

APPENDIX C3
BACKGROUND INFORMATION DOCUMENT



BACKGROUND INFORMATION DOCUMENT (BID)



August 2022

ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS
HARMONY ONE PLANT SOLAR PV FACILITY, WELKOM, FREE STATE PROVINCE

Freegold Harmony (Pty) Ltd (a subsidiary of Harmony Gold Mining Company 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 30MW is proposed south-west of the Witpan dam, south of the Harmony One Gold Plant operations, approximately ~14km north west of the town of Virginia within the Matjhabeng Local Municipality and within the Lejweleputswa District Municipality, Free State Province. The PV facility is located on the Remaining Extent of the Farm Marmageli 20 and Remaining Extent of the Farm Welkom 80 and is owned by the Mine. The solar PV development will be known as Harmony One Plant Solar PV Facility.

The nature and extent of the solar PV facility is explored in more detail in this Background Information Document (BID). A full Scoping and Environmental Impact Reporting (S&EIR) 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 Environmental Impact Assessment (EIA) processes and specialist studies being undertaken to assess the project.
- » Details of how you can become involved in the EIA process, receive information, or raise comments that may concern and/or interest you.

OVERVIEW OF THE PROJECT

The preferred site for the project is on properties which are privately owned by the Mine and are available for the proposed project and is therefore deemed technically feasible by the project developer 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 680 hectares, was identified. A development area of ~310 ha 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 30MW, while allowing for the avoidance of environmental site sensitivities.

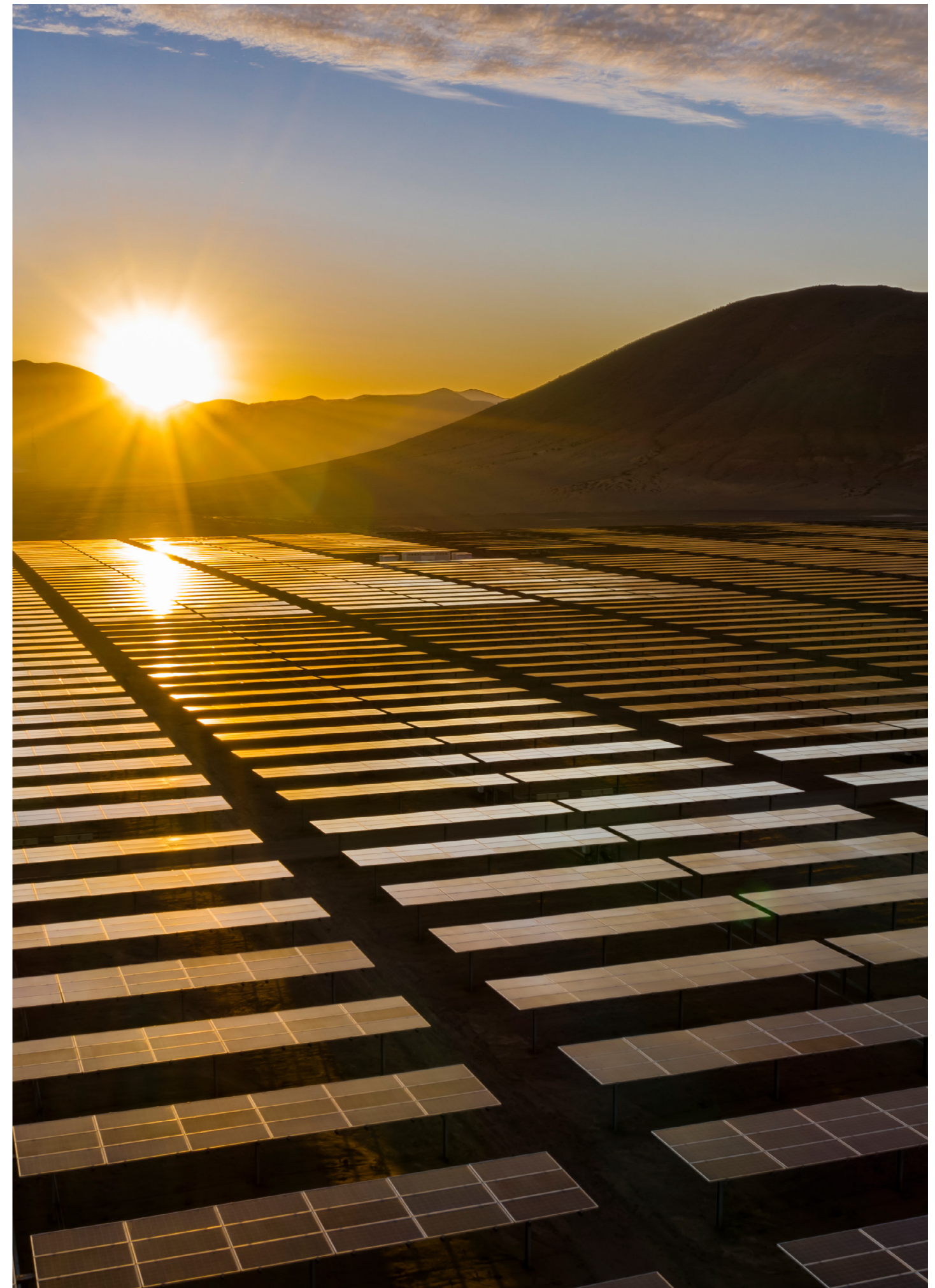
The full extent of the project site is to be evaluated in the Scoping phase to identify sensitivities. Site-specific studies and assessments will delineate areas of potential sensitivity within the identified study area. Once constraining factors have been confirmed, the layout of the solar PV facility within the development area can be planned to avoid sensitive environmental areas and features.

The infrastructure associated with the 30MW solar PV facility will include:

- » PV modules and mounting structures.
- » Inverters and transformers a SCADA room, and maintenance room.
- » Cabling between the project components, to be laid underground where practical.
- » Access roads, internal roads and fencing around the development area.
- » Temporary and permanent laydown areas.
- » Grid connection infrastructure including an on-site facility substation and a switching substation to be connected to the existing Brandgold Substation via an overhead power line (located ~2km north of the site).

The site is accessible via the R730 and traversed by an unnamed mine access road.

As of 2019, the Industrial sector was the leading electricity consumer in South Africa, with up to 56 percent 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.

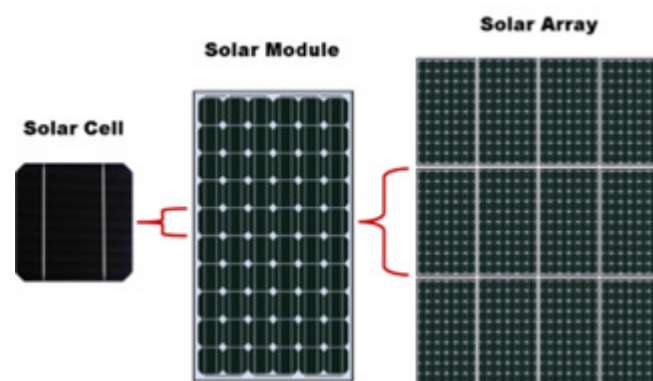


MORE ABOUT SOLAR PV TECHNOLOGY

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.

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 applicant requires Environmental Authorisation 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 (as amended) and Listing Notices (GNR 327, GNR 325, and GNR 324), the application for EA is subject to the completion of a Scoping/EIA process. The application is required to be supported by comprehensive, independent environmental studies undertaken in accordance with the EIA Regulations, 2014 (as amended).

The 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 applicants to be forewarned of potential environmental issues and allows for the resolution of impacts 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 application for EA, and undertaking the supporting EIA 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). I&APs will be actively involved in the EIA 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 EIA processes 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 EIA process. Comments and inputs from I&APs are encouraged to ensure that potential impacts are considered throughout the EIA 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.
- » Adequate review periods are provided for I&APs to comment on the findings of the Scoping/EIA Reports.



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 I&APs of the commencement of the EIA processes in the local printed media 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 Reports 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 EIA processes, 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 applications.
- » You must ensure that any comments regarding the proposed project is submitted within the stipulated timeframes.

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 EIA process, or contacting the environmental consultant with comments.
- » By reviewing and commenting on the reports within the stipulated review and comment periods. Registered I&APs will automatically be notified of the release of the Scoping/EIA Reports for comment, and the closing dates by which comments must be received

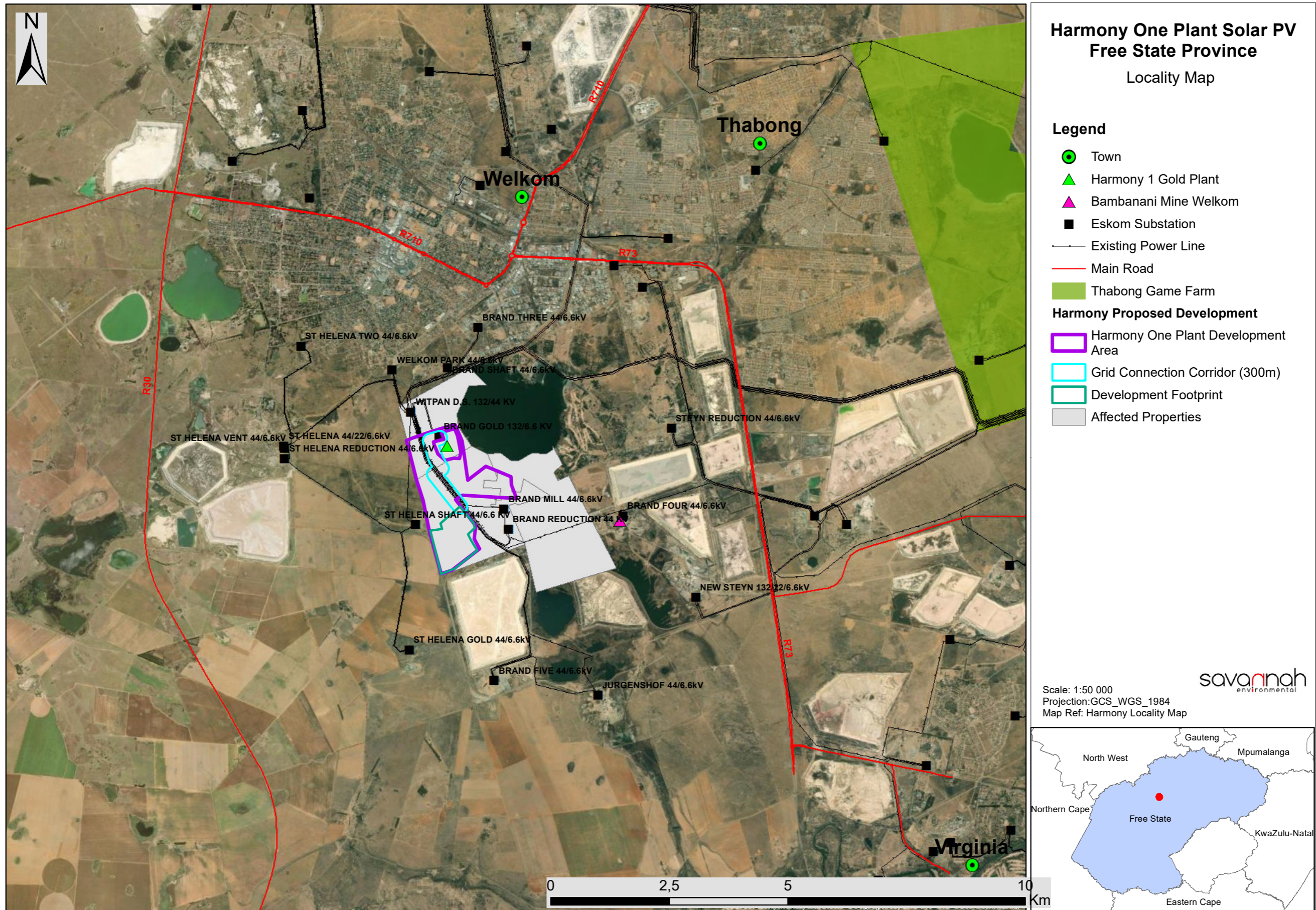
If you consider yourself and I&AP for the proposed project, we urge you to make use of the opportunities created by the public participation process to provide comment, raise comments which affect and/or interest you, or request further information. Your input forms a key element of the EIA process.

By submitting your contact details, you automatically register yourself as an I&AP for the proposed 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 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.



Figure 1: Locality map



**Harmony One Plant Solar PV
Free State Province**
Locality Map

Legend

- Town
- ▲ Harmony 1 Gold Plant
- ▲ Bambanani Mine Welkom
- Eskom Substation
- Existing Power Line
- Main Road
- Thabong Game Farm
- Harmony Proposed Development**
- ▭ Harmony One Plant Development Area
- ▭ Grid Connection Corridor (300m)
- ▭ Development Footprint
- ▭ Affected Properties

Scale: 1:50 000
Projection: GCS_WGS_1984
Map Ref: Harmony Locality Map



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

To visit the online stakeholder engagement platform and view project documentation, visit www.savannahSA.com

ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

**HARMONY ONE PLANT SOLAR PV FACILITY, WELKOM, FREE STATE PROVINCE
(DESTE A Reference No.: To be Issued)**

Registration & Comment Form

August 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 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 One Solar PV Facility	YES	NO
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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