BACKGROUND INFORMATION DOCUMENT

Environmental Impact Assessment for the proposed Meerkat Solar Power Plant near Vryburg, North West Province

ENVIRONAMICS

1. Introduction

Meerkat Solar Power Plant (Pty) Ltd. is proposing to develop an 115MW photovoltaic (PV) solar energy near Vryburg situated in the Naledi Local Municipality in the North West Province. The project will be known as the proposed Meerkat Photovoltaic Solar Energy Facility near Vryburg, North West Province.

The purpose of the proposed PV energy facility will be to evacuate the generated power into the Eskom Holdings SOC Ltd (Eskom) electricity grid. If successful, Meerkat Solar Power Plant will be remunerated on a per kilowatt hour generated basis by Eskom in terms of a 20 year Power Purchase Agreement. Meerkat Solar Power Plant will be required to apply for a generation license from the National Energy Regulator of South Africa (NERSA). Depending on the economic conditions following the lapse of this period, the facility can either be decommissioned or the power purchase agreement may be renegotiated and extended.

The purpose of this background information document (BID) is to provide interested and affected parties (I&APs) with:

- Information on the need for an Environmental Impact Assessment (EIA);
- An overview of the proposed photovoltaic solar energy facility;
- An overview of the EIA process and specialist studies being undertaken to assess the potential impacts associated with the proposed facility; and
- Details of how I&APs may become involved in the process, receive information, or raise issues, which may concern and/or interest them.

2. The need for an EIA

The EIA Regulations, 2014 (GN. R.982) published in terms of the National Environmental Management Act (Act No. 107 of 1998) determine that an environmental authorisation is required for certain listed activities, which might have detrimental impacts on the environment. The following activities have been identified with special reference to the proposed development and are listed in the EIA Regulations:

- Activity 11(i) (GN.R. 983): *"The development of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts."*
- Activity 15 (Activity 11(i) (GN.R. 983): *"The development of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts."*
- Activity 28 (ii) (GN.R. 983): *"Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 1998 and where such development (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare."*
- Activity 1 (GN.R. 984): *"The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more..."*
- Activity 15 (GN.R. 984): *"The clearance of an area of 20 hectare or more of indigenous vegetation..."*

- Activity 4 (GN.R. 985): "*The development of a road wider than 4 metres with a reserve less than 13.5 metres (e) in North West (i) outside urban areas, in (ee) critical biodiversity areas as identified in bioregional plans..*"
  Activity 12 (GN.R. 985): "*The clearance of an area of 300 square metres or more of indigenous vegetation…(a) in North West (ii) within critical biodiversity areas identified in bioregional plans.*"

Being listed under Listing Notice 1, 2 and 3 (GN.R. 983, 984 & 985) implies that the development is considered as potentially having a significant impact on the environment. Subsequently a 'scoping and EIR process' is required as described in Regulations 21-24. The 'scoping and EIR process' involves the identification and assessment of environmental impacts through specialist studies, as well as public participation.

3. Project description

The activity entails the development of a photovoltaic solar energy facility and associated infrastructure on the Portion 3 of the farm Vyflings Pan No. 598, Registration Division IN, North West. The proposed development is located in the North West Province, in the northern central interior of South Africa. The site is located approximately 23km north west of the town of Vryburg (refer to the attached locality map).

The project entails the generation of approximately 115MW electrical power through photovoltaic (PV) panels. The total footprint of the project will be approximately 250 hectares. The key components of the proposed project are described below:

- PV Panel Array - To produce 115MW, the proposed facility will require numerous linked cells placed behind a protective glass sheet to form a panel. Multiple panels will be required to form the solar PV arrays which will comprise the PV facility. Due to the fact that this project only requires 250 hectares of land, there is scope to avoid major environmental constraints through the final design of the facility. The PV panels will be tilted at a northern angle in order to capture the most sun.

- Wiring to Central Inverters - Sections of the PV array will be wired to central inverters. The inverter is a pulse width mode inverter that converts direct current (DC) electricity to alternating current (AC) electricity at grid frequency.

- Connection to the grid - Connecting the array to the electrical grid requires transformation of the low voltage from 480V to a medium voltage of for example 11kV, 22kV or 33kV to 132kV. The normal components and dimensions of a distribution rated electrical substation will be required. Output voltage from the inverter is 480V and this is fed into step up transformers to 132kV. An onsite substation will be required on the site to step the voltage up to 132kV, after which the power will be evacuated into the national grid via the Mookodi-Ganyesa 132kV transmission line. As Meerkat Solar Power Plant (Pty) Ltd. has not yet received a cost estimate letter from Eskom the exact scope of the grid connection might differ.

- Supporting Infrastructure - A control facility with basic services such as water and electricity will be constructed on the site and will have an approximate footprint 400m². Other supporting infrastructure includes voltage and current regulators and protection circuitry.

- Roads – Ready access already exist from a gravel road of the N14. However an internal site road network to provide access to the solar field and associated infrastructure will be required. All site roads will require a width of approximately 5-6m.

- Fencing - For health, safety and security reasons, the facility will be required to be fenced off from the surrounding farm.

4. Specialist studies to be conducted

There are a number of environmental impacts, both positive and negative that can be associated with a photovoltaic solar energy facility. Specialist studies will be conducted to identify and assess these potential impacts. Specialist studies will be guided by existing information, field observation and input from the public participation process. For this project, the following specialist studies have been identified as relevant:

- Geotechnical Report
- Heritage Impact Assessment
- Ecological Fauna and Flora Habitat Survey
- Visual Impact Assessment
- Soil, Land Capability and Agricultural Potential Study
- Social Impact Assessment
- Avifaunal Study

5. The EIA process and timeline for the project

Public participation is an integral part of the EIA process and aims to involve Interested and Affected Parties (I&APs) in the process by notifying them of the proposed project and encouraging them to voice their issues and concerns.

Through the EIA process the project is transparent and allows I&APs to comment on the project or raise concerns, which are included in the respective Scoping and Impact Assessment Reports and are taken into consideration during the authorities' assessment of the project. Table 1 indicates the key steps of the EIA process and the timelines for this project.

Table 1: Key steps of the EIA process

Activity	Prescribed timeframe	Timeframe
Site visit		26 Oct. 2015
Public participation (BID)	30 Days	11 Nov – 11 Dec 2015
Pre-application meeting (sign	-	18 Nov 2015
Conduct specialist studies	-	Nov 2015 - April 2016
Public Participation (BID) Round 2	30 Days	13 Jan. – 12 Feb. 2016
Submit application form and DSR	-	Feb. 2016
Public participation (DSR)	30 Days	Feb. – March 2016
Submit FSR	-	March 2016
Department acknowledges	10 Days	March 2016
Department approves/reject	43 Days	May 2016
Public participation (DEIR)	30 Days	May – Jun. 2016
Submission of FEIR & EMPr	-	Jul. 2016
Department acknowledges	10 Days	Jul. 2016
Decision	107 Days	October 2016
Department notifies of decision	5 Days	October 2016
Registered I&APs notified of decision	14 Days	October 2016
Appeal	20 Days	November 2016

6. Your involvement

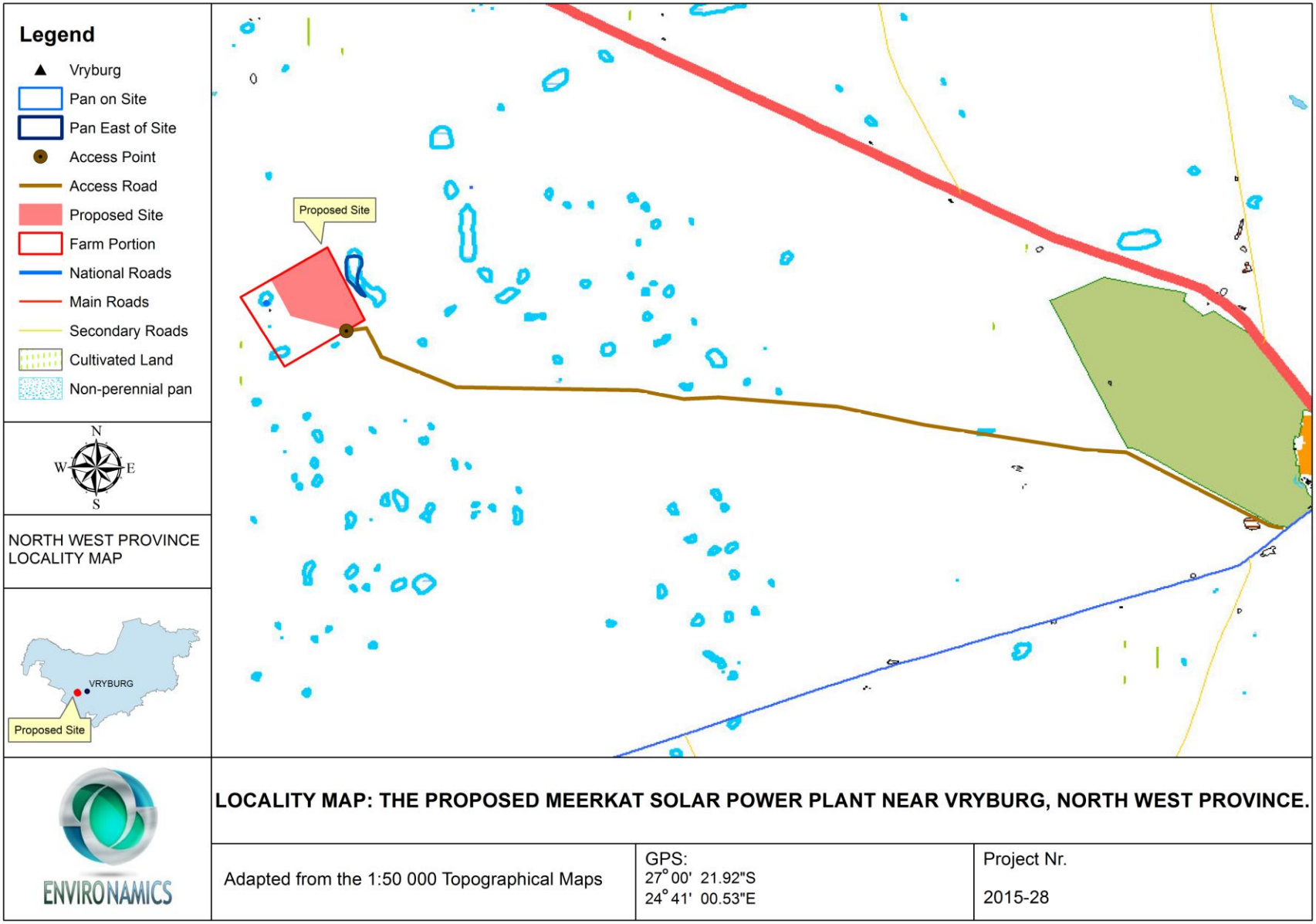
I&APs include individuals, communities or groups whose interest may be positively or negatively affected by the proposed development. You may get involved in the public participation process by:

- Registering as an I&AP.
- Submitting your issues, concerns and questions in writing on the attached comments and response form.
- Attending any public meetings which may be held during the course of the EIA process. As a registered I&AP you will automatically be invited to attend these meetings. Dates for public meetings will also be advertised in the local newspaper.
- Reviewing and commenting on the reports within the stipulated public review periods.

7. Comments and queries

All comments and queries may be directed to the following contact person:

Contact person: Marelie Griesel
Postal Address: PO Box 6484
Baillie Park, 2526
Telephone: 018 290 8228 (w)
086 762 8336 (f)
082 493 5166 (Cell)
Electronic mail: Environamicssa@gmail.com


Legend
Vryburg
Pan on Site
Pan East of Site
Access Point
Access Road
Proposed Site
Farm Portion
National Roads
Main Roads
Secondary Roads
Cultivated Land
Non-perennial pan
N
W
E
S
NORTH WEST PROVINCE
LOCALITY MAP
VRYBURG
Proposed Site
Proposed Site
ENVIRONAMICS
LOCALITY MAP: THE PROPOSED MEERKAT SOLAR POWER PLANT NEAR VRYBURG, NORTH WEST PROVINCE.
Adapted from the 1:50 000 Topographical Maps
GPS:
27° 00' 21.92"S
24° 41' 00.53"E
Project Nr.
2015-28