APPENDIX C3
BACKGROUND INFORMATION DOCUMENT

savannah environmental

Q&A BOOKLET

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ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

KIARA PV CLUSTER

NORTH WEST PROVINCE

The Applicant, Voltalia South Africa (Pty) Ltd, is proposing the construction of seven (7) PV solar energy facilities & a grid connection to be assessed through separate Environmental Impact Assessment (EIA) processes and to be known as the Kiara PV1, Kiara PV2, Kiara PV3, Kiara PV4, Kiara PV5, Kiara PV6 and Kiara PV7 facilities. The facilities will be connected to the national grid via a new overhead power line connecting to the existing Watershed Substation. The projects are proposed to be located on a site approximately 16km north east of the town of Lichtenburg in the North West Province. The nature and extent of the seven solar PV facilities are explored in more detail in this Background Information Document (BID).

The solar PV facilities will comprise several arrays of PV panels and associated infrastructure and will range from a contracted capacity of 120MW to 130MW. The development area is situated within the Ditsobotla Local Municipality within the Ngaka Modiri Molema District Municipality. The site is accessible via an existing gravel road which provides access to the development area.

The development area for the PV facilities and associated infrastructure will be located on the following properties:
» Portion 2 of the Farm Hollaagte No. 8
» Remaining Extent of the Farm Hollaagte No. 8

The infrastructure associated with the PV facilities includes:

» Solar PV array comprising PV modules and mounting structures
» Inverters and transformers
» Cabling between the panels
» 132kV onsite facility substation
» Cabling from the onsite substation to the collector substation (either underground or overhead).
» Electrical and auxiliary equipment required at the collector substation that serves the solar energy facility, including switchyard/bay, control building, fences, etc.
» Battery Energy Storage System (BESS)
» Site and internal access roads (up to 8m wide)
» Site offices and maintenance buildings, including workshop areas for maintenance and storage.
» Temporary and permanent laydown area

A full Scoping and Environmental Impact Assessment (S&EIA) process is being undertaken in support of application for Environmental Authorisation (EA) for the development of the respective PV facilities. A Basic Assessment (BA) process is being undertaken for the grid connection infrastructure. The public participation processes for the projects will be undertaken concurrently, providing the public with an opportunity to comment on all projects simultaneously. Each solar PV facility will be constructed as a separate stand-alone project. To avoid areas of potential sensitivity and to ensure that potential detrimental environmental impacts are minimised as far as possible, the developer will identify a suitable development footprint within which the infrastructure of the PV facilities and its associated infrastructure is proposed to be located and fully assessed during the EIA Phase, as well as a grid connection corridor for consideration in the BA process.

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 proposed solar PV facilities and associated infrastructure.
» An overview of the EIA processes and specialist studies being undertaken to assess each of the projects.
» Details of how you can become involved in the EIA processes, receive information, or raise comments that may concern and/or interest you.

OVERVIEW OF THE PROJECTS

In response to the electricity demand and need for supply within South Africa, the need to promote renewable energy and sustainability in the North West Province, as well as the country's targets for renewable energy, the development of seven solar PV facilities and associated grid connection infrastructure is proposed. The development of the solar PV facilities will add additional capacity and new grid connection infrastructure to the national electricity grid network.

A project site considered to be suitable for the development of seven solar PV facilities, with an extent of approximately 856.5ha hectares in total, was identified by the project developer. The facility development area will be evaluated in the Scoping phase to identify sensitivities. Site-specific studies and assessments will delineate areas of potential sensitivity within the identified study area. Once constraining factors have been confirmed, the layout of the solar PV facilities within the development areas can be planned to minimise social and environmental impacts.

The layout for each facility will be designed to avoid sensitive environmental areas and features and is likely to be smaller than the development footprint identified for the scoping phase. Details for the respective projects are as follows:

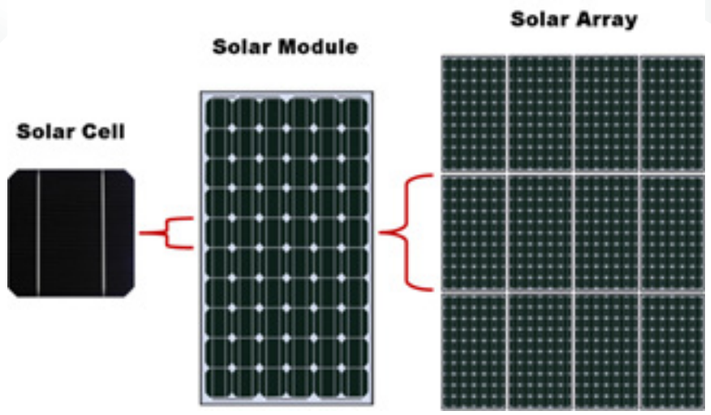
Project name	Capacity	Affected property
Kiara PV1 Facility	120MW	Portion 2 of the Farm Hollaagte No. 8
Kiara PV2 Facility	120MW	Portion 2 of the Farm Hollaagte No. 8
Kiara PV3 Facility	120MW	Portion 2 of the Farm Hollaagte No. 8
Kiara PV4 Facility	120MW	Portion 2 of the Farm Hollaagte No. 8
Kiara PV5 Facility	130MW	Remaining Extent of the Farm Hollaagte No. 8
Kiara PV6 Facility	130MW	Portion 2 of the Farm Hollaagte No. 8
Kiara PV7 Facility	130MW	Remaining Extent of the Farm Hollaagte No. 8

The projects are intended to assist in addressing South Africa's energy challenge and to align with the Department of Mineral Resources and Energy (DMRE's) Integrated Resource Plan (IRP) 2019, to pursue a diversified energy mix that reduces reliance on a single or a few primary energy resources. It is the Developer's intention to bid each renewable energy facility under the Renewable Energy Independent Power Producer Procurement (REIPPP) Programme, or similar programme. The power generated from each solar energy facility is planned to be sold to Eskom and fed into the national electricity grid through the proposed grid connection solution or to a private off-taker.

MORE ABOUT SOLAR PV TECHNOLOGY

Solar energy facilities 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 fields of the PV facilities will comprise the following components:

Photovoltaic Cells:
A photovoltaic (PV) cell is made of silicone that acts as a semiconductor used to produce the photovoltaic effect. PV cells are arranged in multiples/arrays and placed behind a protective glass sheet to form a PV panel. Each PV cell is positively charged on one side and negatively charged on the opposite side, with electrical conductors attached to either side to form a circuit. This circuit captures the released electrons in the form of an electric current (i.e. Direct Current (DC)).



Overview of a PV cell, module and array/panel (Source: pveducation.com)

A solar PV module is made up of individual solar PV cells connected together, whereas a solar PV array is a system made up of a group of individual solar PV modules electrically wired together to form a much larger PV installation. The PV panels will be fixed to support structures to maximise exposure to the sun.

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

Inverters:
Inverters are used to convert electricity produced by the PV cells from Direct Current (DC) into Alternating Current (AC) to enable the facility to be connected to the national electricity grid. Numerous inverters will be arranged in several arrays to collect and convert power produced by the facilities.

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

In accordance with the EIA Regulations, 2014 (as amended) published in terms of Section 24(5) of the National Environmental Management Act (No. 107 of 1998) (NEMA), the applicants require EA from the National Department of Forestry, Fisheries and the Environment (DFFE) in consultation with the North West Department of Rural, Environment, and Agricultural Development. In terms of Section 24(5) of NEMA, the EIA Regulations 2014 (as amended) and Listing Notices (GNR 327, GNR 325, and GNR 324), the applications for EA for the PV facilities are subject to the completion of S&EIA processes and that for the grid connection infrastructure is subject to the completion of a BA process. Each application is required to be supported by comprehensive, independent environmental studies undertaken in accordance with the EIA Regulations, 2014 (as amended).

An EIA is an effective planning and decision-making tool. It allows for potential environmental consequences resulting from a proposed activity to be identified and appropriately managed during the construction, operation, and decommissioning phases of development. It also provides an opportunity for the project applicant to be forewarned of potential environmental issues and allows for the resolution of issue(s) identified and reported on as part of the EIA process, as well as provides opportunity for dialogue with key stakeholders and Interested and Affected Parties (I&APs).

Savannah Environmental has been appointed as the independent environmental consultant responsible for managing the applications for EA and undertaking the supporting EIA process required to identify and assess potential environmental impacts associated with the projects, as well as propose appropriate mitigation and management measures to be contained within the Environmental Management Programmes (EMPrs). I&APs will be actively involved in the EIA processes through the public participation process.

WHAT ARE THE POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED PROJECTS?

The study area will be assessed by independent environmental specialists to identify the potential for environmental impacts. Specialist studies that are proposed as part of the EIA processes include the following:

Specialist study	Scope
Biodiversity Impact Assessment	Assessment of impacts on ecology, fauna and flora, and freshwater resources associated with disturbance of vegetation, fauna, habitats and ecological processes within the project area.
Avifauna Impact Assessment	Pre-construction monitoring in terms of the relevant guidelines to inform the assessment of the impact on avifaunal habitats and sensitive species.
Soils and Agricultural Potential Assessment	Determination of land types within the project area, and assessment of the significance of loss of agricultural land due to the project development and impacts relating to soil degradation and/or erosion.
Heritage Impact Assessment (Archaeology and Palaeontology)	Assessment of impacts on heritage resources due to disturbance or destruction of heritage sites and fossils during the construction phase through excavation activities, and assessment of impacts on heritage resources during operation as a result of visual impact.
Visual Impact Assessment	Determination of the presence of visual sensitive receptors in the area and assessment of the impact of the solar PV facilities and the grid connection solution on these receptors and the overall aesthetics within the area.
Social Impact Assessment	Assessment the positive and negative impacts on the social as a result of the construction and operation of the facilities.

Site-specific studies will be undertaken to assess the potential impact of the proposed development, in order to delineate areas of sensitivity within the affected farm portions, assess impacts associated with the projects and make recommendations regarding avoidance, management and mitigation of impacts. Studies will be informed by available information and detailed field investigations undertaken in accordance with the relevant guidelines and protocols. Once the constraining environmental factors have been determined, the layouts for the proposed facilities can be determined and presented in the EIA reporting.

PUBLIC PARTICIPATION PROCESS

The sharing of information forms the basis of the public participation process and offers I&APs the opportunity to become actively involved in the EIA processes. Comments and inputs from I&APs are encouraged to ensure that potential impacts are considered throughout the EIA processes. The public participation process aims to ensure that:

» Information containing all relevant facts in respect of the applications are made available to I&APs for review.
» I&AP participation is facilitated in such a manner that they are provided with reasonable opportunity to comment on the proposed projects.
» Adequate review periods are provided for I&APs to comment on the findings of the Scoping, EIA and Basic Assessment Reports.

An integrated public participation process will be conducted for all three EIAs. To ensure effective participation, the public participation processes include the following:

» Identifying I&APs, including affected and adjacent landowners and occupiers of land, and relevant Organs of State, and recording details within a database.
» |Notifying registered I&APs of the commencement of the EIA processes and distributing the Background Information Document (BID).
» Providing access to registered parties to Savannah Environmental's website, which centralises project information in a single digital platform.
» Providing an opportunity for I&APs to engage with the EIA project team.
» Placing site notices at the affected property/ies.
» Placing an advertisement in a local newspaper.
» Notifying I&APs of the release of the Reports for a 30-day review and comment period.

YOUR RESPONSIBILITIES AS AN I&AP

In terms of the EIA Regulations, 2014 (as amended) and the Public Participation Guidelines, 2014 your attention is drawn to your responsibilities as an I&AP:

» To participate in the EIA processes, you must register yourself on the I&AP database.
» You must ensure that any comments regarding the proposed projects are submitted within the stipulated timeframes.
» You are required to disclose any direct business, financial, personal, or other interest that you may have in the approval or refusal of the applications.

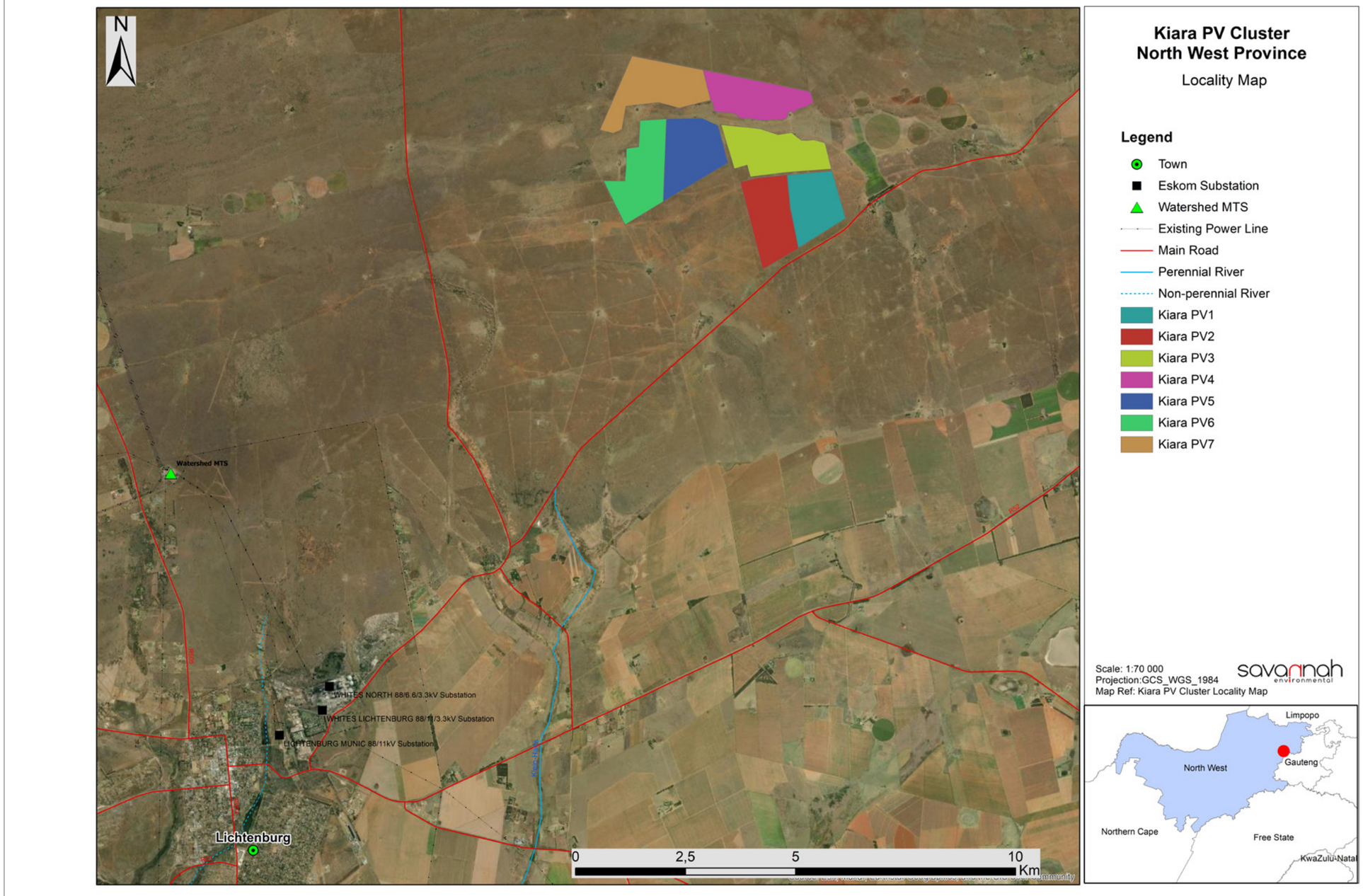
HOW TO BECOME INVOLVED

1. By responding by phone, fax, or e-mail, to the invitation for your involvement.
2. By returning the reply form to the relevant contact person.
3. By contacting the environmental consultant with queries or comments.
4. By reviewing and commenting on the Reports within the stipulated 30-day review and comment periods. Registered I&APs will automatically be notified of the release of the S&EIR for comment, and the closing dates by which comments must be received.

If you consider yourself an I&AP for the proposed projects, we urge you to make use of the opportunities created by the public participation process to provide comment, raise issues and concerns which affect and / or interest you, or request further information. Your input forms a key element of the EIA processes.

By completing and submitting the accompanying reply form, you automatically register yourself as an I&AP for the proposed projects, and are ensured that your comments, concerns, or queries raised regarding the projects will be noted. Please note that all comments received will be included in the project documentation. This may include personal information.

Figure 1: Locality map



COMMENTS AND QUERIES

Direct all comments, queries or responses to:

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