



## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

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

**DFFE Reference:** 14/12/16/3/3/1/2676

**Enquiries:** Ms Olivia Letlalo

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Ms. Andrea Van Gensen  
Eskom Holdings SOC Limited  
DSC Building, Ground floor (C Block), 69 Memorial Road  
PO Box 606  
**KIMBERLEY**  
8301

**Telephone Number:** 053 830 5775  
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### PER E-MAIL / MAIL

Dear Ms Van Gensen

### **ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED FOR THE PROPOSED DEVELOPMENT OF THE KIWANO SOLAR PHOTOVOLTAIC FACILITY, BATTERY ENERGY STORAGE SYSTEM, ASSOCIATED SUBSTATION AND 132KV LOOP-IN-OUT POWERLINES ON PORTION 0 OF ERF 1080 OLYVENHOUTS DRIFT SETTLEMENT AGRICULTURAL HOLDING IN UPINGTON, NORTHERN CAPE PROVINCE**

With reference to the above application, please be advised that the Competent Authority has decided to grant authorisation. The Environmental Authorisation (EA) and reasons for the decision are attached herewith

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing and within fourteen (14) days of the date of the decision, as well as the provisions regarding the submission of appeals that are contained in the EIA Regulations.

In terms of the Promotion of Administrative Justice Act, 2000 (Act No 3 of 2000), you are entitled to the right to fair, lawful, and reasonable administrative action; and to written reasons for administrative action that affects you negatively. Further your attention is drawn to the provisions of the Protection of Personal Information Act, 2013 (Act no. 4 of 2013) which stipulates that the Competent Authority should conduct itself in a responsible manner when collecting, processing, storing, and sharing an individual or another entity's personal information by holding the Competent Authority accountable should the Competent Authority abuses or compromises your personal information in any way.

Your attention is drawn to Chapter 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) National Appeal Regulations published under Government Notice R993 in Government Gazette No. 38303 dated 08 December 2014 (National Appeal Regulations, 2014), which prescribe the appeal procedure to be followed. Kindly include a copy of this document (National Appeal Regulations, 2014) with the letter of notification to interested and affected parties in this matter.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Competent Authority, whichever is applicable.

**Appeals must be submitted in writing in the prescribed form to:**

The Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: [appealsdirector@dfre.gov.za](mailto:appealsdirector@dfre.gov.za)

By hand: Environment House  
473 Steve Biko  
Arcadia  
Pretoria  
0083; or

By post: Private Bag X447  
Pretoria  
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, Act No. 107 of 1998, as amended, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at [https://www.environment.gov.za/documents/forms#legal\\_authorisations](https://www.environment.gov.za/documents/forms#legal_authorisations) or request a copy of the documents at [appealsdirector@dfre.gov.za](mailto:appealsdirector@dfre.gov.za).

Yours faithfully



**Ms Millicent Solomons**  
**Acting Chief Director: Integrated Environmental Authorisations**  
**Department of Forestry, Fisheries, and the Environment**  
Date: 04/04/2023.

cc:	Ms. Natasha Lalie	Zitholele Consulting (Pty) Ltd	Tel: 011 207 2060	Email: <a href="mailto:natashal@zitholele.co.za">natashal@zitholele.co.za</a>
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## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

# Environmental Authorisation

In terms of Regulation 25 of the Environmental Impact Assessment Regulations, 2014, as amended

Proposed development of the Kiwano Solar Photovoltaic Facility, Battery Energy Storage System, associated substation and 132kV loop-in-out powerlines on Erf 1080 Olyvenhouts Drift Settlement Agricultural Holding in Upington, Northern Cape Province

ZF Mgcawu District Municipality

<b>Application Register Number:</b>	14/12/16/3/3/1/2676
<b>Applicant:</b>	<i>Eskom Holdings SOC Limited</i>
<b>Location of activity:</b>	<i>on Portion 0 of Erf 1080 Olyvenhouts Drift Settlement Agricultural Holding in Upington, Northern Cape Province</i>

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

## Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this Environmental Authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this Environmental Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, Act No. 107 of 1998, as amended and the EIA Regulations, 2014, as amended.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

## Activities Authorised

By virtue of the powers conferred on it by the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment Regulations, 2014, as amended, the Department hereby authorises –

### **ESKOM HOLDINGS SOC LIMITED**

with the following contact details –

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to undertake the following activities (hereafter referred to as “the activity”) indicated in Listing Notice 1, Listing Notice 2 and Listing Notice 3 of the EIA Regulations, 2014 as amended:

Activity number	Activity description
<p><b><u>Listing Notice 1, Activity 11(i):</u></b></p> <p><i>“The development of facilities or infrastructure for the transmission and distribution of electricity—</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</i></p> <p><i>excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is— (a) temporarily required to allow for maintenance of existing infrastructure (b) 2 kilometres or shorter in length (c) within an existing transmission line servitude; and</i></p> <p><i>(d) will be removed within 18 months of the commencement of development.</i></p>	<p>Eskom proposes the construction and operation of a new on-site 132kV substation with 5 feeder bays substation to facilitate the connection of the facility to the national grid.</p> <p>The development area is located outside of an urban area.</p> <p>Eskom further propose to develop 132kV loop-in loop-out powerlines from the Solar Photovoltaic (PV) and BESS facility substation to the existing Upington substation. The powerline associated with Site Alternative B will be approximately 5 568m in length.</p> <p>The infrastructure for the distribution of electricity that will be included in the proposed development is not considered bypass infrastructure that is temporarily required for maintenance, within an existing transmission line servitude, nor will it be removed within 18 months of the commencement of the development. The exclusion applicable to Regulation 11 of Listing Notice 1 is therefore not applicable to this proposed development.</p>
<p><b><u>Listing Notice 1, Activity 12(ii)(a)(c):</u></b></p> <p><i>“The development of—</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more, where such development occurs—</i></p> <p><i>(a) within a watercourse; or</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</i></p> <p><i>excluding—</i></p> <p><i>(aa) the development of infrastructure or structures within existing ports or harbours that</i></p>	<p>The development of the Solar PV and BESS facility will require the establishment of solar PV panels and other associated infrastructure within natural drainage lines and within 32m of natural drainage lines identified within the study area. The solar PV panel area will be approximately 115ha in extent. The natural drainage features, although not strictly defined as a wetland or pan, is classified as a watercourse since it does channel water along its alignment during some periods of the year.</p> <p>Considering the exclusions included with Regulation 12 of Listing Notice 1, the development of infrastructure of 100m<sup>2</sup></p>

<p><i>will not increase the development footprint of the port or harbour</i></p> <p><i>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies</i></p> <p><i>(dd) where such development occurs within an urban area</i></p> <p><i>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</i></p> <p><i>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</i></p>	<p>or more within a watercourse or within 32m of a watercourse:</p> <ul style="list-style-type: none"> <li>▪ Will not occur within a harbour</li> <li>▪ Is not associated with the development of a new harbour</li> <li>▪ Does not trigger activity 14 in Listing Notice 2 or 3</li> <li>▪ The activity does not occur within the urban boundary of the town of Upington</li> <li>▪ The activity does not occur within existing roads, road reserves or railway line reserves, nor</li> <li>▪ Will the infrastructure be removed within 6 weeks of the commencement of development and indigenous vegetation will be cleared.</li> </ul> <p>The exclusion applicable to Regulation 12 of Listing Notice 1 is therefore not applicable to this proposed development.</p>
<p><b><u>Listing Notice 1, Activity 14:</u></b></p> <p><i>The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.</i></p>	<p>The development of the Battery Energy Storage System (BESS) plant will include the installation of batteries that will contain substances and materials classified as dangerous goods. This listed activity was included since one of the BESS alternatives propose the use of solid-state batteries. Some solid-state batteries mentioned in the FBAR contain Sulfuric acid and Nickel Cadmium (NiCd). Sulfuric acid is listed in terms of SANS 10234:2008 and is highly corrosive and when overcharged the battery generates hydrogen which presents an explosion risk. Sulphuric acid is also toxic to freshwater fish and invertebrates at certain dosages. Nickel Cadmium (NiCd) solid state batteries, on the other hand, contain Cadmium and various Cadmium chemical combinations of which several are listed in terms of SANS</p>

	<p>10234:2008. Vanadium Redox Flow Batteries contain Vanadium pentoxide, Hydrochloric acid, and Sulfuric acid. Vanadium pentoxide is listed in SANS 10234:2008 (023-001-00-8), and although Vanadium is a nontoxic chemical, the electrolyte is caustic and poses corrosive and environmental hazards like lead-acid batteries. Although the Engineering Procurement and Construction (EPC) contractor that is still to be appointed to develop and construct the BESS facility will confirm construction methods relating to the installation of the chosen battery technology, it is accepted that in some instances the shipping and storage of large quantities of electrolyte, especially for flow battery technologies, will occur on site prior to filling as described on page 62 of the FBAR. Components of the battery storage units for Solid State batteries will be pre-assembled prior to delivery on site, however in the case of flow battery technologies assembly of the battery units will occur on site.</p> <p>The development further includes the construction and use of a Hazardous chemical store with a 24m<sup>2</sup> footprint size where chemicals will be stored. The chemical store will include oils and lubricants which will be required for the operation and maintenance of plant and machinery and other industrial applications during operation and maintenance. Collectively, the combined capacity of all the battery units and content of the chemical store will be more than 80m<sup>3</sup>.</p>
<p><b><u>Listing Notice 1, Activity 19:</u></b></p> <p><i>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 of more than 10 cubic metres from a watercourse,</i></p>	<p>The construction of the access road to Site Alternative B, as well as trenching associated with the construction of the potable water pipeline (max. 114.3 internal diameter), will require dredging and construction across non-perennial drainage lines located within the development property. These non-perennial drainage lines are classified as</p>

<p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies,</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	<p>watercourses by the Department of Water and Sanitation (DWS). The construction and installation of the Solar PV panels and BESS facility will result in a cumulative volume of infilling or dredging of more than 10m<sup>3</sup> within the non-perennial drainage lines located across the development site.</p> <p>Considering the exclusions included with Regulation 19 of Listing Notice 1, the proposed infilling, depositing, dredging, excavation, removal or moving:</p> <ul style="list-style-type: none"> <li>▪ Will not occur behind a development setback</li> <li>▪ Is not associated with maintenance undertaken in accordance with a maintenance management plan,</li> <li>▪ Does not fall within the ambit of activity 21 of Listing Notice 1,</li> <li>▪ Does not occur within existing ports or harbours,</li> <li>▪ Nor is related to the development of a new port or harbour.</li> </ul> <p>The exclusion applicable to Regulation 19 of Listing Notice 1 is therefore not applicable to this proposed development.</p>
<p><b><u>Listing Notice 1, Activity 28(ii):</u></b></p> <p><i>Residential, mixed, retail, commercial, industrial, or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</i></p> <p><i>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare,</i></p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial, or institutional purposes.</p>	<p>The proposed development is considered an industrial use and is proposed on land that was previously used for agricultural purposes, occurs outside of an urban area and will cover an area of more than 20ha on land zoned for agriculture.</p> <p>Considering the exclusions included with Regulation 28 of Listing Notice 1, the proposed development site was used for agricultural purposes and has not been developed for residential, mixed, retail, commercial, industrial or institutional purposes and any point. The exclusion applicable to Regulation 28 of Listing Notice 1 is therefore not applicable to this proposed development.</p>



<p><b><u>Listing Notice 2, Activity 1:</u></b></p> <p><i>"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 —</i></p> <p><i>(a) within an urban area; or</i></p> <p><i>(b) on existing infrastructure</i></p>	<p>Eskom is proposing to develop a 58MW Solar PV facility as well as a 40MW / 200MWh BESS facility. In terms of section 3 of GN 114 of 2018, Solar projects that falls within a REDZ are exempted from following a full EIA process and may follow a Basic Assessment Process. Considering the exclusion included with Regulation 1 of Listing Notice 2, the development of facilities or infrastructure for the generation of electricity from a renewable resource will not occur within an urban area, nor on existing infrastructure. The development will occur outside the urban edge of the town of Upington. The exclusion applicable to Regulation 1 of Listing Notice 2 is therefore not applicable to this proposed development.</p>
<p><b><u>Listing Notice 2, Activity 15</u></b></p> <p><i>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—</i></p> <p><i>(i) the undertaking of a linear activity; or</i></p> <p><i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</i></p>	<p>The proposed Solar PV and BESS development areas for Site Alternative B are approximately 134ha and 136.5ha in extent. Although not all areas with the development footprint will be cleared, cumulatively the combined clearance of more than 20ha of indigenous vegetation will occur during the development of the facility. The proposed project is located outside an urban area and will not occur on existing infrastructure but on vacant land. Considering the exclusion included with Regulation 15 of Listing Notice 2, the clearance of indigenous vegetation is not required for the undertaking of a linear activity, nor for maintenance purposes undertaken in accordance with a maintenance management plan. The exclusion applicable to Regulation 15 of Listing Notice 2 is therefore not applicable to this proposed development.</p>
<p><b><u>Listing Notice 3, Activity 4(g)(ii)(ee)</u></b></p> <p><i>The development of a road wider than 4 metres with a reserve less than 13,5 metres.</i></p> <p><i>g. Northern Cape</i></p> <p><i>ii. Outside urban areas</i></p>	<p>The proposed development will require construction of an access road from the National Road (N14) to the boundary of the development property. This access road, which goes through a Critical Biodiversity Area (CBA) as identified in the</p>

<i>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans</i>	Northern Cape Critical Biodiversity Areas of 2016, will be tarred and will be greater than 4m in width.
<p><b><u>Listing Notice 3, Activity 12(g)(i)(ii)</u></b></p> <p><i>“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.</i></p> <p><i>(g) in Northern Cape</i></p> <p><i>(i). Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004</i></p> <p><i>(ii). Within critical biodiversity areas identified in bioregional plans.</i></p>	<p>The proposed development will require construction of an access road from the National Road (N14) to the boundary of the development property. This access road alignment goes through a Critical Biodiversity Area (CBA) as identified in the Northern Cape Critical Biodiversity Areas of 2016 and will result in the clearance of more than 300m<sup>2</sup> of indigenous vegetation.</p> <p>The construction of the potable water pipeline (max. 114.3 internal diameter), for Site Alternative B will require trenching that will result in the clearance of more than 300m<sup>2</sup> of indigenous vegetation. The proposed project is located outside an urban area and will not occur on existing infrastructure but on vacant land. Considering the exclusion included with Regulation 12 of Listing Notice 3, the clearance of indigenous vegetation is not required for maintenance purposes undertaken in accordance with a maintenance management plan. The exclusion applicable to Regulation 12 of Listing Notice 3 is therefore not applicable to this proposed development.</p>

as described in the Basic Assessment Report (BAR) dated 03 February 2023:

## 21 Digit SG Codes

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## Project infrastructure footprints and coordinates

Development Footprint	Site Alternative B
Development site (Ha)	~ 136.9
Solar PV (Ha)	~ 103.5
Laydown Area (Ha)	~ 12.2
BESS Area (Ha)	~ 3.4
Substation (Ha)	~ 2.2
Powerline (Km)	~ 5.57
Pipeline (Km)	~ 4.50
Access Road (Km)	~ 0.83
Co-ordinates	Site Alternative B (Latitude and Longitude)
Development Site Corner Co-ordinates (DMS)	28°29'53.087" S and 21°07'16.298" E 28°30'29.793" S and 21°07'16.340" E 28°30'29.751" S and 21°08'04.201" E 28°30'25.545" S and 21°08'04.195" E 28°30'25.545" S and 21°08'00.462" E 28°29'53.049" S and 21°08'00.422" E
Development Site Central Co-ordinates (DMS)	28°30'11.420" S and 21°07'40.248" E
Solar PV Corner Co-ordinates (DMS)	28°29'53.416" S and 21°07'17.626" E 28°30'23.847" S and 21°07'17.661" E 28°30'23.815" S and 21°07'52.182" E 28°30'19.476" S and 21°07'52.176" E 28°30'19.459" S and 21°07'59.126" E 28°29'53.377" S and 21°07'59.094" E
Solar PV Central Co-ordinates (DMS)	28°30'08.612" S and 21°07'38.378" E
Battery Energy Storage System Area Corner Coordinates (DMS)	28°30'25.558" S and 21°07'47.334" E 28°30'29.439" S and 21°07'47.338" E 28°30'29.429" S and 21°07'57.598" E 28°30'25.548" S and 21°07'57.593" E
Battery Energy Storage System Area Central Coordinates (DMS)	28°30'27.493" S and 21°07'52.466" E
Development Footprint	Site Alternative B
Substation Corner Co-ordinates (DMS)	28°30'25.548" S and 21°07'57.593" E 28°30'29.429" S and 21°07'57.598" E 28°30'29.436" S and 21°08'04.216" E

	28°30'25.545" S and 21°08'04.195" E
Substation Central Co-ordinates (DMS)	28°30'27.492" S and 21°08'00.905" E
Laydown Area Corner Co-ordinates (DMS)	28°30'24.245" S and 21°07'16.701" E 28°30'29.468" S and 21°07'16.707" E 28°30'29.442" S and 21°07'44.505" E 28°30'24.223" S and 21°07'44.499" E
Laydown Area Central Co-ordinates (DMS)	28°30'26.846" S and 21°07'30.603" E
Powerline Co-ordinates: Start, Middle, End Point (DMS)	28°30'18.07" S and 21°08'06.42" E 28°31'30.32" S and 21°08'16.96" E 28°32'39.18" S and 21°08'13.05" E
Access Road Co-ordinates: Start, Middle, End Point (DMS)	28°30'29.60" S and 21°07'46.20" E 28°30'43.11" S and 21°07'46.31" E 28°30'56.93" S and 21°07'46.45" E
Pipeline Co-ordinates: Start, Middle, End Point (DMS)	28°30'29.95" S and 21°07'45.62" E 28°31'12.70" S and 21°08'25.30" E 28°31'45.45" S and 21°09'47.35" E

- for the proposed development of the Kiwano Solar Photovoltaic facility, Battery Energy Storage System, associated substation and 132kv loop-in-out powerlines on Portion 0 of Erf 1080 Olyvenhouts Drift Settlement Agricultural Holding in Upington, Northern Cape Province, hereafter referred to as "the property".

Eskom propose the installation of a solar PV facility with an envisaged capacity of 58MW. The total site area for the PV installation will be approximately 1 150 000m<sup>2</sup> (115 hectares).

The Solar PV facility will include the following infrastructure:

- Two (2) x 40MVA 132/22kV transformers with associated 2 kV switchgear and control plant.
- Solar PV plant with the output rating of 58MW.
- BESS installation with envisaged capacity of 40MW / 200MWh.
- Establishment of the PV plant Points of Connection (POC) on the 132kV between the PV plant and Kiwano 132kV Substation.
- Separate statistical metering points to be commissioned for the BESS plant and the PV plant.
- The BESS and solar PV plant are to be positioned and configured in isolation of each other, in terms of connections and dependency; and
- Single twin-tern 132kV overhead line (corridor of 500m, 250m on either side of the powerline alignment) on a double circuit support structure, connecting Kiwano substation to Upington substation.

## **KIWANO 132 kV SUBSTATION**

### **The Substation will include the following:**

- 132kV Double busbar.
- 132kV Bus-Coupler.
- 132kV incomer feeder bay.
- Establish 2 x 132kV feeder bays for the BESS connection.
- Establish additional 2 x 132kV feeder bays for the PV integration and
- Spatial provision for a minimum of additional 4 x 132kV feeder bays for future use.

The development will require the following roads to be constructed to service the solar PV and BESS facility:

- Access road from the nearest existing road to the facility. Where possible, existing roads that provide access to the Kiwano site will be used, upgraded, and extended as necessary. A new access road from the existing D3276 road to the site will be required and will be approximately 6 m wide and estimated up to 1km long. The existing D3276 road will require upgrading, approximately 6 m wide and estimated up to 4km long (from N14 to site access road).
- A perimeter road around the site, approximately 5m wide and 4.5km in length.
- Internal roads for access to the Inverter stations, approximately 5m wide and 18km total length. -
- Internal roads/paths between the Solar PV module rows, approximately 2-3m wide, to allow access to the Solar PV modules for operations and maintenance activities.

### **Associate infrastructure include:**

- Inverter stations containing inverters, step-up transformer and switchgear.
- Below ground electrical cables.
- Foundations and mounting structures.
- Operation and maintenance infrastructure including Meteorological Station, Operation and Maintenance (O and M) Building, Spares Warehouse and Workshop, Hazardous Chemical Store, Security Building and Parking areas.
- 3 Tier Fencing (substation perimeter barriers) which consist of an outer perimeter fence, energised fence, and Inner perimeter fence.
- Additional single-tier Category 1 High Security Fences will be constructed within the site to separate the BESS area and Solar PV area from the normal Substation. and
- Gate access points.

## Conditions of this Environmental Authorisation

### Scope of authorisation

1. The **preferred site alternative B** for the proposed development of the Kiwano Solar Photovoltaic facility, Battery Energy Storage System, associated substation and 132kV loop-in-out powerlines on Portion 0 of Erf 1080 Olyvenhouts Drift Settlement Agricultural Holding in Upington, Northern Cape Province is approved as per the geographic coordinates cited in the table above.
2. Authorisation of the activity is subject to the conditions contained in this Environmental Authorisation, which form part of the Environmental Authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this Environmental Authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant, or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this Environmental Authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further Environmental Authorisation in terms of the regulations.
6. The holder of an Environmental Authorisation must apply for an amendment of the Environmental Authorisation with the Competent Authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. **This activity must commence within a period of ten (10) years from the date of issue of this Environmental Authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for Environmental Authorisation must be made for the activity to be undertaken.**
8. **Construction must be completed within ten (10) years of the commencement of the activity on site.**
9. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

### Notification of authorisation and right to appeal

10. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this Environmental Authorisation, of the decision to authorise the activity.

11. The notification referred to must –
  - 11.1. specify the date on which the authorisation was issued,
  - 11.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014,
  - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
  - 11.4. give the reasons of the Competent Authority for the decision.

### **Commencement of the activity**

12. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014, and no appeal has been lodged against the decision. In terms of Section 43(7), an appeal under Section 43 of the National Environmental Management Act, Act No. 107 of 1998, as amended will suspend the Environmental Authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

### **Management of the activity**

13. The site layout plans attached as Appendix A (Site maps) in the final BAR dated 03 February 2023 is not approved.
14. A copy of the final site layout map must be made available for comments to the registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval prior to commencement of the activity. Existing infrastructure must be used as far as possible e.g., roads. The layout map must indicate the following:
  - 14.1. The position of the solar PV panels.
  - 14.2. All associated infrastructure (new and existing).
  - 14.3. Onsite substation and the coordinates.
  - 14.4. The BESS and its coordinates.
  - 14.5. The pipeline and its coordinates.
  - 14.6. The proposed internal road (length and width).
  - 14.7. Construction laydown areas, buildings and their coordinates.
  - 14.8. All sensitive features i.e., nest of the confirmed Kori Bustard (*Ardeotis kori*) and Secretarybird (*Sagittarius serpentarius*), 30m around K10 burial site, and

14.9. All “no-go” and buffer areas.

15. The Environmental Management Programme (EMPr) submitted as part of the BAR is not approved and must be amended to include measures as dictated by the final site lay-out map. The EMPr must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.
16. The amended EMPr must include the final layout map and mitigation measures that are an outcome of the walkdown.
17. The EMPr must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
18. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
19. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAR be discovered.

#### **Frequency and process of updating the EMPr**

20. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 25 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
21. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
22. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of the EIA Regulations, 2014 as amended. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
23. In assessing whether to grant approval of an EMPr which has been updated because of an audit, the Department will consider the processes prescribed in Regulation 35 of the EIA Regulations, 2014 as amended. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.



24. The holder of the authorisation must apply for an amendment of an EMPr, if such amendment is required before an audit is required. The amendment process is prescribed in Regulation 37 of the EIA Regulations, 2014, as amended. The holder of the authorisation must request comments on the proposed amendments to the impact management outcomes of the EMPr or amendments to the closure objectives of the closure plan from potentially interested and affected parties, including the competent authority, by using any of the methods provided for in the Act for a period of at least 30 days.

## Monitoring

25. The holder of the authorisation must appoint an experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
- 25.1. The ECO must be appointed before commencement of any authorised activities.
- 25.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
- 25.3. The ECO must keep record of all activities on site, problems identified, transgressions noted, and a task schedule of tasks undertaken by the ECO.
- 25.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

## Recording and reporting to the Department

26. All documentation e.g., audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department.
27. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.
28. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, considering the processes for such auditing as prescribed in Regulation 34 of the EIA Regulations, 2014 as amended.

29. The holder of the authorisation must, in addition, submit environmental audit reports to the Department within 30 days of completion of the construction phase (i.e., within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
30. The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 as amended and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
31. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

#### **Notification to authorities**

32. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.

#### **Operation of the activity**

33. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

#### **Site closure and decommissioning**

34. Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and Competent Authority at that time.

#### **Specific conditions**

35. The entire loop-in-loop-out power line length must be fitted with bird flight diverters.
36. A site walk through must be conducted prior to any activities taking place as recommended by the Terrestrial Biodiversity specialist and the findings must be considered in the position of the final development layout plan.
37. The footprint of the development must be limited to the areas required for actual construction works and operational activities.

38. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of protected or endangered plant or animal species.
39. No exotic plants must be used for rehabilitation purposes. Only indigenous plants of the area must be utilised.
40. Construction must include design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
41. The identified grave site must be avoided with a 30m buffer zone and fenced off with an access gate.
42. Should any archaeological sites, artefacts, paleontological fossils, or graves be exposed during construction work, work in the immediate vicinity of the find must be stopped, the South African Heritage Resources Agency (SAHRA) must be informed, and the services of an accredited heritage professional obtained for an assessment of the heritage resources.
43. Hazardous substances must be stored in a bunded and designated area to avoid accidental leakage into the environment.
44. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste must be disposed of at a landfill licensed in terms of Section 20 (b) of the National Environment Management Waste Act, 2008 (Act No.59 of 2008).

## General

45. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
  - 45.1. at the site of the authorised activity,
  - 45.2. to anyone on request; and
  - 45.3. Where the holder of the Environmental Authorisation has a website, on such publicly accessible website.

46. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of Environmental Authorisation: 04/04/2023.



**Ms Milicent Solomons**

**Acting Chief Director: Integrated Environmental Authorisations**

**Department of Forestry, Fisheries and the Environment**

## **Annexure 1: Reasons for Decision**

### **1. Information considered in making the decision.**

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The listed activities as applied for in the application form received on the 14 November 2022 and amended application received 06 February 2023.
- b) The emails dated 14, 15 and 22 March 2023 confirming the details of the proposed development.
- c) The information contained in the final BAR dated 03 February 2023.
- d) The comments received from all interested and affected parties as included in the final BAR dated 03 February 2023.
- e) Mitigation measures as proposed in the EMPr for the facility, the generic EMPr and final BAR dated 03 February 2023.
- f) The information contained in the specialist studies contained within the appendices of the final EIAr.

### **2. Key factors considered in making the decision.**

All information presented to the Department was considered in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project which ties with the national government policies, plans, and programmes which have relevance to energy planning and production.
- c) The final BAR dated 03 February 2023 identified all legislations and guidelines that have been considered in the preparation of the BAR.
- d) The location of the proposed solar energy facility.
- e) The methodology used in assessing the potential impacts identified in the final BAR dated 03 February 2023 and the specialist studies have been adequately indicated.
- f) A sufficient public participation process was undertaken, and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 as amended for public involvement.

### **3. Findings**

After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the final BAR dated 03 February 2023 and sufficient assessment of the key identified issues and impacts have been completed.

- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the BAR and will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.