



NOTICE OF AN ENVIRONMENTAL IMPACT ASSESSMENT PROCESS FOR THE PROPOSED ZWARTWITPENSBOK FONTEIN 480MW SOLAR PHOTOVOLTAIC FACILITY, KOEDOSKOP, WATERBERG DISTRICT, LIMPOPO PROVINCE

BACKGROUND INFORMATION DOCUMENT

DFFE Reference no. Pending

DATE: 27 July 2023

PURPOSE OF DOCUMENT

The Background Information Document (BID) serves as a notice in terms of Regulation 41 (2)(b) of the NEMA EIA Regulations of 2014 (GNR. 326) of the intent to develop a photovoltaic solar facility and associated infrastructure at Koedoeskop in the Waterberg District of the Limpopo Province.

The BID provides a brief description of the project and authorisation procedures being followed to obtain the necessary approvals to commission the project. Importantly it indicates how you can become involved and raise issues that may concern and/or affect you. The BID gives you the opportunity to:

- **Register as an interested and affected party (I&APs).**
- **Give initial comments**, raise issues/concerns about the project within the given timeframes to ensure that it is captured in the upcoming EIA Scoping Report.

You are herewith invited to register your interest in the project and to submit your comments by:

- Reviewing the BID.
- Completing the registration form at the end of the BID and emailing it to CEMS; and or
- Writing us a letter / contacting us / sending an email.

Only registered I&APs will receive further notifications regarding the EIA process and reports released for public review and comment.

Registrations and comments must be submitted on or before 28 August 2023 to:

EAP CONTACT DETAILS

Marissa Botha / Maryke André

Conserva Environmental Management Services
10 Knoppiesdoorn Avenue, Thabazimbi, 0387

Tel: 084 226 5584 / 072 755 5103

Email: conserva-ems@outlook.com

1. PROJECT BACKGROUND

Allied Green Energy (Pty) Ltd (AGE) proposes to develop a Solar Photovoltaic Facility with associated infrastructure on Portion 1 of the farm Zwartwitpensbokfontein 434-KQ.

The property is in the jurisdiction of Thabazimbi Local Municipality, 10km south-west of Koedoeskop along the D1234 Northam-Koedoeskop gravel road. GPS coordinates: S 24°56'44.12" E 27°26'25.38". (See **Figure 1** and **2** for the Locality Plans).

The proposed solar pv facility will have a total power generation capacity of up to 480MW, covering a total area of approximately 275-hectares. The facility will connect to the Eskom grid via the existing 132kV Spitskop-Mamba power line crossing the application property. The facility will link using an onsite substation and 132kV power line connection.

2. LEGAL REQUIREMENTS

The proposed project triggers several listed activities in Government Notice (GN) No. R. 324, R. 325, and R. 327 of 7 April 2017 (as amended), which require environmental authorisation in terms of the 2014 EIA Regulations (GNR 326) published under the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) from the National Department of Forestry, Fisheries and Environment (DFFE). The application is subject to a Scoping and EIA process.

The main activities associated with the project include GNR 325 (Listing Notice 2) Activity 1: *The development of a facility for the generation of electricity from a renewable resource where the output is 20MW or more* and Activity 15: *The clearance of an area of more than 20-hectares of indigenous vegetation.*

A General Authorisation (GA) / Water Use License Application (WULA) will also be required under the provisions of the National Water Act, 1998 (Act 36 of 1998) for Section 21(a) and (g) water uses from the Department of Water and Sanitation (DWS).

CEMS is the independent environmental assessment practitioner appointed to conduct the environmental authorisation process and WULA for the project.

3. PROJECT MOTIVATION

South Africa is experiencing a continued national energy crisis and the agricultural sector is bearing the brunt as like many other sectors. There has been an urgent call for installation of renewable energy sources to supplement the ailing Eskom power fleet.

AGE intends to sell 66% of the solar power generated at the facility to Eskom, 33% will be wheeled through the national grid to private users (i.e., nearby farmers, mine) and 1% will be supplied to Allied Farms (Pty) Ltd for commercial farming activities.

Allied Farms (Pty) Ltd is a sister company to AGE, and is a major supplier of maize, wheat, and soybean at Koedoeskop. The agricultural producer cannot afford to be without power for 1 day. Developing the solar facility will ensure a consistent power supply to Allied including nearby farmers.

4. PROJECT FEASIBILITY

South Africa has one of the highest solar radiation-levels in the world making it ideal for solar pv energy installations. The country's annual average 24-hour global solar radiation is about 220 W/m² vs. the world average of 100 – 150W/m².

South Africa has a large area (around 194,000 km²) of high radiation and Koedoeskop is one of the 'High to Moderate' solar resource areas in the country able to produce 8000-8500 Megajoule per square meter. (See **Figure 3**).

Solar energy generation in Koedoeskop is therefore highly feasible and the end users established.

5. SOLAR PV FACILITY LOCATION

AGE owns Portion 1 of the farm Zwartwitpensbokfontein 434-KQ. It is zoned for 'Agriculture' but previously used as a game farm.

The property has no water rights. Water use in the Crocodile West Irrigation Scheme already exceed the allocation and therefore no new applications would be entertained (*B. Greeff, DALRRD*). Dryland farming is not feasible at Koedoeskop nor is it supported by Department of Agriculture Land Reform and Rural Development (DALRRD).

The 88kV Northam-Rooiberg including the 132kV Spitskop-Mamba power lines cross the development property requiring a very short grid connection. It is for these reasons that AGE has selected the property to develop the solar facility.

The property is approximately 377-hectares of which 25% is hilly and 75% is flat. AGE should be able to develop the facility on the 250-275-hectares flat terrain on the western section of the property (i.e., assessment focus area).

The exact available developable area will be confirmed during the EIA process based on the geotechnical conditions and findings of the specialist studies.

6. PROJECT COMPONENTS

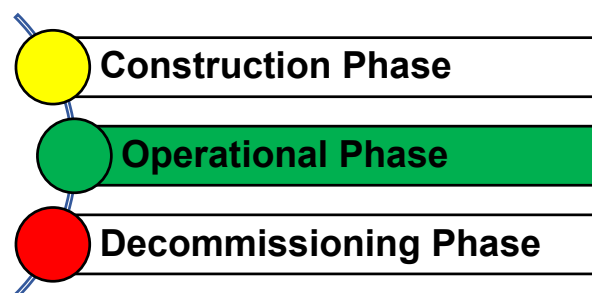
The solar facility components will include:

- 480MW Solar PV arrays consisting of 1000-Watt mono-facial solar panels.
- Mounting structures and underground cabling (AC/DC).
- Inverters and transformers.
- 132kV Onsite substation.
- Short onsite 132kV power line connection to Eskom grid.
- Operations building and Guardhouse.
- Main entrance from the D1234 Northam-Koedoeskop Road including internal access roads.
- Security residence (existing building to be upgraded).
- Perimeter fence and stormwater infrastructure
- Laydown area.

The facility will exclude a Battery Energy Storage System (BESS).

The current solar panel sizes available locally are 500 - 600 Watt/panel but technology is improving rapidly, therefore AGE will be able to install 1000-Watt panels.

The solar facility will comprise three phases:



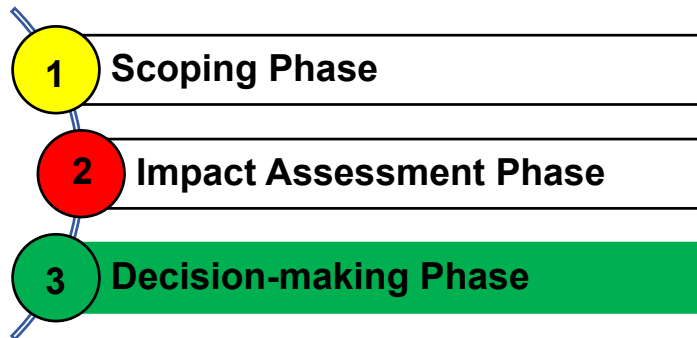
The project is anticipated to take 24 months to construct and commission. The overall lifespan of the solar facility will be approximately 20-25 years. The facility solar panels can either be replaced after 25-years or the facility can be decommissioned after it has reached its lifespan.

7. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS

The EIA is a planning and decision-making tool used to assess the potential environmental, social, and economic consequences of a project, through a consultative process, that may occur should it be authorised.

Public issues and concerns must therefore be identified timeously so it can be recorded and addressed in the EIA process for consideration by the competent authority, DFFE.

The EIA will inform the DFFE and the public of the project consequences, should it be authorised. The EIA process is conducted in line with regulation 21-24 of the NEMA EIA Regulations (GNR 326 as amended in 2017) which comprise three phases:



During the Scoping Phase the potential negative and positive consequences relevant to the project area identified to determine the aspects to be focussed on during the Impact Phase which require more detailed specialist investigations i.e., Plan of Study for the EIA.

The potential impacts will be identified through initial desktop analysis, environmental screening and site verification, initial specialist inputs including comments received from the public and key commenting authorities and experience from similar projects. The findings will be presented in a **Draft Scoping Report and will be made available for 30-days public and authority review.**

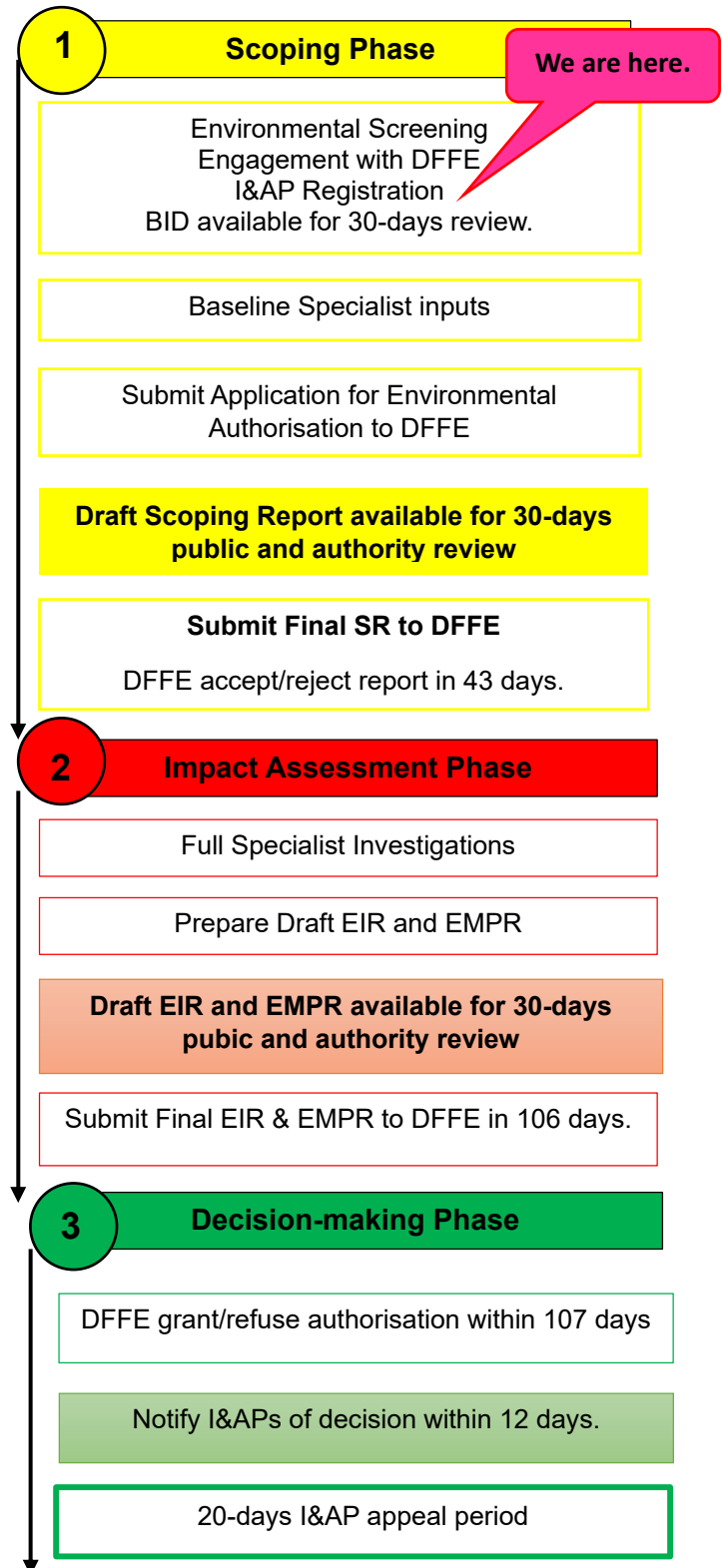
Once the DFFE approves the Scoping Report and Plan of Study for the EIA, the Impact Assessment Phase will commence during which detailed specialist investigations will be undertaken for the issues identified during the Scoping Phase. The findings will be presented in a **Draft Environmental Impact Report (EIR)** which provides an overview of the potential impacts and overall significance including the prescribed mitigation measures to be adhered to minimise these to acceptable levels.

An auditable **Environmental Management Programme (EMPR)** will be prepared that recommends the environmental management specifications to be observed by AGE during the construction, operation, and decommissioning phases of the facility. **Both the Draft EIR and EMPR will be released for 30-days public and authority review.**

Finalised reports will be submitted to the DFFE who will reach a decision on the application within 107 days.

I&APs will be notified of the decision and the opportunity to appeal the decision.

The EIA process is regulated at 300-days. It comprises the following basic steps presented in Figure 4:



8. WATER USE LICENSE APPLICATION

The solar pv facility will require water for construction activities and for domestic purpose (i.e., guardhouse, security residence) during its operation.

There is an existing equipped borehole that can be repaired and used as water supply for the facility.

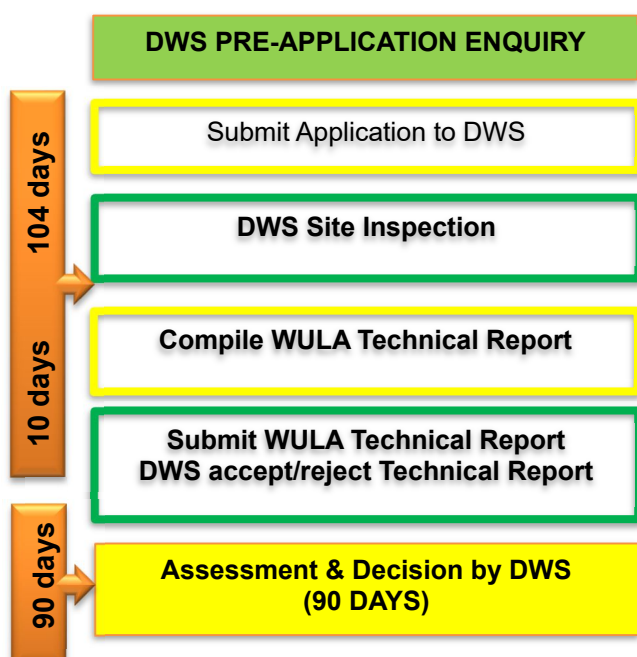
There is also an existing septic tank and soak away system on the property where greywater from the guardhouse and security residence can be disposed to.

AGE will therefore apply to the Department of Water and Sanitation (DWS): Crocodile Proto CMA for either a General Authorisation (GA) / Water Use License Application (WULA) in terms of section 39 / 40 of the National Water Act (Act 36 of 1998) (NWA) for water uses specified under Section 21 (a) and (g). The expected water use and greywater disposal will be very low. The DWS will confirm if the expected quantities can be generally authorised or must be licensed. The applicable water uses include:

- **Section 21 a** – Abstraction of water from a borehole for domestic purposes.
- **Section 21 g** – Disposing of greywater into an existing septic tank and soakaway system generated at the onsite guard/security house.

The application will be subject to a WULA Procedure as set out in the NWA WULA Regulations of 2017 (GNR. 267). The basic procedure will include:

- Pre-application enquiry and engagement to DWS
- Application submission to DWS
- DWS site inspection
- Compile and submit a Water Use Technical Reports to DWS
- DWS evaluation and assessment
- DWS issue decision (water use license)
- EAP inform the registered I&APs of the decision.



9. POTENTIAL IMPACTS & REQUIRED SPECIALIST STUDIES

Several potential impacts have been identified that will be investigated further during the EIA process.

The potential impacts have been informed by the DFFE GIS-based National web-based Environmental Screening Tool Report and typical known impacts for solar pv facilities.

The following specialists will be conducted as part of the EIA process based on the identified key impacts:

- Geotechnical Investigation
- Agricultural Potential Compliance Statement
- Aquatic Compliance Statement
- Heritage Impact Assessment Study
- Palaeontological Field Study
- Level 3 Visual Impact Study
- Terrestrial Biodiversity Impact Study
- Regime 2 Avifauna Study

Additional impacts may be added or considered insignificant based on the finding of further site inspections and inputs received from the public.

10. PUBLIC PARTICIPATION (PP)

Public participation (PP) is a key component of the EIA process and will be conducted in line with both the NEMA EIA Regulations (regulation 39-44) and the NWA.

The PPP aims to engage I&APs and provide an opportunity for the expression of public views on the environmental impacts of the application. All public issues and views on impacts are documented, addressed, and responded to in the EIA process and incorporated into environmental reports for consideration by the DFFE.

It is important that relevant I&APs are identified and involved in the PPP from the beginning of the process to help focus the EIA process plan. The project PPP is illustrated below.

The public is encouraged to get involved in the EIA process by:

- Registering an Interested and Affected Party.
- Review and submitting comments on the BID, Draft Scoping Report, Draft EIR and EMPR.

Targeted meetings will also be held with key commenting authorities and stakeholder as required during the EIA process.

To receive further communication regarding the project, **please register by completing the attached registration form** and sending it back to CEMS **on or before 28 August 2023**.

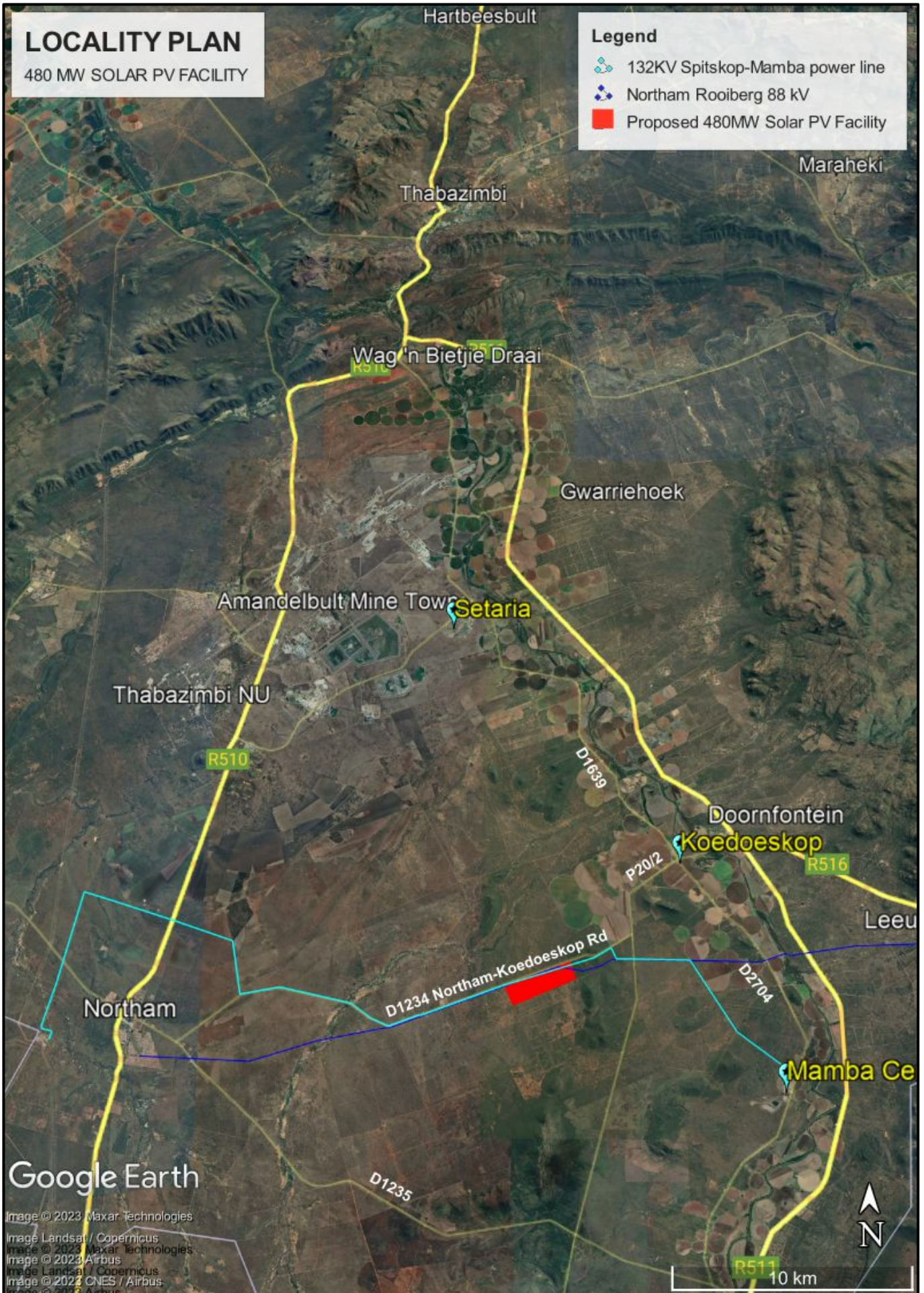


Figure Error! No text of specified style in document.: Project Locality Plan (Regional Plan)

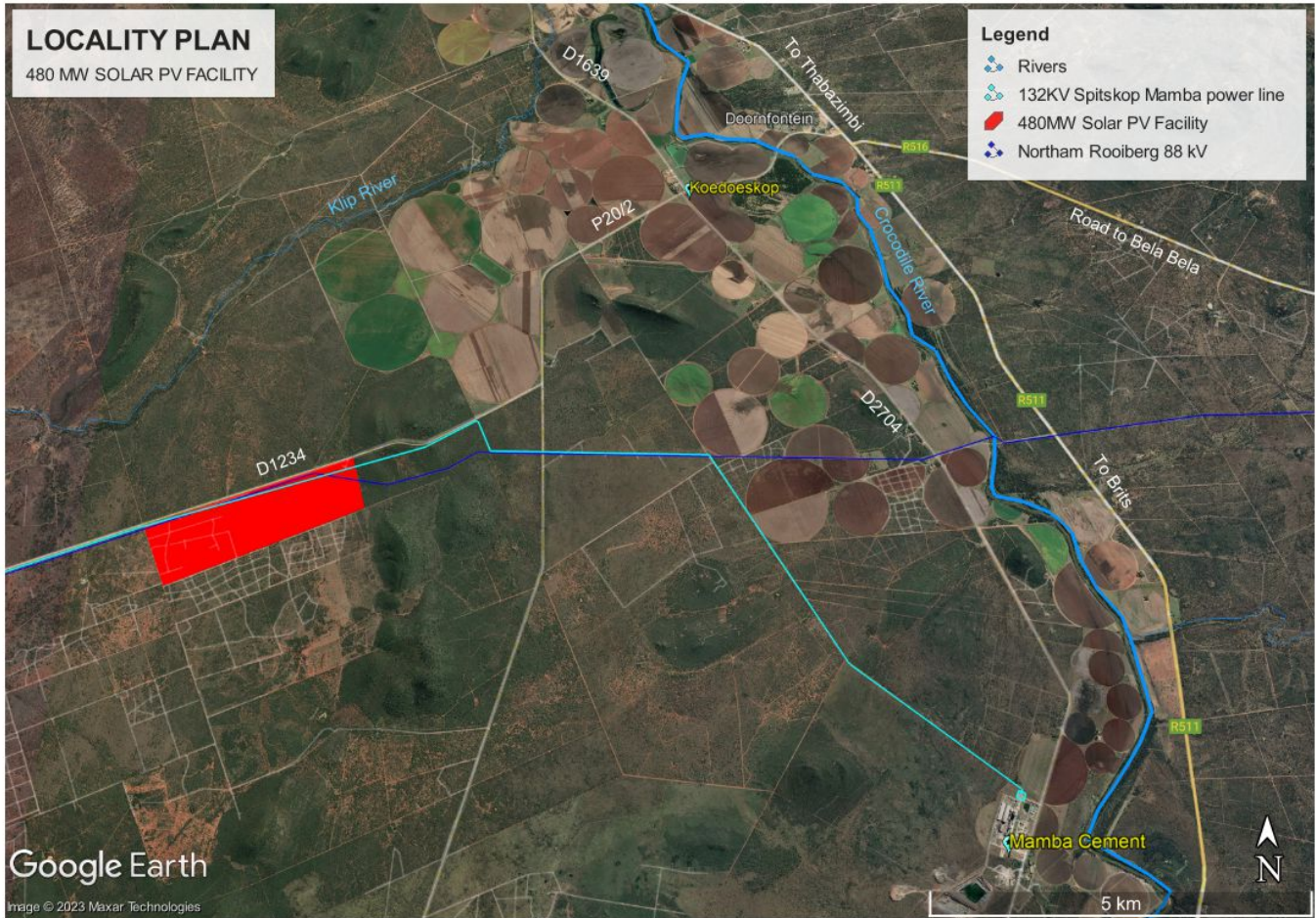


Figure 2: Project Locality Plan (Local Plan)

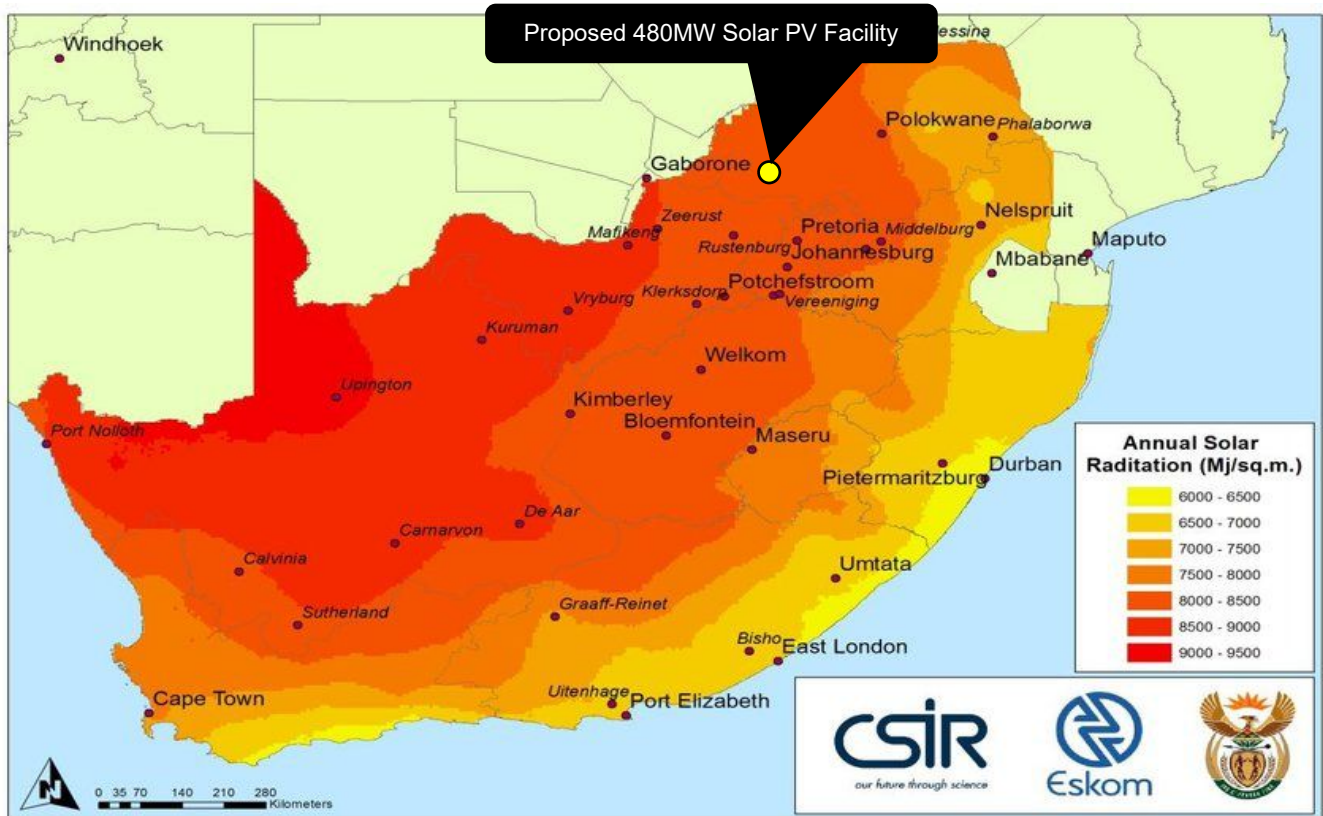


Figure 3: Annual Solar PV Radiation Plan of South Africa. The project site is indicated using a yellow dot/ circle. (Image courtesy of CSIR)



CONSERVA

Environmental Management Services

Registration and Comments Form

Scoping and EIA Process for Proposed
480MW Solar PV Facility at Koedoeskop,
Limpopo Province

INTERESTED AND AFFECTED PARTY REGISTRATION DETAILS:

TITLE:			
NAME AND SURNAME:			
CAPACITY			
ORGANISATION			
POSTAL ADDRESS			
TEL NO		CELL NO	
EMAIL ADDRESS			
INTEREST IN THE MATTER:			

Yes, I would like to participate in the EIA process.	YES
No, kindly remove me from the project mailing list.	NO

COMMENTS (You are welcome to use a separate sheet, if required)

Please provide details of a friend/neighbour/colleague whom we must add to the project mailing list:

Title: _____ Name: _____

Surname: _____ Organisation: _____

Tel: _____

Mobile: _____

Email: _____

Complete and return this form to CEMS
no later than **28 August 2023**.

Attention:

Marissa Botha / Maryke André

Email: conserva-ems@outlook.com

Tel: 084-226-5584