMA EIA Regulations (as amended, GN R326)</th>
</tr>
</thead>
<tbody>
<tr>
<td>iv. a description of the proposed method of assessing the environmental aspects including aspects to be assessed by specialists;</td>
</tr>
<tr>
<td>v. a description of the proposed method of assessing duration and significance;</td>
</tr>
<tr>
<td>vi. an indication of the stages at which the competent authority will be consulted;</td>
</tr>
<tr>
<td>vii. particulars of the public participation process that will be conducted during the environmental impact assessment process; and</td>
</tr>
<tr>
<td>viii. a description of the tasks that will be undertaken as part of the environmental impact assessment process;</td>
</tr>
<tr>
<td>ix. identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.</td>
</tr>
</tbody>
</table>

### Appendix 2 - (1)(i)

An undertaking under oath or affirmation by the EAP in relation to -

i. the correctness of the information provided in the report;

ii. the inclusion of comments and inputs from stakeholders and interested and affected parties; and

iii. any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;

**Chapter/Appendix**: Appendix B  
**YES/NO**: Yes

### Appendix 2 - (1)(j)

An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;

**Chapter/Appendix**: Appendix B  
**YES/NO**: Yes

### Appendix 2 - (1)(k)

Where applicable, any specific information required by the competent authority.

**Chapter/Appendix**: N/A  
**YES/NO**: X

### Appendix 2 - (1)(l)

Any other matter required in terms of section 24(4)(a) and (b) of the Act.

**Chapter/Appendix**: N/A  
**YES/NO**: X

### Appendix 2 – (2)

Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a scoping report, the requirements as indicated in such notice will apply.

**Chapter/Appendix**: Not applicable in terms of the actual Scoping Report, but various gazetted assessment and reporting protocols have been complied with for the specialist studies. Refer to Chapter 4 of this Scoping Report.  
**YES/NO**: Yes