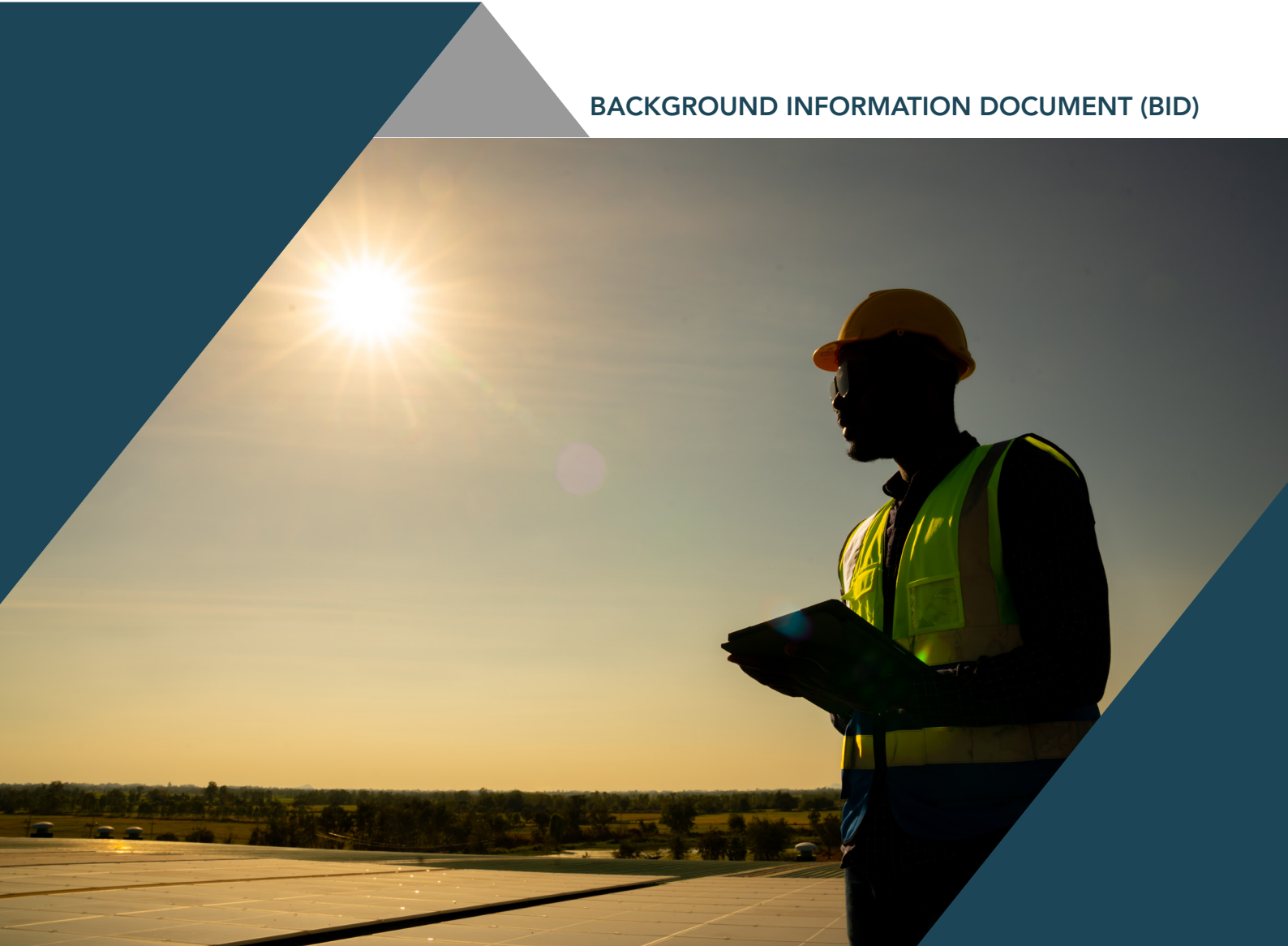


**APPENDIX E3**  
**BACKGROUND INFORMATION DOCUMENT**



BACKGROUND INFORMATION DOCUMENT (BID)



**September 2022**

BASIC ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

HARMONY MOAB KHOTSONG SOLAR PV FACILITY, VILJOENSKROON, FREE STATE PROVINCE

Harmony Moab Khotsong Operations (Pty) Ltd is looking to supplement its energy supply by implementing Photovoltaic (PV) generation, aiding their transition to a more sustainable and environmentally friendly energy mix.

The development of a solar photovoltaic (PV) facility with a generating capacity of up to 100MW is proposed on a site located north of the Harmony Gold Moab and south of the Harmony Gold Great Nologwa operations, approximately ~10km north of the town of Vierfontein within the Mqohaka Local Municipality, Fezile Dabi District Municipality, Free State Province. The solar PV development will be known as Harmony Moab Khotsong Solar PV Facility.

The PV development area includes eleven (11) farm portions, all owned by the Mine. These include:

- » Farm Anglo 593;
- » Farm Hoekplaats 598;
- » Farm Mispah 274;
- » Portion 1 of Farm Zaaiplaats 190;
- » Remaining Extent of Farm Doornkom Wes 446;
- » Farm Chrystalkop 69; and
- » Portions 1, 3, 4, 5, and the Remaining Extent of the Farm Zuiping 394.

The Harmony Moab Khotsong Solar PV Facility is located within the Klerksdorp Renewable Energy Development Zone (REDZ) the project is therefore subject to a Basic Assessment (BA) process, as well as a shortened timeframe of 57 days for the processing of an Application for Environmental Authorisation in accordance with the EIA Regulations, 2014 (as amended), as well as, GNR 114 as formally gazetted on 16 February 2018.

The nature and extent of the solar PV facility is explored in more detail in this Background Information Document (BID). A Basic Assessment (BA) process is being undertaken in order to obtain Environmental Authorisation (EA) for the development of the PV facility and associated infrastructure. The public participation process provides the public with an opportunity to comment on the project.

#### **AIM OF THIS BACKGROUND INFORMATION DOCUMENT**

This document aims to provide you, as an Interested and Affected Party (I&AP), with:

- » An overview of the proposed solar PV facility and associated infrastructure.
- » An overview of the Basic Assessment process and specialist studies being undertaken to assess the project.
- » Details of how you can become involved in the BA process, receive information, or raise comments that may concern and/or interest you.

#### **OVERVIEW OF THE PROJECT**

The generation is intended for own-use by the Mine, reducing the Mine's reliance on Eskom. The preferred site for the project is on properties which are owned by the Mine and are available for the proposed project and is therefore deemed technically feasible for such development to take place.

A project site considered to be technically suitable for the development of the solar PV facility, with an extent of approximately 1400ha, was identified. A development area of ~900ha was demarcated within this project site and allows an adequate footprint for the installation of a solar PV facility with a contracted capacity of up to 100MW, while allowing for the avoidance of environmental site sensitivities.

The full extent of the project site is to be evaluated in the Basic Assessment process to identify environmental sensitivities. Site-specific studies and assessments will be undertaken through the BA process in order to delineate areas of potential sensitivity within the identified study area and grid connection corridor/s. Once constraining factors have been determined, the layout of the solar PV facilities and the grid connection solution can be planned to minimise social and environmental impacts.

The infrastructure associated with the 100MW solar PV facility will include:

- » PV modules and mounting structures
- » Access roads, internal roads and fencing around the development area
- » Temporary and permanent laydown areas
- » Administrative building, control room, workshop, storage building, guard house, auxiliary buildings and structures, water supply infrastructure, weather station
- » Peripheral boundary wall & fencing
- » Inverters, transformers and up to 5 on-site facility substations and switching substations
- » Cabling between the project components, to be laid underground where practical
- » Grid connection infrastructure to be connected to the existing:
  - Vaalreefs Eleven Substation via a ~2km power line (located south-east of the facility);
  - Southvaal Plant Substation via a ~0.5km power line (located north-west of the facility); and
  - Southvaal Substation via a ~4km power line (located north of the facility).



Most of the site is located within the Vaal River Mining Area and is accessible via the Vermaasdrift road originating from the R76 south of the project site, and via the Stokkiesdraai road originating from the R30 west of the project site.

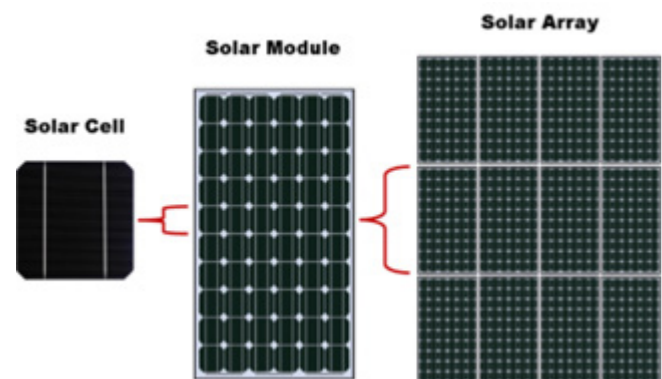
As of 2019, the Industrial sector was the leading electricity consumer in South Africa, with up to 56% of the total consumption (Ratshomo 2019). Mining and quarrying accounted for 10% of the industrial consumption (Chamber of Mines of South Africa, 2017). The successful development of the renewable energy project will enable Harmony Gold to make a valuable and meaningful contribution towards growing the green economy within the Free State Province and South Africa. This will assist the Free State in creating green jobs and reducing Green House Gas emissions, while reducing the energy demand on the Eskom national grid.

#### 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, 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 electricity grid. Numerous inverters will be arranged in several arrays to collect and convert power produced by the facilities.

#### BASIC 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 Environmental Authorisation (EA) from the Department of Small Business Development, Tourism and Environmental (DESTEA), as the Competent Authority. In terms of Section 24(5) of NEMA, the EIA Regulations, 2014 (GNR 326), Listing Notices (GNR 327, GNR 325, and GNR 324), as well as GNR 114 (the site is located within the Klerksdorp REDZ), the application for EA for the Harmony Moab Khotsong Solar PV Energy Facility is subject to the completion of a Basic Assessment (BA) process. The application for EA is required to be supported by comprehensive, independent environmental studies undertaken in accordance with Appendix 6 of the EIA Regulations, 2014, as amended, and where relevant, in line with the gazetted protocols.

A BA 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 applicants to be forewarned of potential environmental issues, and allows for the resolution of issue(s) identified and reported on as part of the BA processes, 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 application for EA, undertaking the supporting BA process required to identify and assess potential environmental impacts associated with the project, as well as propose appropriate mitigation and management measures to be contained within the Environmental Management Programme (EMPr). Generic EMPrs in accordance with GNR435 will be compiled for the grid connection solution. I&APs will be actively involved in the BA process through the public participation process.

#### WHAT ARE THE POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROJECT?

The development area and the grid connection corridors will be assessed by independent environmental specialists to identify the potential for environmental impacts. Specialist studies that are proposed as part of the BA process include the following:

- » Biodiversity – includes ecology, freshwater features, fauna and flora and assesses the potential impact and the associated disturbance of vegetation on the biodiversity of the area (including critical biodiversity areas and broad-scale processes).
- » Avifauna – which includes pre-construction monitoring in terms of the relevant guidelines and assesses the impact on avifaunal habitats and sensitive species.
- » Soils, Land Use, and Agricultural Potential – includes land types and assesses the significance of loss of agricultural land and soil degradation and/or erosion.
- » Heritage (Archaeology and Palaeontology) – which includes archaeology and palaeontology and assesses the potential of disturbance to or destruction of heritage sites and fossils during the construction phase through excavation activities.
- » Visual – which includes the visual quality of the area and assesses the impact of the solar PV facility and the grid connection solution on the aesthetics within the area.

- » Social – which assesses the positive and negative social impacts.

Specialist studies will be informed by existing information, previous experience in the area, 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 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 BA process. Comments and inputs from I&APs are encouraged to ensure that potential impacts are considered throughout the BA process. The public participation process aims to ensure that:



- » Information containing all relevant facts in respect of the application is 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 project.
- » An adequate review period is provided for I&APs to comment on the findings of the Basic Assessment Report.

To ensure effective participation, the public participation process 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 I&APs of the commencement of the BA process and distributing this Background Information Document (BID) to registered I&APs.
- » Providing access to registered parties to Savannah Environmental's website, which centralises project information and stakeholder input in a single digital platform.
- » Providing an opportunity for I&APs to engage with the EIA project team.
- » Placing site notices at the affected properties.
- » Placing an advertisement in a local newspaper.
- » Notifying I&APs of the release of the Report for a 30-day review and comment period.
- » Holding meetings with key stakeholders (virtual and in person), and providing an opportunity to engage with the project team via appropriate virtual platform (MS Teams / Zoom, etc), multi-media (i.e., SMS / WhatsApp)

#### Your responsibilities as an I&AP

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

- » To participate in the BA process, you must register yourself on the I&AP database.
- » You are required to disclose any direct business, financial, personal, or other interest that you may have in the approval or refusal of the application.
- » You must ensure that any comments regarding the proposed project is submitted within the stipulated timeframe.

#### How to become involved

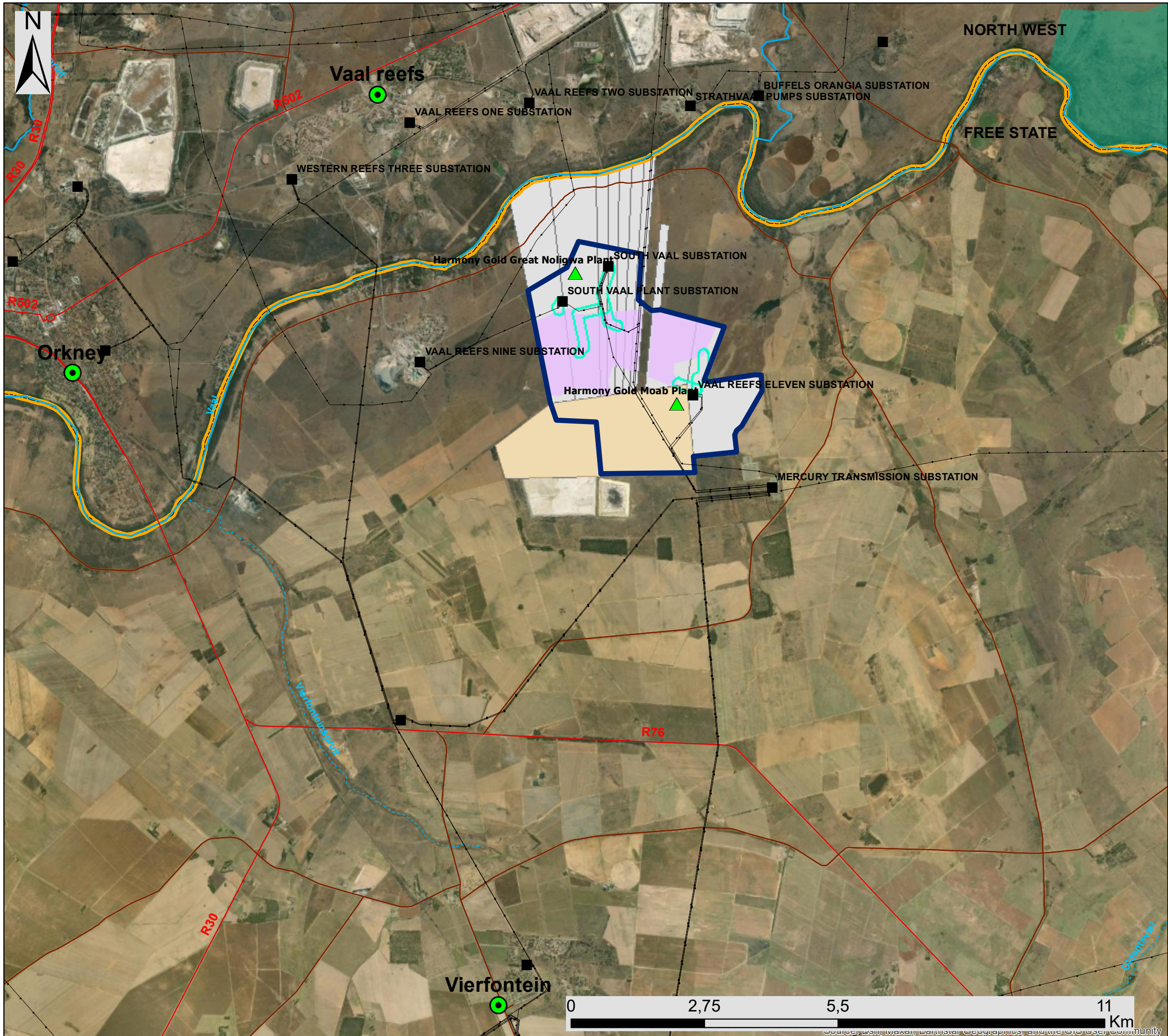
- » By responding by phone, fax, or e-mail to the invitation for your involvement.
- » By returning the reply form to the relevant contact person.
- » By engaging with the project team during the BA process or contacting the environmental consultant with comments.
- » By reviewing and commenting on the report within the stipulated review and comment period Registered I&APs will automatically be notified of the release of the BA Report for comment, and the closing date by which comments must be received.

If you consider yourself an I&AP for the proposed project, 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 BA process.

By submitting your contact details, you automatically register yourself as an I&AP for the project and are ensured that your comments raised will be noted. Please note that all comments received will be included in the project documentation, and this may include personal information.

In terms of Section 18(2) of the Protection of Personal Information Act (POPIA), by completing and submitting the accompanying reply form, you automatically register yourself as an I&AP for the proposed projects, and that all comments received will be included in the project documentation, and this will include personal information for certain purposes, including for purposes of the appeal processes. If you register as an I&AP please be informed that the consequences of your registration is that your contact information will be included in documents and reports that will be available in the public domain.





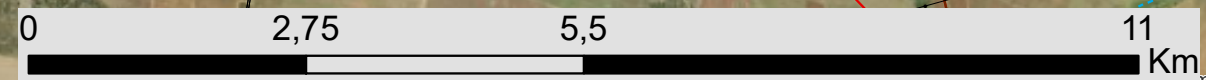
# Harmony Moab Khotsong Solar PV Free State Province

## Locality Map

### Legend

- ▲ Harmony Gold Mine Operations
- Town
- Eskom Substation
- Existing Power Line
- Main Road
- Secondary Road
- Perennial River
- - - Non-perennial River
- ▭ Provincial Boundary
- ▭ Bushybend Private Nature Reserve
- ▭ Mispah Game Farm
- Proposed Development**
- ▭ Moab Khotsong Development Area
- ▭ Affected Properties
- ▭ Development Footprint
- ▭ Grid Connection Corridor (300m)

Scale: 1:75 000  
 Projection: GCS\_WGS\_1984  
 Map Ref: Harmony Moab Khotsong Locality Map



Source: Esri, Imagery, Earthstar Geographics, and the GIS User Community

## COMMENTS AND QUERIES

Direct all comments, queries or responses to:

**Savannah Environmental**

**Nicolene Venter**

P.O. Box 148, Sunninghill, 2157

**Mobile:** 060 978 8396

**Tel:** 011 656 3237

**Fax:** 086 684 0547

**Email:** [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com)

To visit the online stakeholder engagement platform and view project documentation, visit [www.savannahSA.com](http://www.savannahSA.com)

**BASIC ASSESSMENT AND PUBLIC PARTICIPATION PROCESS**

**HARMONY MOAB KHOTSONG PLANT SOLAR PV FACILITY, VIERFONTEIN, FREE STATE PROVINCE  
(DESTEА Reference No.: To be Issued)**

**Registration & Comment Form**

September 2022

Return completed registration and comment form to: **Nicolene Venter of Savannah Environmental**

**Phone:** 011 656 3237

**Mobile (incl. 'please call me'):** 060 978 8396

**Fax:** 086 684 0547

**E-mail:** publicprocess@savannahsa.com

**Postal Address:** PO Box 148, Sunninghill, 2157

In terms of Section 18(2) of the Protection of Personal Information Act (POPIA), by completing and submitting the accompanying reply form, you automatically register yourself as an I&AP for the proposed project, and that all comments received will be included in the project documentation, and this will include personal information for certain purposes, including for purposes of the appeal processes. If you register as an I&AP please be informed that the consequences are of your registration is that your contact information will be included in documents and reports that will be available in the public domain.

**Please provide your complete contact details:**

Name & Surname:			
Organisation:			
Designation:			
Postal Address:			
Telephone:		Fax:	
Mobile:			
E-mail:			

**I would you like to register as an interested and affected party (I&AP) on the project database** (please circle your response)

Harmony Moab Khotsong Plant Solar PV Facility	<b>YES</b>	<b>NO</b>
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**In terms of EIA Regulations, 2014, as amended, Regulation 43(1), you are required to register as an I&AP to receive further correspondence regarding the Scoping & EIA process for the projects and to disclose any direct business, financial, personal or other interest which you may have in the approval or refusal of the application** (add additional pages if necessary):

**Please list your comments regarding your project selection above** (add additional pages if necessary):

**Please provide contact details of any other persons who you regard as a potential interested or affected party:**

Name & Surname:			
Postal Address:			
Telephone:			
Mobile:			
E-mail:			

**THANK YOU FOR YOUR REGISTRATION**