

APPENDIX C3:  
Background Information Document

OCTOBER  
2021



ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS

**HOUTHAAALBOOMEN PV CLUSTER CONSISTING OF BARLERIA PV, DICOMA PV AND SETARIA PV FACILITIES, NORTH WEST PROVINCE**

NORTH WEST PROVINCE



The development of three separate solar photovoltaic (PV) facilities, each with a generating capacity of up to 75MW, and associated infrastructure is proposed on the farms Portion 1, Portion 9 and Portion 10 of the Farm Houthaalboomen 31, Portion 0 of Farm Talene 25 and Portion 7 of Farm Elandsfontein 34 located approximately 5km north west of the town of Lichtenburg in the North West Province. The three solar PV facilities are to be known as Barleria PV, Dicoma PV and Setaria PV, and would form the Houthaalboomen PV Cluster. The facilities are located within the Ditsobotla Local Municipality of the Ngaka Modiri Molema District Municipality.

The nature and extent of the three solar PV facilities within the Houthaalboomen PV Cluster are 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 respective PV facilities. 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, with a separate project development company (or Special Purpose Vehicle (SPV)) as the applicant for each project. The project details for the respective projects are as follows:

Applicant	Project Name
Barleria PV (Pty) Ltd	Barleria PV
Dicoma PV (Pty) Ltd	Dicoma PV
Seratia PV (Pty) Ltd	Setaria PV

#### 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 Environmental Impact Assessment (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 three 75MW solar PV facilities 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 three solar PV facilities, with an extent of approximately 552 hectares in total, was identified by the project developer. The dedicated development area for each solar PV facility does not exceed 190ha in extent. The facility development area as well as two alternative grid connection solutions (within a 100m wide corridor) 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	Affected Properties	Contracted Capacity	Development Area
Barleria PV	<p><b>Solar PV:</b>                      Portion 1 of the Farm-Houthaalboomen 31                      Portion 9 of the Farm Houthaalboomen 31                      Portion 10 of the Farm Houthaalboomen 31</p> <p><b>LILO Grid:</b>                      Portion 1 of the Farm Houthaalboomen 31                      Portion 0 of Farm Talene 25                      Portion 7 of Farm Elandsfontein 34</p>	75MW	176ha
Dicoma PV	<p><b>Solar PV:</b>                      Portion 1 of the Farm Houthaalboomen 31                      Portion 9 of the Farm Houthaalboomen 31                      Portion 10 of the Farm Houthaalboomen 31</p> <p><b>LILO Grid:</b>                      Portion 1 of the Farm Houthaalboomen 31                      Portion 0 of Farm Talene 25                      Portion 7 of Farm Elandsfontein 34</p>	75MW	180ha
Setaria PV	<p>Portion 1 of the Farm Houthaalboomen 31                      Portion 9 of the Farm Houthaalboomen 31                      Portion 10 of the Farm Houthaalboomen 31</p> <p><b>LILO Grid:</b>                      Portion 1 of the Farm Houthaalboomen 31                      Portion 0 of Farm Talene 25                      Portion 7 of Farm Elandsfontein 34</p>	75MW	186ha

### More About Solar Pv Technology

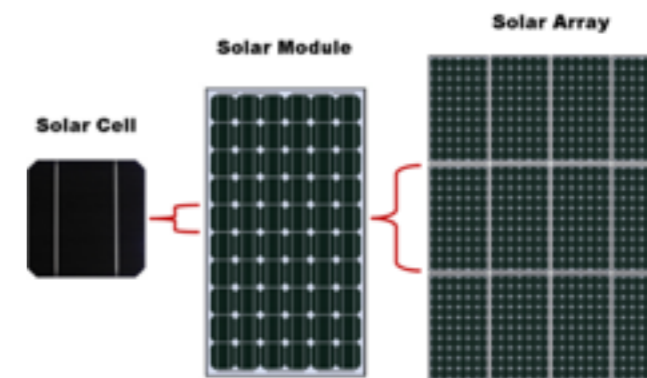
Solar energy facilities use energy from the sun to generate electricity through a process known as the Photovoltaic Effect. This effect refers to photons of light colliding with electrons, and therefore placing the electrons into a higher state of

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)).

<sup>1</sup> The LILO corridor intersects with several existing parallel Eskom power lines (Watershed-Sephaku 1 132kV, Dudfield-Watershed 2 88kV, Dudfield-Watershed 1 88kV, and Watershed-Klerksdorp North 1 132kV). Therefore, should the connection to the Delareyville Munic-Watershed 1 88kV not be technically feasible, connection to the above mentioned power lines would still be within the assessed LILO corridor and considered feasible through the construction of a shorter LILO connection.



**Figure 2:** 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 three applications for EA are subject to the completion of Scoping/EIA processes. 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 5 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:

- Biodiversity – includes ecology & freshwater, fauna and flora and assess the potential impact and the associated disturbance of vegetation on the biodiversity (including critical biodiversity areas and broad-scale processes).
- Avifauna – includes an assessment of impacts on avifaunal habitats and sensitive features.
- 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 facilities and the grid connection solution on the aesthetics within the area.
- Social – which assesses the positive and negative social impacts.
- Traffic – which assesses the impact related traffic within the area





The independent specialist studies will be undertaken wherein the potentially significant impacts will be identified, 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 EMPr compiled for the various projects.

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 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 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 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 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 Scoping/EIA Reports for comment, and the closing dates by which comments must be received.

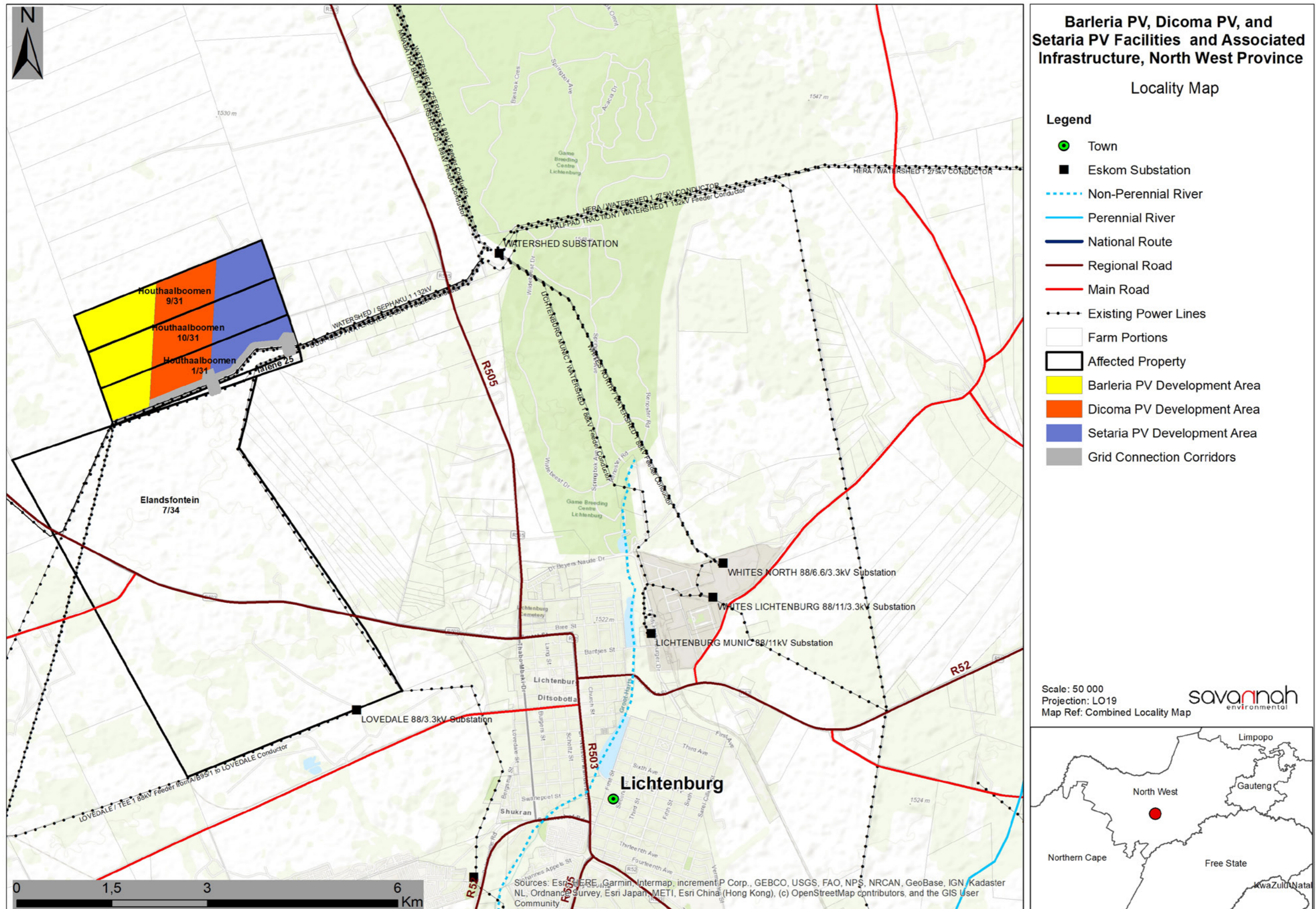
If you consider yourself an I&AP for the proposed projects, we urge you to make use of the opportunities created by the public participation process to provide comment, raise issues and concerns which affect and / or interest you, or request further information. Your input forms a key element of the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





## COMMENTS AND QUERIES

Direct all comments, queries or responses to:

*Savannah Environmental*  
*Nicolene Venter*  
P.O. Box 148, Sunninghill, 2157  
Tel: 011 656 3237  
Mobile: 060 978 8396  
Fax: 086 684 0547  
E-mail: [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)





**ENVIRONMENTAL IMPACT ASSESSMENTS AND PUBLIC PARTICIPATION PROCESS**

**HOUTHAALBOOMEN PV CLUSTER CONSISTING OF BARLEIRA PV, DICOMA PV AND SETARIA PV FACILITIES NEAR LICHTENBURG, NORTH WEST PROVINCE  
(DFFE Ref. No.: To be Issued)**

**Registration & Comment Form**

October 2021

Return completed registration and comment form to: **Nicolene Venter / Tumelo Muthelwe** 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:			

**I would like to register as an interested and affected party (I&AP) on the following project's database** (please tick the relevant box)

Barleira PV		Dicoma PV		Setaria PV	
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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 BA 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:			