

APPENDIX C3
BACKGROUND INFORMATION DOCUMENT



BACKGROUND INFORMATION DOCUMENT (BID)



October 2022

BASIC ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

HIGHVELD SOLAR PV FACILITY AND ASSOCIATED GRID CONNECTION SOLUTION, STILFONTEIN,
NORTH WEST PROVINCE



The development of a solar photovoltaic (PV) facility with a generating capacity of up to 240MW and associated grid connection infrastructure is proposed by WKN Windcurrent SA (Pty) Ltd on a site located approximately ~15km north east of Stilfontein in the North West Province. The solar PV development will be known as the Highveld Solar PV Facility. The grid connection solution will be known as Highveld PV Grid Connection, is required to connect the project/s to the Eskom grid (within a 300m wide corridor approximately 20km in length), and will form part of a separate application for Environmental Authorisation. The projects are situated within the JB Marks Local Municipality and within the Dr Kenneth Kaunda District Municipality.

The PV facility is located on the Portions 56, 11, and 10 of Farm Rietfontein 388 as well as Remainder of Farm Rietfontein 3. The grid connection infrastructure will include a substation on portions 10 and 56 of the Farm Rietfontein 388, and a power line within a 300m wide and 20km long corridor. The corridor extends between the proposed Highveld Solar PV Facility and a point of connection on the Hermes DS - Potchefstroom DS 1 and Buffels East 1 - Potchefstroom 132kV Feeder lines located east of Khuma and the R502.

The Highveld 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 the GNR 114 as formally gazetted on 16 February 2018. The Highveld PV Grid Connection is located in the Central Corridor of the Strategic Transmission Corridors.

The nature and extent of the solar PV facility are 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

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, the development of a solar PV facility of up to 240MW is proposed within the Klerksdorp REDZ and Central Corridor of the Strategic Transmission Corridors. The development of the facility will add new capacity to the national electricity grid network.

A project site considered to be technically suitable for the development of the solar PV facility, with an extent of approximately ~1400ha was demarcated within this project site. It allows an adequate footprint (~433ha) for the installation of a solar PV facility with a contracted capacity of up to 240MW, 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 processes in order to delineate areas of potential sensitivity within the identified study area and grid connection corridor. 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 240MW solar PV facility will include:

- » Solar PV arrays, modules and mounting structures.
- » Inverters and transformers.
- » A Battery Energy Storage System (BESS)
- » On-site facility substation
- » Cabling between the project components
- » Site and internal access roads up to 6m in width, where required
- » Temporary and permanent laydown areas and O&M buildings and fencing around the development area.

The grid connection infrastructure will include a Switching Substation and a 132kV power line within a 300m wide and approximately 20km long corridor. Two alternative grid route corridors are being considered, and both corridors extend between the proposed Highveld Solar PV Facility and a point of connection on the Hermes DS - Potchefstroom DS 1 and Buffels East 1 - Potchefstroom 132kV Feeder lines located east of Khuma and the R502.



Access to the PV development area is provided via: the N12, located to the south of the development area; the Hartebeesfontein Road; and Rietfontein Road which are located to the west of the development area. The existing access road turning off from the Rietfontein Road towards the PV facility will be upgraded for safe access to the facility during the construction and operation phases.

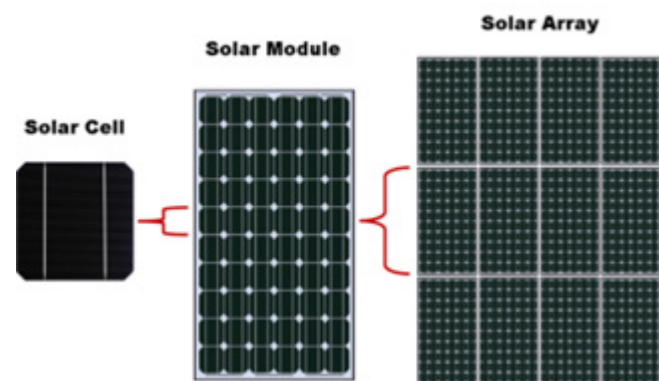
Site-specific studies and assessments will be undertaken through the BA processes in order to delineate areas of potential sensitivity within the surrounding areas, the identified study area and grid connection corridor/s. Once constraining factors have been determined, the layout of the solar PV facility and the grid connection solution can be planned to minimise social and environmental impacts.

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 facility 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 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 Forestry, Fisheries and the Environment (DFFE), as the Competent Authority. In terms of Section 24(5) of NEMA, the EIA Regulations, 2014 (GNR 326), GNR 114 and 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 Highveld Solar PV Energy Facility and associated grid connection are 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 includes 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 an 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 project, we urge you to make use of the opportunities created by the public participation process to provide comment, submit queries 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.














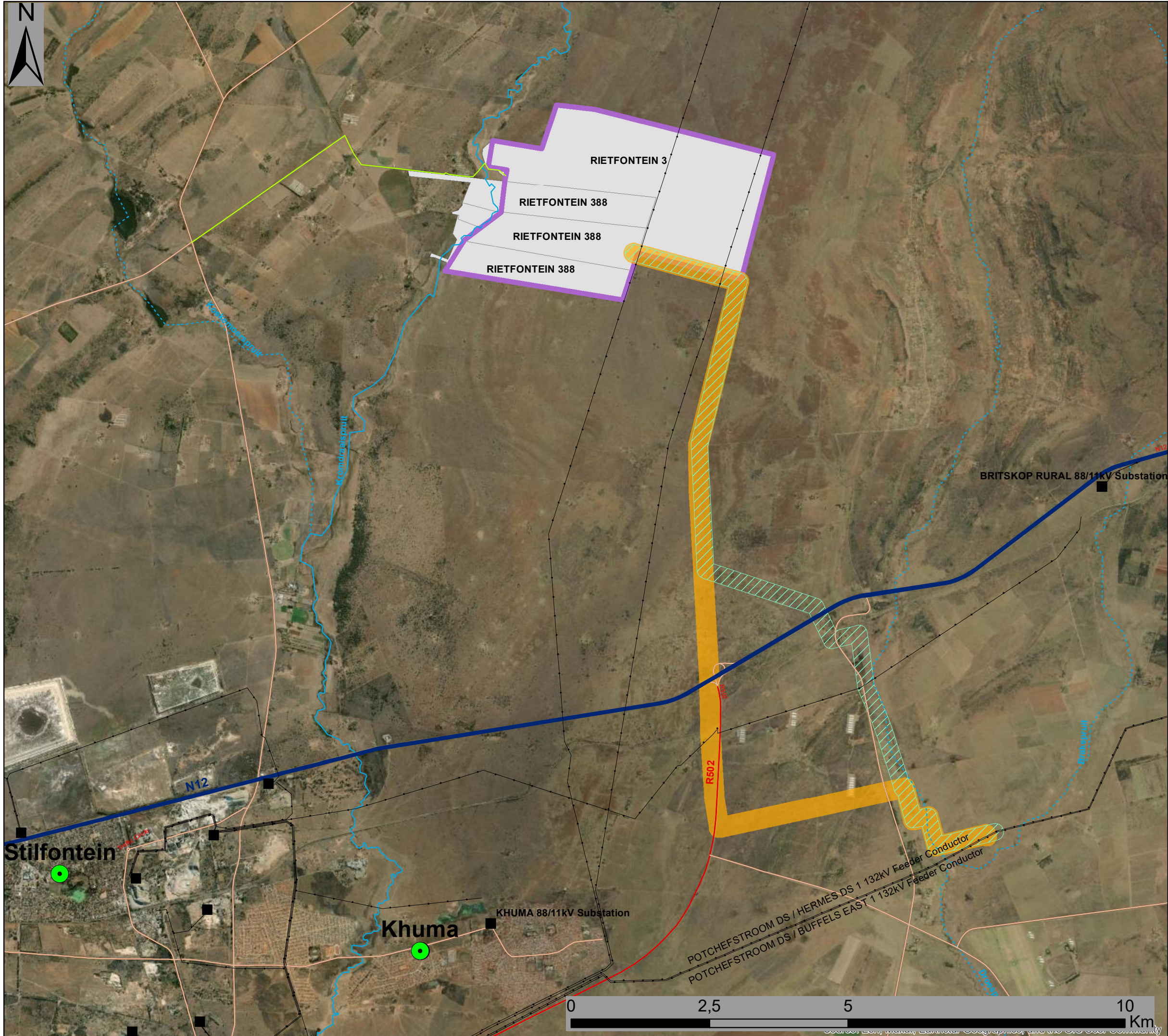


Highveld Solar PV and Grid Connection North West Province

Locality Map

Legend

-  Town
-  Eskom Substation
-  Existing Power Line
-  National Route
-  Main Road
-  Secondary Road
-  Local Road
-  Perennial River
-  Non-perennial River
- Proposed Development**
-  Development Area
-  Affected Properties
-  Alt 1 Grid Connection Corridor (300m)
-  Alt 2 Grid Connection Corridor (300m)



Scale: 1:60 000
 Projection: GCS_WGS_1984
 Map Ref: Highveld Solar PV 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

BASIC ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

**HIGHVELD SOLAR PV FACILITY AND ASSOCIATED GRID CONNECTION SOLUTION NEAR STILFONTEIN
NORTH WEST PROVINCE**

Registration & Comment Form

November 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

Your registration as an interested and/or affected party will be applicable for this project only and your contact details provided are protected by the POPI Act of 2013

Please provide your complete contact details:

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

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 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