

JULY 2018

BASIC ASSESSMENT PROCESS

MOEDING SOLAR PV FACILITY,
NORTH WEST PROVINCE

BACKGROUND INFORMATION DOCUMENT

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Moeding Solar (Pty) Ltd ("Moeding Solar") is proposing the development of a photovoltaic (PV) solar energy generation facility, and associated infrastructure on a site situated approximately 8km south of Vryburg. The facility is known as the Moeding Solar PV Facility and will be located within the Naledi Local Municipality and within the greater Dr Ruth Segomotsi Mompati District Municipality in the North West Province.

The project site is located within Zone 6 of the Renewable Energy Development Zones (REDZ), known as the Vryburg REDZ. The procedure to be followed in applying for environmental authorisation for a large-scale project in a REDZ was formally gazetted on 16 February 2018 (in GN113 and GN114). As the project is located within one of the eight REDZ areas, the Moeding Solar PV Facility is now subject to a Basic Assessment and not a full EIA process, as well as a shortened timeframe of 57 days for the processing of an Application for Environmental Authorisation.

AIM OF THIS BACKGROUND INFORMATION DOCUMENT

This document aims to provide you, as an interested and/or affected party (I&AP), with:

- » an overview of the Moeding Solar PV Facility.
- » an overview of the Basic Assessment (BA) process and the studies being undertaken to assess the project.
- » details of how you can become involved in the BA process, receive information, or raise issues, which may concern and/or interest you.

OVERVIEW OF THE PROPOSED PROJECT

In response to the growing electricity demand within South Africa, the need to promote renewable energy and sustainability within the North West Province, as well as the country's targets for renewable energy, Moeding Solar is proposing the development of a commercial photovoltaic (PV) solar energy generation facility and associated infrastructure. The solar energy facility is proposed to be developed on Portion 1 of the farm Champions Kloof 731, Portion 4 and the Remaining Extent of Portion 3 of the farm Waterloo 730 situated approximately 8km south of Vryburg in the North West Province.

The facility is proposed to include multiple arrays (static or tracking) of photovoltaic (PV) solar panels with a contracted capacity of up to 100MW. The development footprint for the facility is anticipated to be approximately 300ha in extent.

Infrastructure associated with the solar energy facility will include:

- » Arrays of PV panels (either a static or tracking PV system) with a contracted capacity of up to 100MW.

- » Mounting structures to support the PV panels.
- » On-site inverters to convert the power from a direct current to an alternating current and an on-site substation to facilitate the connection between the solar energy facility and the Eskom electricity grid.
- » A new 132kV power line between the on-site substation and the Eskom grid connection point.
- » Battery storage with up to 6 hours of storage capacity.
- » Cabling between the project components, to be laid underground where practical.
- » Offices and workshop areas for maintenance and storage.
- » Temporary laydown areas.
- » Internal access roads and fencing around the development area.

The 132kV power line is proposed to be developed on the Remaining Extent of the farm Rosendal 673, Portion 4 and the Remaining Extent of Portion 3 of the farm Waterloo 730. Two power line alternatives are being considered:

- » Direct connection to the existing Mookodi Substation located on the northern portion of the project site.
- » A turn-in turn-out connection into the proposed Mookodi - Magopela 132kV power line (along the eastern boundary of the project site).

It is the developer's intention to bid the Moeding Solar PV Facility under the Department of Energy's (DoE) Renewable Energy Independent Power Producer Procurement (REIPPP) Programme. The power generated from the project will be sold to Eskom and will feed into the national electricity grid. The development of the project will also assist with the achievement of the electricity goals as set out in the Integrated Resources Plan.

Site-specific studies and assessments will be undertaken through the BA process in order to delineate areas of potential sensitivity within the broader areas and the identified study area. Once constraining factors have been determined, the layout of the solar energy facility can be planned to minimise social and environmental impacts.

USE OF SOLAR PV TECHNOLOGY AS THE RENEWABLE ENERGY TECHNOLOGY FOR THE MOEDING SOLAR PV FACILITY

Solar energy facilities, such as those using PV panels use energy from the sun to generate electricity through a process known as the **Photovoltaic Effect**. This effect refers to photons of light colliding with electrons, and therefore placing the electrons into a higher state of energy to create electricity. The solar energy facility will comprise of the following components (refer to Figure 1):



The Photovoltaic Cell

Individual PV cells are linked and placed behind a protective glass sheet to form a photovoltaic panel.

The Inverter

The photovoltaic effect produces electricity in direct current (DC). Therefore an inverter is required to change it to an alternating current (AC).

The Support Structure

The PV panels will be attached to a support structure up to 5m off the ground set at an angle so to receive the maximum amount of solar radiation (fixed technology), or set to track the sun (tracking technology) in order to increase the amount of energy produced.

The PV panels are designed to operate continuously for more than 20 years, unattended and with low maintenance.



Figure 1: Solar PV facility (Courtesy of Kabi Solar)

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS (BASIC ASSESSMENT PROCESS)

As per the EIA Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No 107 of 1998), Moeding Solar (Pty) Ltd require authorisation from the National Department of Environmental Affairs (DEA) (in consultation with North West Department of Rural, Environment and Agricultural Development (READ)) for the undertaking of the project. Due to the location of the Moeding Solar PV Facility project site within the REDZ, a BA process is required to be undertaken in accordance with GN114, as formally gazetted on 16 February 2018. In order to obtain authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations, 2014, as amended.

A BA is an effective planning and decision-making tool. It allows the environmental consequences resulting from a proposed activity to be identified and appropriately managed during construction and operation. It provides the opportunity for the developer to be fore-warned of potential environmental issues, and allows for the resolution of the issue(s) reported on in the BA report as well as dialogue with affected parties.

Moeding Solar has appointed **Savannah Environmental**, as the independent environmental consultant, to undertake the Basic Assessment for the project to identify and assess all potential environmental impacts associated with the project, and recommend appropriate mitigation measures in an Environmental Management Programme (EMPr). As part of these environmental studies, I&APs will be actively involved through the public involvement process being undertaken by **Savannah Environmental**.

WHAT ARE THE POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE MOEDING SOLAR PV FACILITY?

A number of potential environmental impacts associated with the Moeding Solar PV Facility have been identified, and will be assessed through specialist studies, including:

- » Impacts on biodiversity - which includes ecology, wetlands, fauna and flora
- » Impacts on avifauna
- » Impacts on soils and agricultural potential
- » Impacts on heritage including the archaeology and palaeontology
- » Impacts on the social and socio-economic environment
- » Impacts on the visual quality of the area



The independent specialist studies will be undertaken wherein the potentially significant impacts will be assessed and ground-truthed. Practical and achievable mitigation measures will be recommended in order to minimise the significance of the potential impacts identified. These recommendations will be included within an Environmental Management Programme (EMPr) compiled for the project.

Specialist studies will be informed by existing information, field observations and input from the public participation process. As an I&AP, your input is considered as an important part of the process, and we urge you to become involved.

PUBLIC INVOLVEMENT PROCESS

The sharing of information forms the basis of the public involvement process and offers you the opportunity to become actively involved in the BA process from the onset. Comments and inputs from I&APs during the BA process are encouraged in order to ensure that all potential impacts are considered within the ambit of the study.

The public involvement process aims to ensure that:

- » Information containing all relevant facts in respect of the applications are made available to I&APs for review.
- » Participation by potential I&APs is facilitated in such a manner that I&APs are provided with a reasonable opportunity to comment on the application.
- » Adequate review period is provided for I&APs to comment on the findings of the BA report.

YOUR RESPONSIBILITIES AS AN I&AP

In terms of Section 24J of the National Environmental Management Act, Act 107 of 1998 and the Department of Environmental Affairs Public Participation Guideline 2017, as part of the BA process, an I&AP has the responsibility to:

- » Provide comment regarding the projects within the specified timeframes;
- » Submit written comment directly to the EAP;
- » Disclose any direct business, financial, personal or other interest which that I&AP may have in the approval or refusal of the applications.

HOW TO BECOME INVOLVED

1. By responding (by phone, fax or email) to our invitation for your involvement which has been advertised in local newspapers.
2. By returning the attached Reply Form to the relevant contact person.
3. By attending the meetings to be held during the course of the BA process.
4. By contacting the consultants with queries or comments.
5. By reviewing and commenting on the BA report within the stipulated 30-day review periods.

If you consider yourself an I&AP for the Moeding Solar PV Facility, we urge you to make use of the opportunities created by the public involvement process to provide comment, or raise those issues and concerns which affect and/or interest you, and about which you would like more information. Your input into this process forms a key element of the BA process.

COMMENTS AND QUERIES

Direct all comments, queries or responses to:

Savannah Environmental

PO Box 148, Sunninghill, Johannesburg, 2157

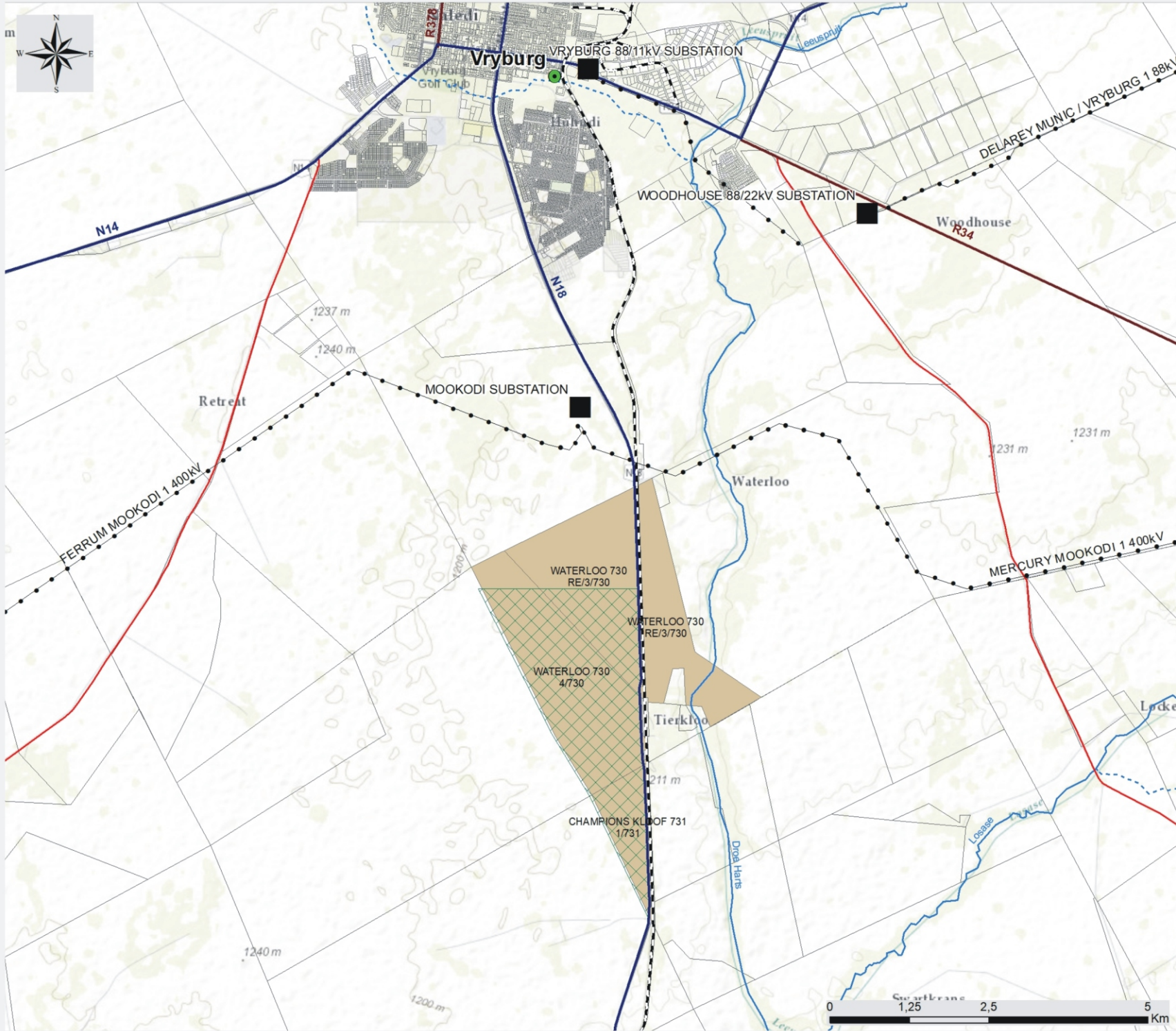
Phone: 011 656 3237

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To view project documentation, visit

www.savannahSA.com



Moeding Solar PV Facility and associated infrastructure, North West Province

Locality Map

Legend

- Town
- Eskom Substation
- Railway
- National Route
- Regional Road
- Main Road
- Non-perennial River
- Perennial River
- Project Site
- Affected Property
- Farm Portion



Scale: 1:56 360
 Projection: LO25
 Map Ref: Moeding Locality Map 27.06.2018

