



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: 14/12/16/3/3/2/2291

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Mr. Ernst Jordaan Burger
Cygnis Energy (Pty) Ltd
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PER EMAIL / MAIL

Dear Mr. Burger

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED: FOR THE DEVELOPMENT OF THE UP TO 240MW LYRA 2 SOLAR PARK PHOTOVOLTAIC SOLAR ENERGY FACILITY WITH GRID CONNECTION INFRASTRUCTURE AND OTHER ASSOCIATED INFRASTRUCTURE NEAR THABAZIMBI WITHIN THE LEPHALALE LOCAL MUNICIPALITY IN THE LIMPOPO PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and the 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 from the date of the decision, as well as the provisions regarding the submission of appeals that are contained in the Regulations.

In terms of the Promotion of Administrative Justice Act, 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, Act No. 4 of 2013 which stipulate that the Department should conduct itself in a responsible manner when collecting, processing, storing, and sharing an individual or another entity's personal information by holding the Department accountable should the Department abuse or compromise your personal information in any way.

Your attention is drawn to Chapter 2 of the National Environmental Management Act, 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 prescribes 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.

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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 Department, 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: appeals@dfpe.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 or request a copy of the documents at appeals@dfpe.gov.za.

Yours faithfully


Mr. Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Forestry, Fisheries and the Environment
Date: 31/08/2023

cc:	Ms. Jacolette Adam	Exigent Engineering Consultants cc	Email: jacolette@exigent.co.za
	Ms. Melinda Rodgers	Limpopo Department of Economic Development, Environment & Tourism	Email: rodgersmc@ledet.gov.za
	Ms. Leseo Matlwa	Lephalale Local Municipality	Email: Leseo.Matlwa@lephalale.gov.za

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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

The development of the up to 240MW Lyra 2 Solar Park Photovoltaic Solar Energy Facility with grid connection infrastructure and other associated infrastructure near Thabazimbi within the Lephalale

Local Municipality in the Limpopo Province

Waterberg District Municipality

Authorisation register number:	14/12/16/3/3/2/2291
Last amended:	First issue
Holder of authorisation:	Cygnis Energy (Pty) Ltd
Location of activity:	Remaining Extent of Farm Groot Vogelstruisfontein 644 LQ (project site) Farm Welgelegen 469 LQ Remaining Extent of the Farm Peerboom 466 LQ Remaining Extent of the Farm Grootestryd 465 LQ Lephalale Local Municipality Waterberg District Municipality Limpopo Province

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 –

Cygnis Energy (Pty) Ltd

with the following contact details –

Mr. Ernst Jordaan Burger

PO Box 5

BRITS

0250

Telephone Number: (012) 400 9991

Cell phone Number: (082) 449 7626

Email Address: development@lewton.co.za

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><u>Listing Notice 1, Item 11</u></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>The Lyra 2 Solar Park will entail the construction and operation of:</p> <ul style="list-style-type: none"> • an on-site 22kV/132kV step-up substation, equipped with high-voltage power transformers, stepping up the voltage from 22kV (or 33kV) to 132kV, and one 132kV busbar with metering and protection devices (switching station). • the “Lyra 2” 132kV Powerline (double circuit), approximately 11.4km long, connecting the on-site 132kV switching station to the 132kV busbar of the new “Lyra” 132kV/400kV step-up Substation and 400kV Switching Station to be built in proximity of the Eskom Matimba Substation (Connection Alternative 1 @ 400kV). <p>Connection infrastructure is located outside urban areas or industrial complexes.</p>
<p><u>Listing Notice 1, Item 19</u></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 proposed Lyra 2 Solar Park 132kV Powerline will intercept wetlands and 1:100-year floodline that have been identified as per the National Freshwater Priority Areas (NFPEPA) database and as per specialist studies. The interception of these watercourses will exceed a volume of 10m³.</p>

<p><u>Listing Notice 1, Item 24</u></p> <p><i>“The development of a road-</i> <i>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres.”</i></p>	<p>Multiple internal roads will be constructed for the purpose of servicing the solar park. The widths of the proposed internal roads are approximately 8 m. During the construction phase, the access road from R510 and some of the internal roads will have a reserve wider than 13.5m to allow the transportation of abnormal goods (e.g., power transformers, etc.). The overall length of internal roads is approximately 40,000 m. The new access road from R510 will be 0.4km long.</p>
<p><u>Listing Notice 1, Item 28</u></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> <i>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.”</i></p>	<p>The Lyra 2 Solar Park can be regarded as an industrial development, where the proposed footprint will have an extension of approximately 490ha. During the construction phase, the existing vegetation within the proposed footprint will be cleared. The project site (Remainder of the Farm Groot Vogelstruisfontein 644 LQ) is currently being used for livestock grazing.</p>
<p><u>Listing Notice 2, Item 1</u></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.”</i></p>	<p>The proposed Lyra 2 Solar Park consists of the construction, operation, and maintenance of a Photovoltaic (PV) Power Plant with a maximum generation and storage capacity of up to 240MW at the point of connection (Maximum Export Capacity).</p> <p>The proposed solar photovoltaic facility, as well as the associated on-site high-voltage substation and Battery Energy Storage System (BESS), will be located on the Remainder of the Farm Groot Vogelstruisfontein 644 LQ.</p>

<p><u>Listing Notice 2, Item 15</u></p> <p><i>"The clearance of an area of 20 hectares or more of indigenous vegetation."</i></p>	<p>The proposed development will see the clearance of approximately 490ha of indigenous vegetation, corresponding to the proposed footprint and development area of the Lyra 2 Solar Park.</p>
<p><u>Listing Notice 3, Item 4</u></p> <p><i>"The development of a road wider than 4 metres with a reserve less than 13,5 metres –</i></p> <p><i>(e) in Limpopo;</i></p> <p><i>(i) in areas outside urban areas;</i></p> <p><i>(aa) A protected area identified in terms of NEMPAA, excluding disturbed areas;</i></p> <p><i>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</i></p> <p><i>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas."</i></p>	<p>Multiple internal roads will be constructed for the purpose of servicing the Lyra 2 Solar Park. The widths of the proposed internal roads are approximately 8m. During the construction phase, the access road from R510 and some of the internal roads will have a reserve wider than 13.5m to allow the transportation of abnormal goods (e.g., power transformers, etc.). The overall length of internal roads is approximately 40,000m. For Lyra 2 Solar Park, the new access road from R510 will be 0.4km long.</p> <p>For the Lyra 2 Solar Park, the Terrestrial specialist noted that the project area is not located close to any Listed Threatened Ecosystem. The project area is near the listed NFEPA river, named Sandloop River, although this river will not be impacted by the development footprint.</p> <p>The proposed development footprint does not have any Critical Biodiverse Areas (CBAs) present on the site. The whole proposed project area, including the powerline corridors, falls within the classification of other natural areas (ONA). Small sections representing No Natural Habitat Remaining (NNHR) are located on the eastern side outside of the Lyra 2 Solar Park area and these areas are also highly suitable for the development.</p>

<p><u>Listing Notice 3. Item 12</u></p> <p><i>“The clearance of an area of 300 square metres or more of indigenous vegetation”</i></p> <p><i>(e) in Limpopo</i></p> <p><i>(ii) Within critical biodiversity areas identified in bioregional plans;</i></p>	<p>The proposed development will see to the clearance of approximately 490ha of indigenous vegetation. The screening tool has identified Other Natural Areas (ONA) in the Lyra 2 Solar Park development area.</p>
<p><u>Listing Notice 3. Item 14</u></p> <p><i>“The development of-</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 10 square metres or more;</i></p> <p><i>where such development occurs-</i></p> <p><i>(a) within a watercourse;</i></p> <p><i>(e) in Limpopo;</i></p> <p><i>(i) in areas outside urban areas;</i></p> <p><i>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</i></p> <p><i>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</i></p> <p><i>(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.”</i></p>	<p>The proposed development area of the Lyra 2 Solar Park and connection infrastructure is 8.83km from the D'nyala Nature Reserve.</p> <p>The Terrestrial specialist noted that the project area is not located close to any Listed Threatened Ecosystem. The project area is near the listed NFEPA river, named Sandloop River, although this river will not be impacted by the development footprint.</p> <p>The proposed development footprint of the Lyra 2 Solar Park does not have any Critical Biodiverse Areas (CBAs) present on the site. The whole proposed project area, including the powerline corridors, falls within the classification of other natural areas (ONA). Small sections representing No Natural Habitat Remaining (NNHR) are located on the eastern side outside of the Lyra 2 Solar Park area and these areas are also highly suitable for the development.</p>

as described in the Environmental Impact Assessment Report (EIAr) dated July 2023 at:

SG 21 Code:

Farm names & Portion numbers	SG 21 Digit Code
Remaining Extent of Farm Groot Vogelstruisfontein 644 LQ (project site)	T0LQ00000000064400000
Farm Welgelegen 469 LQ	T0LQ00000000046900000
Remaining Extent of the Farm Peerboom 466 LQ	T0LQ00000000046600000
Remaining Extent of the Farm Grootestryd 465 LQ	T0LQ00000000046500000

Geographical Coordinates:

Development Area / PV plant footprint		
Point	Latitude	Longitude
P1	23° 38' 26.53" S	27° 44' 49.24" E
P2	23° 38' 23.24" S	27° 44' 50.90" E
P3	23° 38' 20.76" S	27° 44' 51.25" E
P4	23° 38' 18.71" S	27° 44' 52.37" E
P5	23° 38' 16.50" S	27° 44' 54.15" E
P6	23° 38' 06.65" S	27° 45' 03.61" E
P7	23° 38' 01.73" S	27° 45' 02.59" E
P8	23° 38' 00.31" S	27° 45' 00.14" E
P9	23° 37' 57.86" S	27° 44' 58.85" E
P10	23° 37' 57.80" S	27° 44' 50.46" E
P11	23° 37' 56.68" S	27° 44' 44.45" E
P12	23° 37' 56.16" S	27° 44' 36.74" E
P13	23° 37' 58.76" S	27° 44' 29.88" E
P14	23° 37' 59.04" S	27° 44' 27.75" E
P15	23° 37' 56.94" S	27° 44' 25.66" E
P16	23° 37' 54.45" S	27° 44' 32.32" E
P17	23° 37' 53.68" S	27° 44' 36.68" E
P18	23° 37' 53.74" S	27° 44' 44.99" E
P19	23° 37' 54.86" S	27° 44' 49.86" E
P20	23° 37' 55.02" S	27° 44' 53.07" E
P21	23° 37' 50.66" S	27° 44' 53.04" E
P22	23° 37' 42.77" S	27° 44' 49.50" E
P23	23° 37' 38.65" S	27° 44' 49.47" E
P24	23° 37' 55.67" S	27° 43' 27.23" E
P25	23° 38' 08.33" S	27° 43' 21.64" E
P26	23° 38' 19.33" S	27° 43' 19.25" E
P27	23° 38' 28.34" S	27° 43' 12.84" E
P28	23° 38' 40.18" S	27° 42' 60.00" E
P29	23° 38' 56.01" S	27° 42' 54.97" E
P30	23° 38' 26.97" S	27° 44' 41.41" E
P31	23° 38' 38.23" S	27° 44' 43.58" E

Overall extent: 490ha

Lyra 2 132kV Powerline

Point	Latitude	Longitude
P1 - On-site substation	23° 38' 11.56" S	27° 43' 22.68" E
P2 - bending point	23° 39' 13.36" S	27° 41' 05.04" E
P3 - bending point	23° 39' 11.98" S	27° 40' 47.69" E
P4 - bending point	23° 39' 16.33" S	27° 40' 37.99" E
P5 - bending point	23° 39' 28.57" S	27° 40' 31.15" E
P6 - bending point	23° 40' 09.57" S	27° 38' 11.63" E
P7 - bending point	23° 39' 59.95" S	27° 37' 52.40" E
P8 - bending point	23° 40' 03.77" S	27° 37' 24.56" E
P9 - bending point	23° 39' 58.16" S	27° 37' 19.74" E
P10 - Lyra 400kV substation	23° 39' 58.42" S	27° 37' 18.80" E

Overall length: 11.4km

On-site 22kV/132kV Substation and 132kV Switching Station

Point	Latitude	Longitude
P1	23° 38' 10.60" S	27° 43' 22.00" E
P2	23° 38' 08.82" S	27° 43' 25.98" E
P3	23° 38' 11.37" S	27° 43' 27.33" E
P4	23° 38' 13.16" S	27° 43' 23.35" E

Footprint: 1.10ha

Battery Energy Storage System (BESS)

Point	Latitude	Longitude
P1	23° 38' 13.86" S	27° 43' 21.35" E
P2	23° 38' 13.80" S	27° 43' 33.99" E
P3	23° 38' 19.70" S	27° 43' 19.99" E
P4	23° 38' 24.40" S	27° 43' 16.49" E
P5	23° 38' 28.99" S	27° 43' 16.52" E
P6	23° 38' 28.91" S	27° 43' 34.08" E

Footprint: 20ha

new access road from R510

Point	Latitude	Longitude
P1 - R510	23° 37' 46.50" S	27° 45' 05.21" E
P2 - Lyra 1 Development Area	23° 37' 50.93" S	27° 44' 52.87" E

Overall length: 0.4km

- for the up to **240MW Lyra 2 Solar Park** Photovoltaic Solar Energy Facility with grid connection infrastructure and other associated infrastructure near Thabazimbi, within the Lephalale Local Municipality in the Limpopo Province, hereafter referred to as “the property”.

The main infrastructure associated with the facility includes the following:

- Photovoltaic modules (mono or poly-crystalline, bi-facial modules);
 - Mounting systems for the PV arrays (single-axis horizontal trackers) and related foundations;
 - Internal cabling and string boxes;
 - Medium voltage stations, hosting DC/AC inverters and LV/MV power transformers;
 - Medium voltage receiving station(s);
 - Workshops & warehouses;
 - One **on-site 33kV/132kV step-up substation** with high-voltage power transformers, stepping up the voltage from 33kV (or 22k) to 132kV, and one 132kV busbar with metering and protection devices (switching station);
 - “**Lyra 2**” **132kV Powerline (double circuit), approximately 11.4km long**, connecting the on-site 132kV switching station to the 132kV busbar of the 132kV/400kV step-up substation and 400kV switching station to be built in proximity of the Eskom Matimba Substation Connection Alternative 1 @ 400kV;
 - Interventions on the Eskom Matimba Substation for the equipment of a new 400kV feeder bays.
 - Battery Energy Storage System (BESS), with a Maximum Export Capacity up to 240MW and a 6-hour storage capacity up to 1440MWh, with a footprint up to 20ha within the proposed PV plant footprint / fenced area, and will comprise the following equipment:
 - Up to 288 containers (each up to 40m²), each with a storage capacity of up to 5MWh and on a concrete platform. These will house the batteries, management system and auxiliaries.
 - Up to 120 transformer stations (up to 35m² each).
 - Up to an additional 10m² per container for cooling units.
 - Internal access roads up to 8.0m wide between rows of containers.
 - BESS will be connected:
 - to the PV plant by means of DC/DC inverters, and
 - to the 22kV (or 33kV) bus-bay of the on-site step-up substation by means of kiosk transformers, medium-voltage overhead lines and/or underground cables.
 - Temporary infrastructure including a site camp and a laydown area.
 - Electrical system and UPS (Uninterruptible Power Supply) devices;
 - Lighting system;
 - Grounding system;
-

- New access road, 0.4km long, from Regional Road R510;
- Internal roads;
- Fencing of the site and alarm and video-surveillance system;
- Water access point, water supply pipelines, water treatment facilities; and
- Sewage system.

Below is a table for the details or dimensions of the up to **240MW Lyra 2 Solar Park** Photovoltaic Solar Power Plant with grid infrastructure and other associated infrastructure:

Component	Descriptions/dimensions
Output capacity of the PVPP	Maximum Export Capacity (@ the point of connection): up to 240MW Installed capacity - DC side (PV modules): up to 375.0MWp Installed capacity - AC side (inverters): up to 300.0MW
Height of PV panels	Up to 4.5m
Area of the PV Array	Total area of the PV Array: 174.71ha (considering 625,000 PV modules of 2.795m ²)
Number of inverters required	Each Medium voltage station will be equipped with DC/AC inverters that convert Direct Current (DC) into Alternate Current (AC) at a low voltage (typically 600V). There will be 100 medium voltage stations of 3.0MW throughout the proposed development. PV technology is in constant and rapid evolution, this means that the final choice of the type (e.g., central inverters or string inverters) and model of inverter can be taken at the time of the commission date, on the basis of the availability of inverters of the worldwide market and of the cost-efficiency curve. In any case, the total installed capacity of the inverters (AC side) will be up to 300MWac.
Area occupied by inverter/transformer stations/substations	There will be 100 medium voltage stations throughout the proposed development. Each will have an area of approximately 30m ² . Therefore, the combined area of the medium voltage stations will be 3000m ² .
Control rooms	The substation will be equipped with 2 control rooms. The control rooms will have a length of 30m and a width of 11m. Therefore, each of the control room will have an area of 330m ² .
Workshops/Warehouses	Two warehouses / workshops will be constructed within close proximity to the on-site substation and switching station. The three warehouses will have an area of approximately 30 m ² each: 900m ² in total.
Capacity of on-site substations	The on-site 22kV/132kV step-up substation and 132kV switching station will host two 300 MVA 22kV/132kV transformers (one as spare).

Component	Descriptions/dimensions
Area occupied by both permanent and construction laydown areas	<p>Project footprint / fenced area is up to approximately 490ha. Surface area (within the project footprint) will be covered by PV modules, internal roads, MV stations, HV substation and switching station, control buildings, warehouses and Battery Energy Storage System (BESS).</p> <p>The construction camp (temporary) will be up to 20ha in extent and will correspond to the area used for BESS.</p>
Areas occupied by buildings	<p>Medium-voltage stations occupy a footprint up to 3,000m².</p> <p>On-site substation and switching station occupy a footprint of approx. 11,250m². This area includes the control buildings.</p> <p>Workshop & Warehouse occupy a footprint of approx. 300m² each. In total, 3 warehouses are foreseen.</p> <p>Therefore, the total area occupied by buildings (MV stations, HV substation, Workshop & Warehouse) amounts to approx. 15,150m² (1.5ha).</p> <p>The Battery Energy Storage Systems (BESS) will be located in the area where the camp site will be for the purpose of the construction phase. This area will be approximately 20ha in size.</p>
Length of internal roads	Approximately 40,000m
Width of internal roads	Up to 8.0m, with a road reserve up to 13.5m
Access roads	<p>Access to the project site will be from an existing access road, 0.4km long, coming from the Regional Road R510 and getting to the site from the East. This existing dust road will be upgraded at a higher standard.</p>
Proximity to the grid connections	<p>Connection Alternative 1 @ 400kV: to the 400 kV busbar of the Eskom Matimba Substation, via the Powerline Corridor 1, ±12 km long (Preferred).</p> <p>The following connection infrastructure is required:</p> <ul style="list-style-type: none"> • one 132 kV power line (double circuit), approximately 11.4 km long, connecting the on-site 132kV switching station to the 132 kV busbar of the 132kV/400kV step-up substation and 400kV switching station to be built in proximity of the Eskom Matimba Substation (Lyra 2 132kV Powerline)
Height of fencing	3.0m
Type of fencing	Wire mesh fencing with video-surveillance system.
Height of overhead powerlines	<p>132kV: up to 25m above the ground level</p> <p>400kV (if required): up to 45m above the ground level</p>

Component	Descriptions/dimensions
<p>Length and width of servitude of 132kV powerlines</p>	<p>Connection Alternative 1 @ 132kV: to the 132 kV busbar of the Eskom Matimba Substation, via the Powerline Corridor 1, ±12 km long (Preferred).</p> <p>In this case, the following connection infrastructure is required:</p> <ul style="list-style-type: none"> • One 132 kV power line (double circuit), approximately 11.4 km long, connecting the on-site 132kV switching station to the 132 kV busbar of the Eskom Matimba Substation (<u>Connection Alternative 1 @ 132kV</u>) • Interventions on the Eskom Matimba Substation for the equipment of a new 132 kV feeder bay. <p>Servitude width for a 132kV powerline: 36m (18m from each side of the centre line).</p>
<p>On-site substation and switching station</p>	<p>One on-site 22kV/132kV step-up substation and 132kV switching station is required, having a footprint of 11,250m² each.</p>
<p>Battery Energy Storage Facility</p>	<p>BESS with a Maximum Export Capacity up to 240MW each and a 6-hour storage capacity up to 1440MWh, with a footprint up to 20ha within the proposed PV plant footprint / fenced area.</p>

Conditions of this Environmental Authorisation

Scope of authorisation

1. The development of the up to **240MW Lyra 2 Solar Park** Photovoltaic Solar Power Facility, and the **preferred Grid Connection Alternative 1 (132 kV power line (double circuit), approximately 11.4 km long)** with the associated grid connection infrastructure, to connect the facility to **the 400kV busbar** of the **Eskom Matimba Power Station** via the **12km long Powerline Corridor Alternative 1**, and other associated infrastructure near Thabazimbi, within Wards 1, 2, 4, 5 and 13 of the Lephalale Local Municipality in the Waterberg District Municipality in the Limpopo Province, as per the geographic coordinates cited in the tables above is hereby approved.
2. The site layout plan attached as Appendix A25 of the EIAR and labelled "*Lyra 2 Final Layout Map*" for the **240 WM Lyra 2 Solar Park** Photovoltaic Solar Power Plant is approved.
3. 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.
4. 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.
5. The activities authorised may only be carried out at the property as described above.
6. 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.
7. 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.
8. This activity must commence within a period of ten (10) years from the date of issue of this Environmental Authorisation. If the commencement of the activity does not occur within that period, the authorisation

lapses, and a new application for Environmental Authorisation must be made in order for the activity to be undertaken.

9. Construction must be completed within five (05) years of the commencement of the activity on site.

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 generic Environmental Management Programmes (EMPrs) *“for the development and expansion of substation infrastructure for the transmission and distribution of electricity”* for the onsite step-up substation/switching station, and *for the development and expansion for overhead electricity transmission and distribution infrastructure* for the powerlines, submitted as part of the EIAr dated July 2023, are approved. The approved final site layout plan indicating the position of the on-site step-up

substation/switching station and micro-sited powerline which includes coordinates must be appended to Part C of the approved generic EMPrs.

14. The EMPr for the PV facility, submitted as part of the EIAr is not approved and must be amended to include measures as dictated by the final site layout map and micro-siting, and the provisions of this environmental authorisation. The EMPr must be made available for comments to 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 the commencement of the activity.
 15. The EMPr amendment must include the following:
 - 15.1. The requirements and conditions of this environmental authorisation;
 - 15.2. All recommendations and mitigation measures recorded in the EIAr, and the specialist reports as included in the EIAr dated July 2023;
 - 15.3. A re-vegetation and habitat rehabilitation plan. Restoration must be undertaken as soon as possible after the completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats;
 - 15.4. A traffic management plan for the site access road to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimise impacts on local commuters e.g., limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations, including farming operations;
 - 15.5. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion;
 - 15.6. A chance-finds procedure, to be implemented in the event of fossils being uncovered;
 - 15.7. An effective monitoring system to detect any leakage or spillage of any hazardous substances during their transportation, handling, use, or storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or stormwater systems;
 - 15.8. A fire management plan; and
 - 15.9. The approved final site layout map.
 16. Once approved, the EMPr must be implemented and strictly adhered to. It shall be seen as a dynamic document and shall be included in all contract documentation for the development when approved.
 17. Changes to the approved EMPr must be submitted in accordance with the EIA Regulations applicable at the time.
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18. The Department reserves the right to amend an approved EMPr should any impacts that were not anticipated or covered in the EIAr be discovered.

Frequency and process of updating the EMPr

19. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 26 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.
20. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
21. 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.
22. In assessing whether to grant approval of an EMPr which has been updated as a result 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.
23. 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

24. 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.
 - 24.1. The ECO must be appointed before the commencement of any authorised activities.

- 24.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
- 24.3. The ECO must keep a record of all activities on site, problems identified, transgressions noted, and a task schedule of tasks undertaken by the ECO.
- 24.4. 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

25. 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.
26. 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.
27. The frequency of auditing and submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of the EIA Regulations, 2014 as amended.
28. 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.
29. 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.
30. 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

31. A written notification of commencement must be given to the Department no later than fourteen (14) days before 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

32. 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

33. 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

34. No activities, which require a water use license, must be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water and Sanitation.
35. A permit must be obtained from the relevant Department for the removal or destruction of indigenous, protected, or endangered plant or animal species (if any) and a copy of such permit/s must be submitted to the Department for record keeping.
36. A botanist must be appointed to perform a final walkthrough of the facility to identify areas that require protection and to identify species of conservation concern that can be translocated and/or require permits. The findings of the final walkthrough must inform the final EMPr and any amendments thereto.
37. No exotic plants may be used for rehabilitation purposes. Only indigenous plants of the area may be utilised.
38. Foundations and trenches must be backfilled with originally excavated materials as much as possible. Excess excavation materials must be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
39. The washing of panels during maintenance must be done with biodegradable soaps to avoid soil contamination.
40. The powerlines must be marked with recommended bird flight diverters (such as brightly coloured 'aviation' balls, thickened wire spirals, or flapping devices) on potential areas of high impact as identified by an avifauna specialist, to increase the visibility of the lines for collision-susceptible species.
41. If any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell, and charcoal/ash

- concentrations), unmarked human burials, fossils or other categories of heritage resources are uncovered during construction, work in the immediate area must be halted, LIHRA and SAHRA must be alerted immediately, and a professional archaeologist or palaeontologist (depending on the nature of the finds) must be contacted as soon as possible to inspect the findings.
42. 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 stormwater run-off.
43. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, reuse, 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

44. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
- 44.1. at the site of the authorised activity;
 - 44.2. to anyone on request; and
 - 44.3. where the holder of the Environmental Authorisation has a website, on such publicly accessible websites.
45. 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 after 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 the authorisation.

Date of Environmental Authorisation: 3/08/2023



Mr. Sabelo Malaza

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 02 December 2022.
- b) The information contained in the final EIAr dated July 2023.
- c) The comments received from interested and affected parties as included in the EIAr dated July 2023.
- d) Mitigation measures as proposed in the EIAr and the EMPRs dated July 2023.
- e) The information contained in the specialist studies contained within the appendices of the EIAr dated July 2023 and as appears below:

Title	Prepared by	Date
Terrestrial Ecology Impact Assessment	AGES	March 2023
Aquatic Impact Assessment	Scientific Aquatic Services	March 2023
Wetland/riparian Impact Assessment	AGES	March 2023
Avifauna Impact Assessment	The Biodiversity Company	May 2023
Heritage Impact Assessment	Beyond Heritage Cultural Resource Consultants	March 2023
Agriculture Impact Assessment	AGES	March 2023
Visual Impact Assessment	Graham A Young Landscape Architect	April 2023
Palaeontology Impact Assessment	Prof. Marion Bamford	March-April 2023
Socio-Economic Impact Assessment	Glen Steyn & Associates	April 2023
Geotechnical Assessment	Geotechnical Specialist Services	May 2023
Floodline Impact Assessment	CWT Consulting	June 2023
EMPr	Exigent Engineering Consultants cc	July 2023

2. Key factors considered in making the decision.

All information presented to the Department was taken into account 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 stems from the response to the growing electricity demand, fuelled by increasing economic growth and social development and placing increasing pressure on South Africa's existing power generation capacity. Coupled with this, is the growing awareness of environmentally responsible development, the impacts of climate change, and the need for sustainable development. In addition, the primary rationale for the proposed solar photovoltaic (PV) facility is to add new generation capacity from renewable energy to the national electricity mix and to aid in achieving the targeted goal of all new installed generating capacity being derived from renewable energy forms, as targeted by DMRE.
- c) The EIAr dated July 2023 identified all legislations and guidelines that have been considered in the preparation of the EIAr.
- d) The location of the proposed up to **240MW Lyra 2 Solar Park** Photovoltaic Solar Power Plant with grid infrastructure and other associated infrastructure.
- e) The methodology used in assessing the potential impacts identified in the EIAr dated July 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 EIAr dated July 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 information contained in the EIAr dated July 2023 is deemed to be accurate and credible.
- d) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) EMPr measures for the pre-construction, construction, and rehabilitation phases of the development were proposed and included in the EIAr 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**.

Annexure 2: Locality Map

