

# CONSULTATION BASIC ASSESSMENT REPORT

## DISCO 2 SOLAR PHOTOVOLTAIC FACILITY:

**Proposed Construction and Operation of a Solar  
Photovoltaic Facility and Associated Infrastructure, on  
a Portion of Farm 713, Hopefield, Sundays River Valley  
Municipality**

**September 2022**



**Prepared for:**

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## **ABBREVIATIONS**

CARA	Conservation of Agricultural Resources Act
CBA	Critical Biodiversity Area
CBA Report	Consultation Basic Assessment Report
CEMPr	Construction Phase Environmental Management Programme
DFFE	Department of Forestry, Fisheries and the Environment
DEA	National Department of Environmental Affairs
DEDEAT	Provincial Department of Economic Development, Environmental Affairs and Tourism
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECBCP	Eastern Cape Biodiversity Conservation Plan (2019)
EIA	Environmental Impact Assessment
EIS	Ecological Importance and Sensitivity
EMPr	Environmental Management Programme
ESA	Ecologically Sensitive Area
FEPAs	Freshwater Ecosystems Priority Areas
I&AP	Interested and Affected Party
LSRWUA	Lower Sundays River Water Users Association
NBA	Nation Biodiversity Assessment (2018)
NEMA	National Environmental Management Act (Act 107 of 1998), as amended
NEMAA	National Environmental Management Amendment Act (Act 107 of 1998)
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act (Act 25 of 1999)
NPAES	National Protected Areas Expansion Strategy
OEMPr	Operational Phase Environmental Management Programme
PES	Present Ecological State
SABIF	South African Biodiversity Information Facility
SAHRA	South African Heritage Resources Agency
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SRVM	Sundays River Valley Municipality
SSV Report	Site Sensitivity Verification Report
STEP	Subtropical Thicket Ecosystem Project

## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

The project applicant, Venter Wildlife Trust, proposes the construction and operation of a Solar Photovoltaic (PV) Facility, including associated infrastructure, capable of producing 3.4MW of AC electricity, on a portion of Farm 713, known as Hopefield, in the Sundays River Valley Municipality. The facility will be for private use for existing agricultural activities on Farm 713, namely, broiler houses and irrigation infrastructure and is not a large-scale commercial PV Facility. The farm measures approximately ~554ha in extent and is currently zoned Agriculture 1. Farm 713 is a working farm and is currently used for commercial production of citrus, a Poultry Broiler Facility and associated infrastructure.

The proposed facility will consist of several photovoltaic solar panels, anticipated to measure ~ 35 475m<sup>2</sup> (3.55ha) in extent, as well as a battery storage area (~300m<sup>2</sup>), with a total proposed development footprint of ~3.6ha. The proposed facility will have a combined production capacity of 3.4MW of AC electricity and will be a hybrid facility which will be connected to the existing ESKOM grid, with battery backup during power outages.

The PV Facility and its components will be connected to one another and connected via underground cables (400V) to two existing ESKOM transformers on site. Additionally, a private 22kV overhead powerline will be constructed over a distance of ~2.5km, connecting the PV Facility to an existing Medium Voltage point (MV). The PV Facility is proposed to be constructed adjacent to the northern boundary of Farm 713, on an area that has previously been transformed, within the footprint of an existing, separately fenced in Poultry Broiler Facility.

Farm 713 is located ~7km north of Sunland and approximately 8.5km north-west of Addo, in the Sundays River Valley Municipality. The farm can be accessed via the DR02006 gravel road (Enon Road), at its intersection with the Slagboom road (MN50605). The nearest boundary of the Addo Elephant National Park is approximately ~5.4km from the boundary of the farm and ~7.6km from the proposed development footprint.

### **PROJECT DETAIL**

The farm measures approximately ~554ha in extent and is currently zoned Agriculture 1. Farm 713 is a working farm and is currently used for the commercial production of citrus and a Poultry Broiler Facility (12 houses and associated infrastructure). Approximately ~140ha of the site has been transformed for citrus orchards, including internal roads and laydown areas. Approximately 38ha of the site has been transformed for a separately fenced in Poultry Broiler facility, which consists of 12 broiler houses including associated infrastructure (i.e., internal access roads, boilers, managers house, and existing Eskom transformers), located adjacent to the northern boundary of the farm. In Addition, a pump station is also located adjacent to the north-east boundary of the enclosed footprint of the Poultry Broiler facility. A farm dam, measuring ~2.5ha in extent, is located southeast of the Poultry Broiler Facility in the centre of the site and is currently used to convey irrigation water from the Lower Sundays River Water Users Association (LSRWUA) canal system to several of the applicant's farms, including Farm 713. The remainder of the site is in a near natural condition with some evidence of disturbance, including internal roads, and cut lines. The south-eastern portion of Farm 713, measuring ~219 ha has been rezoned as Public Open Space III (Private Nature Reserve), in compliance with the conditions of a previous Environmental Authorisation issued on Farm 713.

It is the intention of the applicant to construct and operate a 3.4MW solar Photovoltaic (PV) facility, including associated infrastructure, on a portion on Farm 713. The PV facility will consist of multiple solar panels (~3.5ha), with associated infrastructure (i.e., battery storage area and electrical power cables), for a combined development footprint of ~3.6ha. In addition to the solar PV area, underground electrical cables (400V) must be installed between the PV array and the battery storage area as well as to existing Eskom transformers and an MV (Medium Voltage) point. The connection to the MV point will be an overhead 22kV powerline mounted on creosote poles.

Associated with the proposed PV Facility are the following project activities:

- Preparation of the site, levelling, runoff control measures, and stormwater management
- Construction of foundations for metal supporting frames
- Installation of the solar Photovoltaic array (panels) (~3.5ha)
- Establishment of battery storage area (~300m<sup>2</sup>) and connection to the array

- Installation and connection of inverters (String or Centre Inverters)
- Installation of underground cables (400V) connecting the PV facility with existing transformers
- Establishment of a 22kV overhead private powerline (~2.5km) connecting the PV facility with an existing MV point on Farm 690
- Establishment and/or expansion of internal access roads
- Securing the facility including erection of a fence

The total area proposed for the construction of the solar photovoltaic facility and associated infrastructure is anticipated to be ~3.6ha in extent and is proposed on an area of the farm that has previously been transformed as part of the existing Poultry Broiler facility. The project components are indicated in Map 3 below (also attached in Appendix C).

### **Pre-construction Phase**

Prior to commencement with construction activities on site, the detailed design drawings for the proposed construction for the solar Photovoltaic facility and associated infrastructure must be finalised and the necessary approvals obtained. Final designs and PV panels to be installed will be based on the best available technology at the time of construction.

### **Construction Phase**

It is anticipated that the proposed construction phase will entail the following activities:

- Preparation of the site, levelling, runoff control measures, and stormwater management
- Construction of foundations for metal supporting frames
- Installation of the solar Photovoltaic array (panels) (~3.5ha)
- Establishment of battery storage area (~300m<sup>2</sup>) and connection to the array
- Installation and connection of inverters (String or Centre Inverters)
- Installation of underground cables (400V) connecting the PV facility with existing transformers
- Establishment of a 22kV overhead private powerline (~2.5km) connecting the PV facility with an existing MV point on Farm 690
- Establishment and/or expansion of internal access roads
- Securing the facility including erection of a fence

### **Operational Phase**

Once the PV facility and associated infrastructure has been installed, the facility will become operational and start producing 3.4MW electricity which will be fed into the ESKOM grid. The applicant will therefore receive a rebate from the power utility, based on the amount of electricity produced at the solar PV facility on Farm 713.

### **PROJECT TIMING**

Should this project receive a positive Environmental Authorisation, it is proposed that the preconstruction phase will commence immediately and will be completed within 12 months. The construction phase will commence within 6 months of the completion of the Pre-construction period and is anticipated to be completed within 24 months. Once the construction phase is completed the PV facility will become operational and will continue on perpetuity.

### **BASIC ASSESSMENT PROCESS AND PUBLIC PARTICIPATION**

In terms of the NEMA EIA Regulations 2014 (as amended), published in GN R326, 327, 325 and 324, promulgated under Chapter Five of the National Environmental Management Act (Act 107 of 1998) (NEMAA), and published in Government Gazette 40772 on the 7 April 2017, the project requires a Basic Assessment (BA), because it triggers, amongst others the following listed activity, in Listing Notice 1 (GN R324):

- “1. The development of facilities or infrastructure for the generation of electricity from a renewable resource where –  
(ii) The output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare”

In addition to the above, the following listed activities are also anticipated to be triggered by the proposed development:

GN R327 (Listing Notice 1): 28. (ii).

GN R324 (Listing Notice 3): 18. a. i. (gg)

This listed activity requires authorisation from the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT). The Basic Assessment Report (BAR) needs to show the competent authority, DEDEAT (Sarah Baartman Region), as well as the project applicant, the Venter Wildlife Trust, what the consequences of their choices will be in biophysical, social and economic terms. Public participation forms an important component of this process, by assisting in the identification of issues and alternatives to be evaluated, and, together with specialist input, assists the competent authority with their decision-making. The BA Process is currently at the stage where an Application Form for Environmental Authorisation has been submitted to the competent authority. In parallel, Interested and Affected Parties (I&APs) are being provided with a legislated 30-day comment period within which to provide their input on the Consultation Basic Assessment Report (CBAR).

### **SPECIALIST STUDIES**

The following specialist studies have been undertaken as part of the BA Process in order to inform the CBAR:

- Terrestrial Biodiversity Compliance Statement
- Aquatic Biodiversity Compliance Statement
- Visual Specialist Opinion Report

Specialist assessments are included in Appendix D of the CBAR. In addition, a **Phase 1 Heritage Impact Assessment**, which was undertaken as part of a previous environmental assessment on Farm 713, has also been used to assess potential impacts on heritage resources, and has been included as supporting information to this report, in Appendix G (ix).

### **ENVIRONMENTAL IMPACT STATEMENT**

The proposed construction of the Solar photovoltaic facility is anticipated to have an overall **LOW NEGATIVE** impact on the receiving environment during the construction phases, if all the recommended mitigation measures are applied. In the operational phase, the overall impact is **LOW NEGATIVE** to **NEUTRAL**

Terrestrial Biodiversity impacts are not anticipated to be significant, as the site is largely transformed and no significant vegetation other than some weeds that currently occur on site. The implementation of proposed mitigation measures, suggested by specialist, the impact has been rated as a **LOW NEGATIVE** impact.

Aquatic Biodiversity impacts are not anticipated to be significant, as no drainage lines occur within the development footprint and surrounding drainage line and river systems are likely to be unaffected due to distance from the site. The implementation of proposed mitigation measures, suggested by specialist, the impact has been rated as a **LOW NEGATIVE** impact.

Heritage impact can be mitigated to **NEUTRAL** during the construction phase if the ECO and/or construction foreman are informed of the various types of heritage artefacts which could be uncovered during excavation and levelling, and what action is to be taken should a heritage material be uncovered.

The overall Visual impacts associated with this development is anticipated to be **LOW NEGATIVE**. Impacts on sensitive receptors are anticipated to be low due to the transformed nature of the site and the surrounding agricultural activities. Impact associated with visual impacts can be mitigated and is predicted to be **LOW NEGATIVE**.

The application of the proposed mitigation and design measures, as recommended by the respective specialists, to be effectively managed in order to reduce the identified impacts so as to not have a detrimental effect on the environment.

In addition, some positive impacts have also been predicted. These include the creation of a number of additional employment opportunities and associated economic growth for the local community rated as **LOW POSITIVE**. Additionally, a consistent electricity supply for the adjacent Poultry Broiler Facility will be provided rated as a **MEDIUM POSITIVE**.

### **NO-GO Alternative (Compulsory)**

The No-Go alternative will result in the potential employment and skills development opportunities for the local community not being realised. In turn, the potential opportunity for economic growth in the community will be lost. The securing a stable electricity supply for current agricultural activities will also not be realised. These consequential impacts are regarded as **HIGH NEGATIVE**.

## BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

NEAS Number:

Date Received:


**Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014 as amended, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.**

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### Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority **unless indicated otherwise by the Department**.
7. No faxed or e-mailed reports will be accepted **unless indicated otherwise by the Department**.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.



## SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

<b>YES</b>	<b>NO</b>
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If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

This section of the report provides an overview of the Basic Assessment project team under management of Sandy Wren, Registered Environmental Assessment Practitioner (EAP) (No: 2019/1242) and Public Process Consultants.

<b>BASIC ASSESSMENT PROJECT TEAM</b>		
<b>Team Member</b>	<b>Company</b>	<b>Role</b>
Sandy Wren	Public Process Consultants	EIA Team Leader, Registered EAP
JP Hechter	Public Process Consultants	Registered Candidate Environmental Assessment Practitioner
Emily Whitfield	Public Process Consultants	Junior Environmental Assessment Practitioner
Geena Pringle	Public Process Consultants	Trainee Environmental Assessment Practitioner
Wandile Junundu	Public Process Consultants	Community Consultation
Jamie Pote	Private	Terrestrial Biodiversity Specialist Assessment
Jaclyn Smith	JS Environmental Consulting	Aquatic Biodiversity Specialist Assessment
Lloyd Rossouw	Private	Phase 1 Heritage Impact Assessment (Palaeotropical and Archaeological)
Graham Young	Graham A Young Landscape Architect (GYLA)	Visual Specialist Opinion Report
<b>TECHNICAL TEAM</b>		
Brandon and Louise Polley	Synthesis Power Solutions	Renewable Energy Specialist
Nico Venter	Venter Wildlife Trust	Applicant Representative

The following independent specialist studies, which have been reviewed by the EIA Team, are included in Appendix D:

- Appendix D(i): Terrestrial Biodiversity Compliance Statement
- Appendix D(ii): Aquatic Biodiversity Compliance Statement
- Appendix D(iii): Visual Specialist Opinion Report

In addition, a **Phase 1 Heritage Impact Assessment**, which was undertaken as part of a previous environmental assessment on Farm 713, has also been used to assess potential impacts on heritage resources, and has been included as supporting information to this report, in Appendix G (ix).

The specialist studies listed above have been informed by the National Web-based Environmental Screening Tool, technical input, public consultation and the EAP's knowledge of the local area as well as knowledge gained through two previous Basic Assessments undertaken on Farm 713. The Screening Tool Report has been attached in Appendix H. The Site Sensitivity Verification Report which confirms or disputes the current use of the land and environmental sensitivity, of the proposed development footprint, as identified by the Screening Tool, which has informed the specialist studies proposed to be undertaken for this assessment, has been included in Appendix I.

## 1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

### **INTRODUCTION**

The project applicant, Venter Wildlife Trust, proposes the construction and operation of a Solar Photovoltaic (PV) Facility, including associated infrastructure, capable of producing 3.4MW of AC electricity, on a portion of Farm 713, known as Hopefield, in the Sundays River Valley Municipality. The facility will be for private use for existing agricultural activities on Farm 713, namely, broiler houses and irrigation infrastructure and is not a large-scale commercial PV Facility. The farm measures approximately ~554ha in extent and is currently zoned Agriculture 1. Farm 713 is a working farm and is currently used for commercial production of citrus, a Poultry Broiler Facility and associated infrastructure (reservoirs and irrigation infrastructure).

The proposed facility will consist of several photovoltaic solar panels, anticipated to measure ~ 35 475m<sup>2</sup> (3.55ha) in extent, as well as a battery storage area (~300m<sup>2</sup>), for a total proposed development footprint of ~3.6ha. The type of PV panels to be installed will be based on best available technology at the time of construction. The proposed facility will have a combined production capacity of 3.4MW of AC electricity and will be a hybrid facility which will be connected to the existing ESKOM grid, with battery backup during power outages.

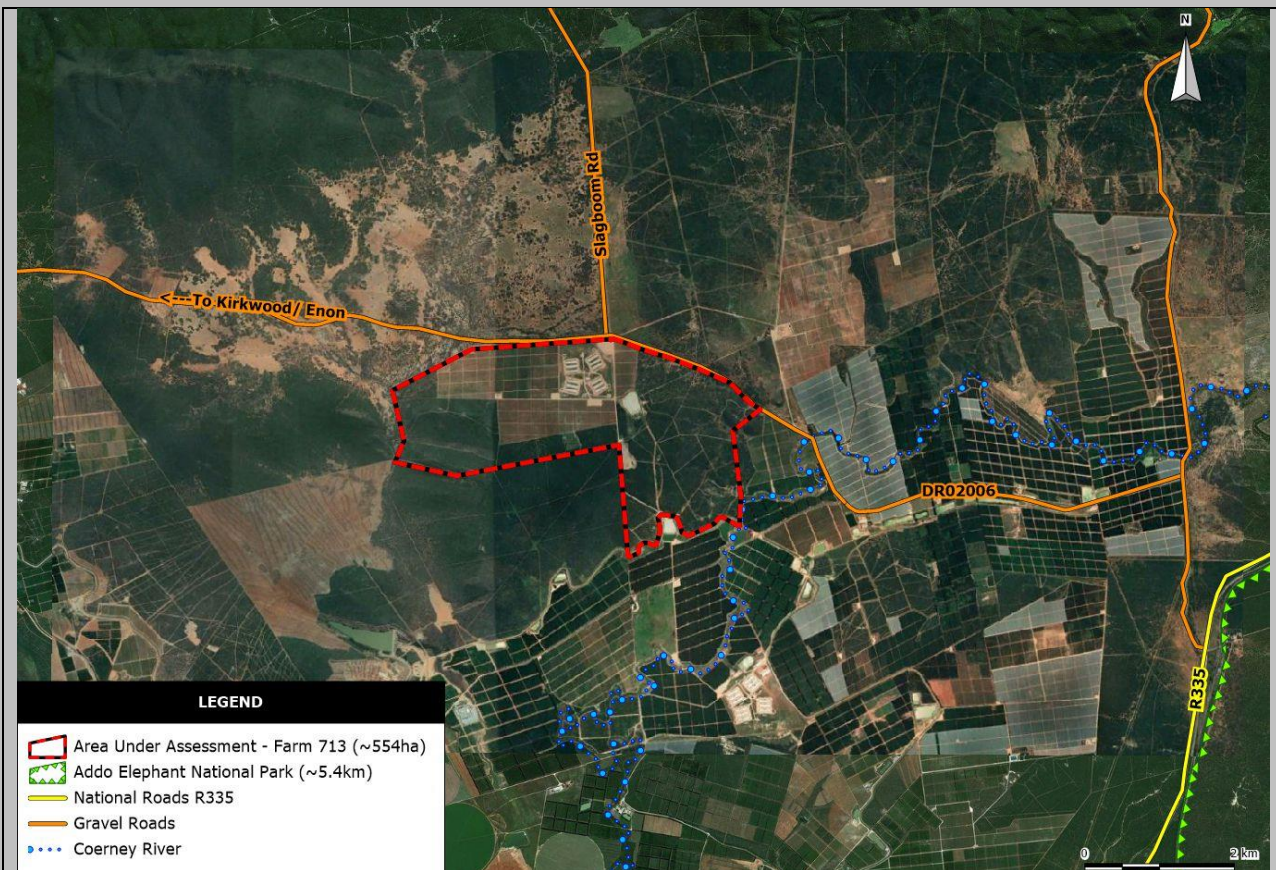
The PV Facility and its components will be connected to one another and connected via underground cables (400V) to two existing ESKOM transformers on site. Additionally, a private 22kV overhead powerline, mounted on creosote poles, will be constructed over a distance of ~2.5km, connecting the PV Facility to an existing Medium Voltage point (MV) located on the neighbouring property (Farm 690), also owned by the applicant, adjacent to the southern boundary of Farm 713.

The PV Facility is proposed to be constructed adjacent to the northern boundary of Farm 713, on an area that has previously been transformed, within the footprint of an existing, separately fenced in, Poultry Broiler Facility.

### **PROJECT LOCALITY**

Farm 713 is located ~7km north of Sunland and approximately 8.5km north-west of Addo, in the Sundays River Valley Municipality. The farm can be accessed via the DR02006 gravel road (Enon Road), at its intersection with the Slagboom road (MN50605). The nearest boundary of the Addo Elephant National

Park is approximately ~5.4km from the boundary of Farm 713 and ~7.6km from the proposed development footprint.



Map 1: Locality Map of Farm 713, Hopefield on which the proposed Photovoltaic facility will be constructed, in the Sundays River Valley Municipality.

## SURROUNDING LANDUSE

Land-uses on the properties adjacent to Farm 713 include commercial agriculture (i.e., citrus orchards), livestock and game grazing/ browsing. Vegetation cover on adjacent farms is therefore characterised by activities associated with the “Sundays River Valley” agricultural area. Although the proposed construction of a solar Photovoltaic facility is not characteristic of the surrounding area, it will provide support for existing agricultural activities (i.e., Poultry broiler facility and irrigation infrastructure for citrus production).

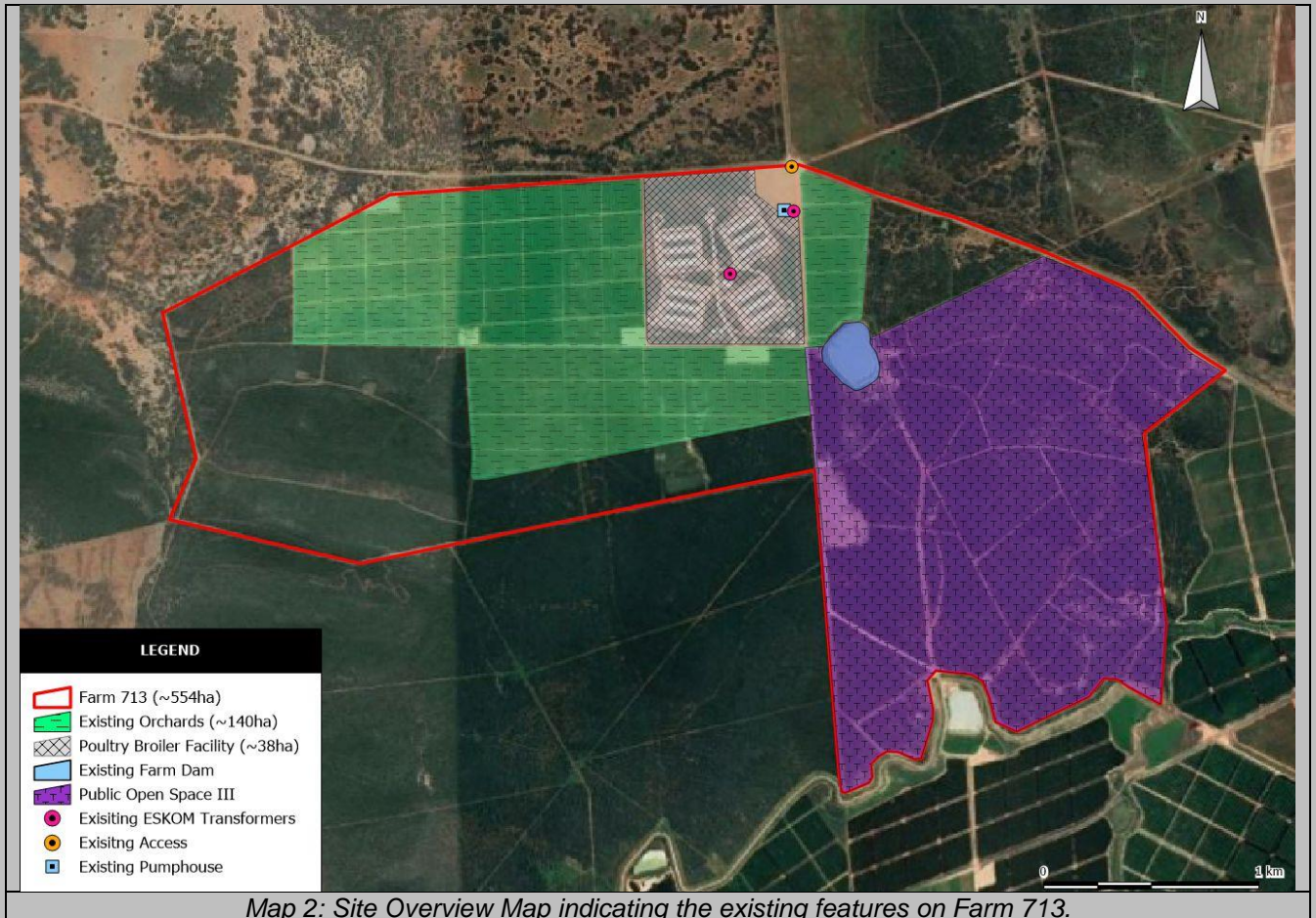
## SITE OVERVIEW

The following section of the assessment provides an overview of the existing land use, project components and activities on Farm 713 (see Map 2 below).

The farm measures approximately ~554ha in extent and is currently zoned Agriculture 1. Farm 713 is a working farm and is currently used for the commercial production of citrus and a Poultry Broiler Facility (12 houses and associated infrastructure). Approximately ~140ha of the site has been transformed for citrus orchards, including internal roads and laydown areas. Approximately 38ha of the site has been transformed for a separately fenced in Poultry Broiler facility, which consists of 12 broiler houses including associated infrastructure (i.e., internal access roads, boilers, managers house, and existing Eskom transformers), located adjacent to the northern boundary of the farm. In Addition, a pump station is also located adjacent to the north-east boundary of the enclosed footprint of the Poultry Broiler facility.



A farm dam, measuring ~2.5ha in extent, is located southeast of the Poultry Broiler Facility in the centre of the site and is currently used to convey irrigation water from the Lower Sundays River Water Users Association (LSRWUA) canal system to several of the applicant's farms, including Farm 713. The remainder of the site is in a near natural condition with some evidence of disturbance, including internal roads, and cut lines. The south-eastern portion of Farm 713, measuring ~219 ha has been rezoned as Public Open Space III (Private Nature Reserve), in compliance with the conditions of a previous Environmental Authorisation issued on Farm 713.



Map 2: Site Overview Map indicating the existing features on Farm 713.

## PROJECT OVERVIEW

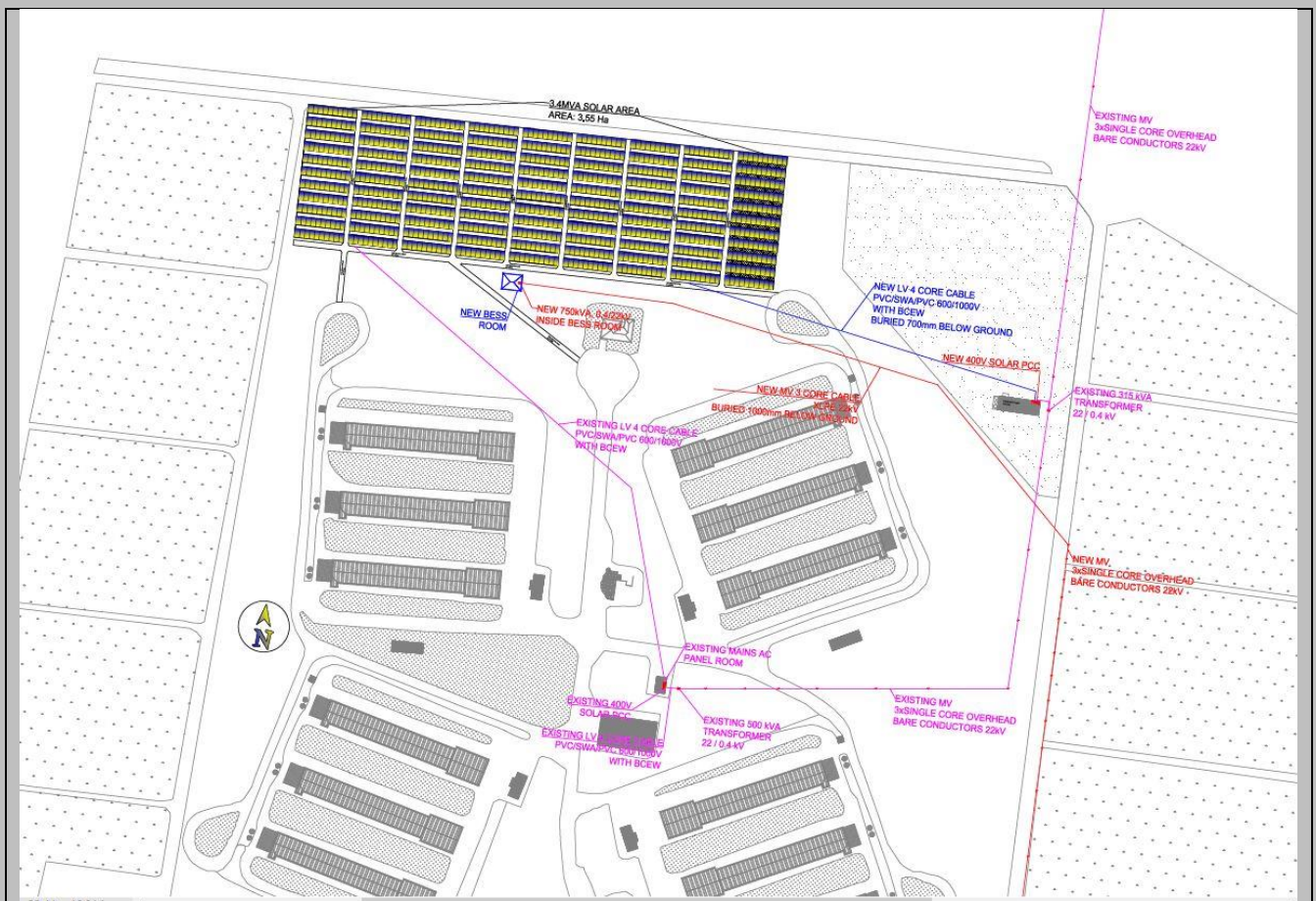
It is the intention of the applicant to construct and operate a 3.4MW solar Photovoltaic (PV) facility, including associated infrastructure, on a portion on Farm 713. The PV facility will consist of multiple solar panels (~3.5ha), with associated infrastructure (i.e., battery storage area and electrical power cables), for a combined development footprint of ~3.6ha. In addition to the solar PV area, underground electrical cables (400V) must be installed between the PV array and the battery storage area as well as to existing Eskom transformers and an MV (Medium Voltage) point. The connection to the MV point will be an overhead 22kV powerline mounted on creosote poles.

Associated with the proposed PV Facility are the following project activities:

- Preparation of the site, levelling, runoff control measures, and stormwater management
- Construction of foundations for metal supporting frames
- Installation of the solar Photovoltaic array (panels) (~3.5ha)
- Establishment of battery storage area (~300m<sup>2</sup>) and connection to the array

- Installation and connection of inverters (String or Centre Inverters)
- Installation of underground cables (400V) connecting the PV facility with existing transformers
- Establishment of a 22kV overhead private powerline (~2.5km) connecting the PV facility with an existing MV point on Farm 690
- Establishment and/or expansion of internal access roads
- Securing the facility including erection of a fence

The total area proposed for the construction of the solar photovoltaic facility and associated infrastructure is anticipated to be ~3.6ha in extent and is proposed on an area of the farm that has previously been transformed as part of the existing Poultry Broiler facility. The project components are indicated in Map 3 below (also attached in Appendix C).



Map 3: Development components associated with the proposed solar Photovoltaic facility (adapted from Drawing No. 2022 – SDP – E – rl, by B&K Solar)

## PROPOSED ACTIVITIES

### PRE-CONSTRUCTION PHASE

Prior to commencement with construction activities on site, the detailed design drawings for the proposed construction for the solar Photovoltaic facility and associated infrastructure must be finalised and the necessary approvals obtained. Final designs and PV panels to be installed will be based on the best available technology at the time of construction.

## CONSTRUCTION PHASE

### *Solar Photovoltaic Array (Panels)*

Prior to the erection of the solar array vegetation and topsoil will be required to be removed for the individual PV mounts, internal vehicle tracks and for the levelling of a portion of the proposed development footprint. Individual solar panels will be arranged in multiple rows and mounted on metal frames fixed onto concrete foundations. The proposed PV facility will be a fixed system, meaning that the solar arrays will be mounted in a stationary position. Based on local climatic conditions the PV panels will be spaced at varying intervals to avoid shading adjacent panels and mounted at an angle to allow for maximum exposure to the sun.

Micro-siting and positioning of the individual mounts within the array will be confirmed by the technical team at the time of construction and will take into consideration the solar regime and other climatic conditions, topographic features, soil stability, and hydrology of the site.

Based on the best available technology and the most cost-effective method available at the time of construction, the inverters proposed for the PV facility will either be string-inverters mounted at the base of the metal supporting structures connecting individual panels via internal cabling, or a central inverter which will be constructed within the battery storage area footprint.

### *Battery Storage Area*

It is proposed that the battery storage area is constructed, immediately south of the PV footprint. The battery storage area will comprise of a number of battery containers (4 × 40) anticipated to be ~300m<sup>2</sup> in extent. Should a central inverter be required at the time of construction, it will be installed within the proposed footprint of the battery storage area. The type and quantity of batteries will be determined based on the best available technology at the time of construction. Batteries will be kept at optimal charges to prolong battery life and capacity.

### *Connection Cables*

The PV facility will be connected to two existing transformers via 400V underground cables and one private overhead powerline (22kV), mounted on creosote poles, to a Medium Voltage point (MV), located adjacent to the southern boundary of Farm 713.

An underground cable will connect the solar PV facility to an existing transformer, referred to as the “main transformer”, which is located within the footprint of the Poultry Broiler facility, over a distance of ~180m south of the solar PV area. In addition, an underground cable will connect the PV facility to the transformer referred to as the “pumphouse transformer”, located at the existing pumphouse on site, over a distance of ~342m south-east of the proposed PV facility. It is anticipated that both underground cables will be 400V.

In order to connect the PV facility to the MV point (750kW) located adjacent to the southern boundary of Farm 713, it is proposed that a 22kV overhead powerline will be constructed over a distance of ~2.4km. The overhead powerline will be mounted on creosote poles spaced 80m apart with a disturbance footprint of ~1m<sup>2</sup> at the base of each pole along existing vehicle tracks. A portion of the 22 kV overhead powerline, measuring ~1.5km (1513 m) is proposed to be erected within the Open Space III area and,



as far as practically possible, will be constructed in disturbed areas adjacent to existing internal vehicle tracks. See Site Plan Attached as Appendix A

#### *Eskom Grid Connection*

The PV facility will be connected to the ESKOM grid as part of a wheeling agreement with the power utility. Electricity generated by the PV facility will be fed into the national grid via the two existing ESKOM transformers (main and pumphouse transformers) as well as via the Medium Voltage point (MV). The main transformer has a capacity of 500kVA/ 500kW, the pumphouse transformer, a capacity of 315kVA/ 315kW and the MV point a capacity of 750kW. See Site Plan Attached as Appendix A.

An application has been made to ESKOM for a wheeling agreement with the power utility. Copies of confirmation of application submitted is included in Appendix G (ix).

#### OPERATIONAL PHASE

Once the PV facility and associated infrastructure has been installed, the facility will become operational and start producing 3.4MW electricity which will be fed into the ESKOM grid. The applicant will therefore receive a rebate from the power utility, based on the amount of electricity produced at the solar PV facility on Farm 713.

Under normal circumstances the Poultry Broiler facility and pumping infrastructure on the farm will be powered by electricity supplied directly from ESKOM. However, in the event where electricity is not available from the power utility (e.g., load-shedding), inverters will switch to utilise back-up electricity supplied from the battery storage containers. Once electricity supply has been restored by ESKOM, inverters will switch back to utilising electricity from the grid, thus allowing normal operations to continue without interruption. By tying into the ESKOM grid, the applicant is able to utilise the power utilities distribution infrastructure, thus negating the need to install such on the farm.

#### *Internal Roads*

Internal roads will be required for maintenance and cleaning purposes. It is proposed that the roads constructed during the construction phase of the project and will be utilised during the operational phase of the project. It is anticipated that the new roads will measure ~4m in width. Exact dimensions of road needed will be determined by the project engineers prior to commencement of the construction phase.

#### *Cleaning and Maintenance*

The solar PV panels are monitored remotely for faults, thus maintenance is usually conducted as and when required, although, on average, this is anticipated to be twice a year. Dirt accumulates on the panels over time, and this will reduce the efficiency thereof. As a result, the panels need to be washed with a water and soap mixture, a few times a year. However, the frequency of washing is dependent on various factors, predominantly local climatic conditions (e.g., frequency of precipitation and windblown dust etc.) and a reliable water supply is available on site to undertake regular cleaning of the panels.

#### *Security*

The proposed PV facility will be located adjacent to, and within the boundary of the existing Poultry Broiler Facility. The Poultry Broiler Facility is separately fenced in from the rest of the farm and has an access-controlled entrance.

## DECOMMISSIONING PHASE

It is not anticipated that the PV facility will be decommissioned. Should the facility be decommissioned in future, this will be done in compliance with any legislation or regulations which might be applicable at the time.

## **SITE ACCESS**

Farm 713 is located ~ 7km north of Sunland and approximately 8.5km north-west of Addo, in the Sundays River Valley Municipality. The proposed PV facility will be accessed via the existing access located on the DR02006 gravel road (Enon Road), at its intersection with the Slagboom road (MN50605).

## **PROJECT TIMING**

Should the proposed PV facility receive a positive Environmental Authorisation, it is proposed that the development will take place in phases as follows:

PHASES	ACTIVITY	TIMEFRAME
<b>PRE-CONSTRUCTION PERIOD</b>		
Detailed Planning and Design Phase	<ul style="list-style-type: none"> <li>• Determine the best technology available at the time</li> <li>• Prepare final layouts/ development footprint</li> <li>• Relevant permit &amp; licence applications and approvals</li> <li>• Pre-Commencement Audit</li> </ul>	12 months
<b>CONSTRUCTION PERIOD</b>		
PHASES	ACTIVITY	TIMEFRAME
1	<ul style="list-style-type: none"> <li>• Site preparation – clearing (if needed) and levelling</li> <li>• Construction of supporting bases</li> <li>• Mounting Photovoltaic arrays</li> <li>• Preparation and installation of battery storage containers</li> <li>• Installing internal cabling and inverters</li> <li>• Installation of underground cabling</li> <li>• Installation of overhead powerline</li> </ul>	Commence within 6 months of the Pre-Construction period and be completed within 24 months.
<b>OPERATION PERIOD</b>		
Operational Phase	<ul style="list-style-type: none"> <li>• The PV facility will produce ~3.4MW of electricity and convey this into the ESKOM grid</li> </ul>	Commence upon completion of construction phase and will continue in perpetuity

Should this project receive a positive Environmental Authorisation, it is proposed that the preconstruction phase will commence immediately and will be completed within 12 months. The construction phase will commence within 6 months of the completion of the Pre-construction period and is anticipated to be completed within 24 months. Once the construction phase is completed the PV facility will become operational and will continue on perpetuity.

## **2. FEASIBLE AND REASONABLE ALTERNATIVES**

**“alternatives”**, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;



- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

**Paragraphs 3 – 13 below should be completed for each alternative.**

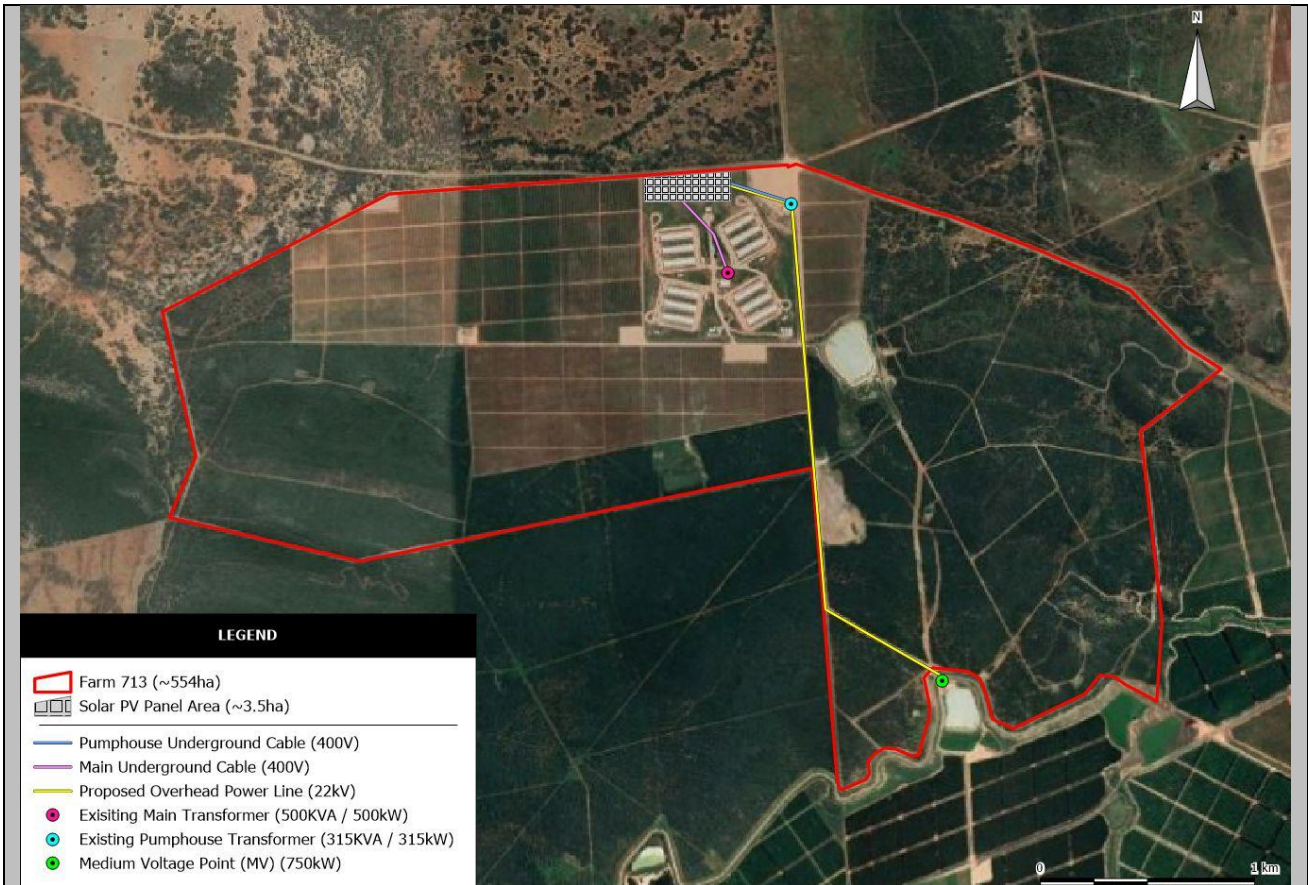
This Basic Assessment included the consideration of various layout alternatives. Site alternatives were not assessed, as the project proposes to ensure electricity security for the existing Disco 2 Poultry Broiler Facility on Farm 713 as well as associated irrigation pumping infrastructure. The following factors have informed the layout alternatives considered in this assessment:

- Proximity to the existing Poultry Broiler facility and Pump Station as well as their technical requirements
- Access to existing Eskom infrastructure

#### **Layout 1 (not preferred)**

Layout 1 below initially proposed the PV Facility without a battery storage facility. The implications thereof would be that, on days when sun exposure is not optimal, and the PV facility does not produce sufficient electricity to power the Poultry Broiler facility, it would be solely dependent on power from ESKOM or would have to be supplied by some alternative energy source (e.g., boiler, generator), as is the current situation. The Poultry Broiler facility requires a reliable, constant energy supply in order to ensure that a certain temperature, humidity and air quality is maintained within the houses at all times. Therefore, due to the dependance of the Poultry Broiler facility on electricity and the often-unreliable supply from ESKOM, it was necessary to include a battery storage facility (battery containers) as a back-up during power outages in order to ensure constant electricity supply to the Poultry Broiler facility. The proposed PV facility will also supply electricity to the pumpstation, which is used to convey irrigation water to the orchards on Farm 713 and adjacent farms. Inconsistent supply of electricity will impact on the water distribution network, thus including battery storage as part of the facility design ensures a consistent supply of irrigation water to the orchards.

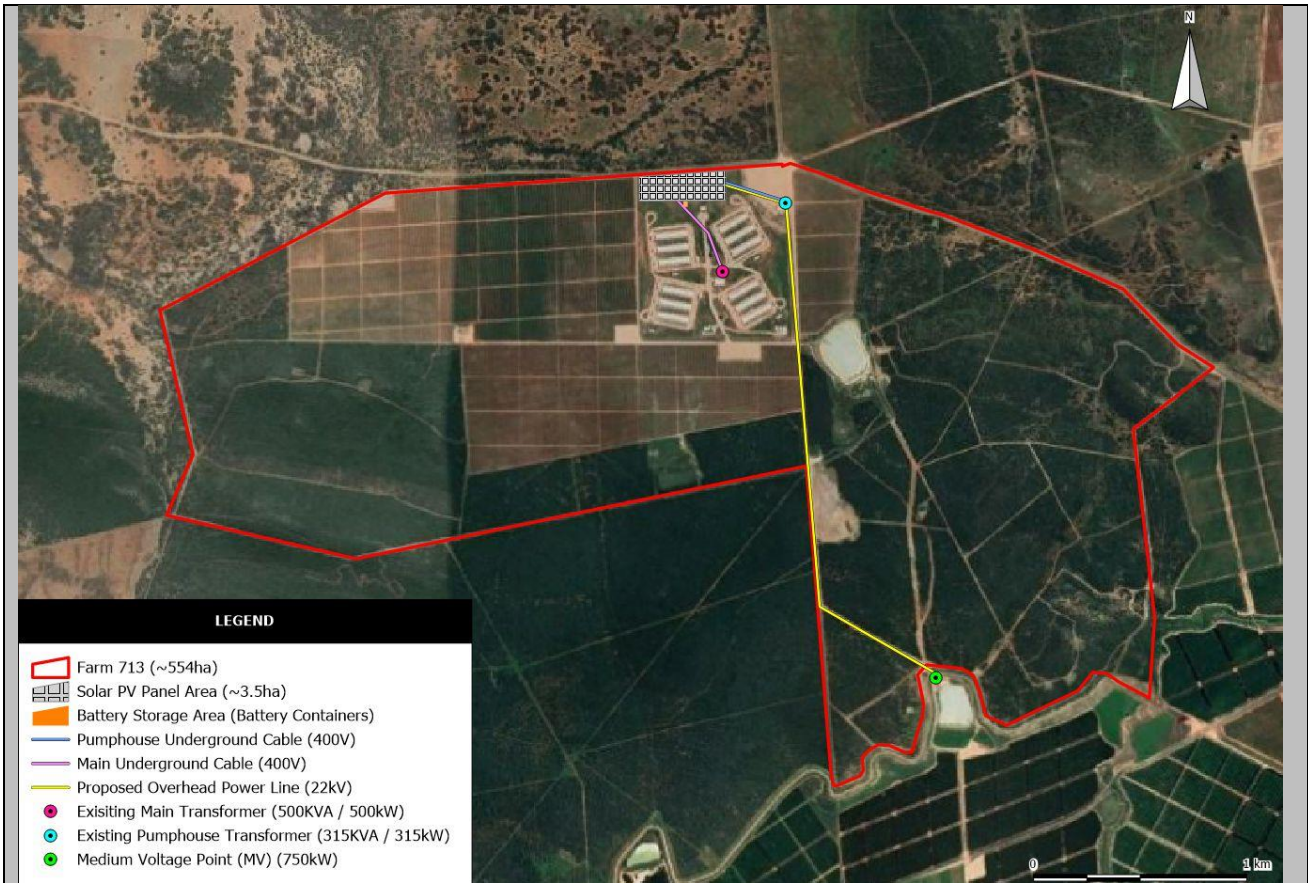
This layout was, therefore, amended and is **not the preferred layout** for the site and was not assessed further in this assessment, as it does not include a battery storage room.



*Layout 1: Not the preferred layout*

**Layout 2 (preferred)**

Layout 2, as outlined in Section A above (Activity Description), and depicted in Appendix C, is the preferred layout for this site and has been assessed in full in this Basic Assessment Process. It provides for a battery storage facility of ~300m<sup>2</sup> footprint (battery containers), in order to ensure consistent electricity supply during power outages. Micro-siting of the individual PV panels within the array footprint area will be confirmed by the project Engineer during the detailed design phase, should environmental authorisation be granted. A total disturbance footprint of ~3.6ha is anticipated.



Layout 2: Preferred Layout Alternative

### No-Go alternative

In addition, to the alternatives discussed in this section, the No-Go alternative was assessed in full in the Impact Assessment section of this report (Section D). With the increased instability of the national electricity network, as well as the increased cost of alternative fuels (e.g., Diesel for generators), maintaining a consistent power supply at the Poultry Broiler facility, as well as at the dam pump station, is rapidly increasing production costs. The No-Go option would result in the continuing of the current situation, increased production costs and resultant rise in food prices. Additionally, the existing national electricity network would continue to be strained by the electricity requirements of the Poultry Broiler facility and dam pump station.

### 3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

C	0	7	6	0	0	0	0	0	0	0	0	0	7	1	3	0	0	0	0	0
1	2	3	4	5																

List alternative sites if applicable.

**Alternative:**

Alternative S1<sup>1</sup> (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

**Latitude (S):**

**Longitude (E):**

<b>33°</b>	<b>25.493'</b>	<b>25°</b>	<b>38.725'</b>
°	'	°	'
°	'	°	'

In the case of linear activities:

**Alternative:**

Alternative S1 (preferred or only route alternative)

• Starting point of the activity

• Middle point of the activity

• End point of the activity

**Latitude (S):**

**Longitude (E):**

°	'	°	'
°	'	°	'
°	'	°	'

Alternative S2 (if any)

• Starting point of the activity

• Middle point of the activity

• End point of the activity

°	'	°	'
°	'	°	'
°	'	°	'

Alternative S3 (if any)

• Starting point of the activity

• Middle point of the activity

• End point of the activity

°	'	°	'
°	'	°	'
°	'	°	'

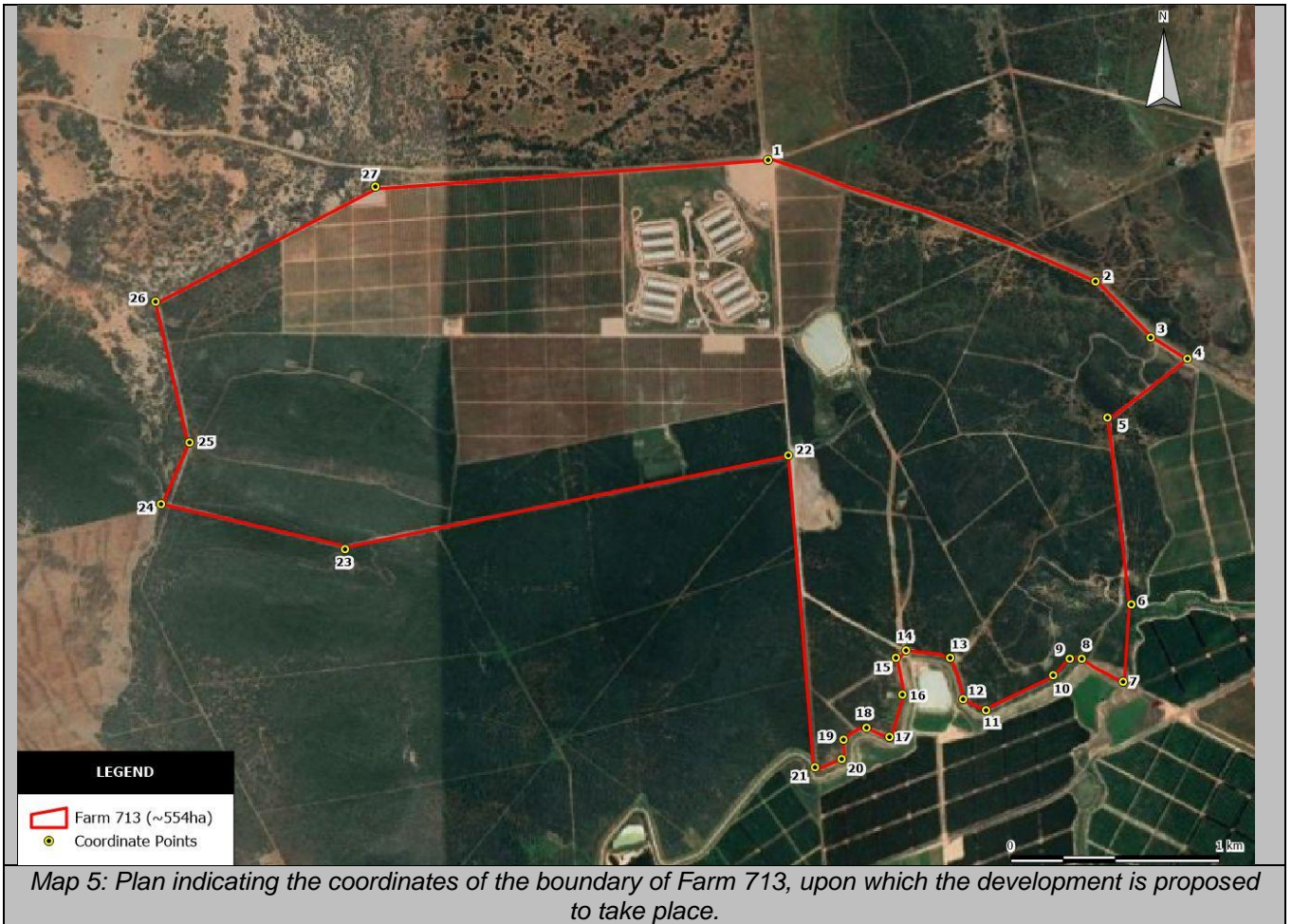
For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

<sup>1</sup> "Alternative S.." refer to site alternatives.

Coordinates for the property where the proposed Photovoltaic development will take place (Preferred alternative).

Point Number	Latitude (S) (DDMMSS)			Longitude (E) (DDMMSS)		
	DD	MM	SS	DD	MM	SS
1	33°	25'	27.07"S	25°	38'	59.80"E
2	33°	25'	42.85"S	25°	39'	50.58"E
3	33°	25'	49.76"S	25°	39'	58.63"E
4	33°	25'	52.37"S	25°	39'	3.54"E
5	33°	26'	0.18"S	25°	39'	51.79"E
6	33°	26'	24.36"S	25°	39'	55.15"E
7	33°	26'	34.61"S	25°	39'	54.48"E
8	33°	26'	31.52"S	25°	39'	48.18"E
9	33°	26'	31.47"S	25°	39'	45.95"E
10	33°	26'	33.59"S	25°	39'	43.73"E
11	33°	26'	37.97"S	25°	39'	33.12"E
12	33°	26'	36.79"S	25°	39'	26.66"E
13	33°	26'	31.33"S	25°	39'	27.19"E
14	33°	26'	30.35"S	25°	39'	20.64"E
15	33°	26'	31.84"S	25°	39'	19.35"E
16	33°	26'	35.91"S	25°	39'	20.21"E
17	33°	26'	41.48"S	25°	39'	18.24"E
18	33°	26'	40.60"S	25°	39'	14.29"E
19	33°	26'	41.94"S	25°	39'	11.08"E
20	33°	26'	44.31"S	25°	39'	10.83"E
21	33°	26'	45.75"S	25°	39'	6.70"E
22	33°	26'	5.11"S	25°	39'	2.41"E
23	33°	26'	16.48"S	25°	37'	53.39"E
24	33°	26'	11.27"S	25°	37'	25.93"E
25	33°	26'	3.45"S	25°	37'	29.59"E
26	33°	26'	45.42"S	25°	37'	24.73"E
27	33°	26'	30.17"S	25°	37'	58.97"E





#### 4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

**Alternative:**

Alternative A1<sup>2</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the activity:**

<b>35 700m<sup>2</sup></b>
m <sup>2</sup>
m <sup>2</sup>

**Length of the activity:**

m
m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the site/servitude:**

<b>5 539 906m<sup>2</sup></b>
m <sup>2</sup>
m <sup>2</sup>

<sup>2</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

## 5. SITE ACCESS

Does ready access to the site exist?

<b>YES</b>	NO
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If NO, what is the distance over which a new access road will be built

m
---

Describe the type of access road planned:

Farm 713 is located ~7km north of Sunland and approximately 8.5km north-west of Addo, in the Sundays River Valley Municipality. Access to the farm is gained from the existing entrance on the DR02006 gravel road (Enon Road), at its intersection with the Slagboom road (MN50605).

A Traffic Impact Assessment is not proposed for the PV Facility and associated Infrastructure, as the impacts on the surrounding roads are anticipated to be of very low significance as they will be temporary and limited to the Construction Phase of the development. It is not anticipated that the Operational Phase, will increase the traffic volumes on the surrounding roads.

The existing access to the farm, which will be utilised to access the proposed PV facility, has been included on the Site Plan attached as Appendix A to this report.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

## 6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - rivers;
  - the 1:100 year flood line (where available or where it is required by DWA);

- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or invested with alien species);

6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

6.10 the positions from where photographs of the site were taken.

A site plan has been included in Appendix A

## **7. SITE PHOTOGRAPHS**

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Color photographs from the center of the site have been included in Appendix B

## **8. FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

A facility illustration has been included in Appendix C



## 9. ACTIVITY MOTIVATION

### 9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	<b>R 12.5 million</b>
What is the expected yearly income that will be generated by or as a result of the activity?	<b>R 2 million</b>
Will the activity contribute to service infrastructure?	<b>NO</b>
Is the activity a public amenity?	<b>NO</b>
How many new employment opportunities will be created in the development phase of the activity?	<b>12 (unskilled) 5 (skilled)</b>
What is the expected value of the employment opportunities during the development phase?	<b>R 1 million (Construction) R 250 000 p/a (operation)</b>
What percentage of this will accrue to previously disadvantaged individuals?	<b>70%</b>
How many permanent new employment opportunities will be created during the operational phase of the activity?	<b>2 (unskilled) 1 (skilled)</b>
What is the expected current value of the employment opportunities during the first 10 years?	<b>R2.5 million</b>
What percentage of this will accrue to previously disadvantaged individuals?	<b>80%</b>

### 9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The National Development Plan, Vision 2030 (2012) indicates one of the development priorities in South Africa is to reduce greenhouse gas emissions by moving to less carbon-intensive electricity production, procuring 20 000MW of renewable energy (page 48 and 66). In 2018, a total of 10 809 GWh of electricity was produced from renewable sources (South African Energy Sector Report, 2021), which represents just over 50% of the NDP's target. Therefore, there is still a shortfall of approximately 9000 MW of renewable energy required to be procured, in order to achieve this goal.

The proposed PV facility will supplement electricity supply to the National Grid, thus contributing to the NDP's target of 20 000MW, as well as provide renewable energy to the applicant directly, thus reducing their carbon footprint.

The Final Integrated Development Plan for the SRVM (SRVM IDP 2021/ 2022), indicates that the current unemployment rate in the municipal area may be as high as 38.54%. The Agricultural sector, apart from tourism, is the largest provider of employment in the SRVM area and, as it currently represents ~11% of the employment for the SRVM area (Final SRVM IDP 2021/ 2022). Additionally,

the SRVM IDP (2015/ 2016; Page 36) states that: *“The municipality can boast its ecotourism and agricultural potential.”* Finally, the following statement is given by the SRVM Spatial Development Framework (SRVM SDF 2013; Page 8): *“The agricultural sector is one of the key economic drivers of the Sundays River Valley Municipality.”*

The proposed development is anticipated to create 3 new permanent employment opportunities for the lifespan of the project as well as 17 temporary employment opportunities during the construction phase of the project. The existing Poultry Broiler facility contributes to the provision of poultry products, thereby improving supply of the product and ensuring the local costs of these products are maintained at a reasonable and sustainable level. The Poultry Broiler Facility requires a reliable, constant energy supply in order to ensure that a certain temperature, humidity and air quality is maintained within the houses at all times. However, with the increased instability of the national electricity network, as well as the increased cost of alternative fuels (e.g. Diesel for generators), maintaining a consistent power supply at the Poultry Broiler facility, is rapidly increasing production costs, and resulting in increased food prices and food insecurity. By constructing a solar PV facility, the applicant will be able to ensure a stable and cost-effective electricity supply to the poultry facility, thus reducing climbing input costs and decreasing the sharp rise in the price for poultry products.

The proposed PV facility will also supply electricity to the pumpstation, which is used to convey irrigation water to the orchards on Farm 713 and adjacent farms. Inconsistent supply of electricity impacts on the water distribution network. The PV facility would therefore ensure a consistent and reliable supply of irrigation water to the applicant’s orchards.

The project will provide economic stimulation in the SRVM, through a temporary increase in demand for goods associated with the construction phase of the activity. In the long term and during the operational phase of the activity, positive economic benefits are associated with the creation of additional employment opportunities; a reduction in food production costs and the resultant food price increases.

It is the applicant’s intention to build on this economic base in the SRVM, by making optimum use of the available resources in the area, including the available work force from local communities.

Indicate any benefits that the activity will have for society in general:

The PV facility will provide ~3.4MW of electricity supply to the National Grid. In addition, by reducing their reliance on the national power utility, the applicant will be able to reduce production costs and the resultant rise in the cost of poultry products, thus contributing to national food security.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The Final IDP (2021/ 2022) for the SRVM indicates that the current unemployment rate in the municipal area may be as high as 38.54%. The proposed development will create additional permanent employment opportunities during the operational phase, as well as several construction phase jobs. The employment opportunities that will be generated by the proposed development will improve the buying power of these individuals in the local communities, which in turn, may contribute positively towards the local economy and enable individuals to improve their standard of living.

**10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES**

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
<p><b>GN R327 (LISTING NOTICE 1)</b></p> <p><i>“1. The development of facilities or infrastructure for the generation of electricity from a renewable resource where—</i></p> <p><i>(ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare;</i></p> <p>It is anticipated that the proposed development footprint of the solar PV Facility and associated infrastructure will be ~3.6ha in extent and will have the capacity to produce 3.4MW of AC electricity from a renewable resource.</p> <p><b>This listed activity will require Environmental Authorisation.</b></p> <p><i>“24. The development of a road—</i></p> <p><i>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road—</i></p> <p><i>(c) which is 1 kilometre or shorter.”</i></p> <p>The PV facility will require the construction of internal access roads in order to gain access to the project components and solar panels for maintenance and cleaning purposes. Internal access roads are anticipated to be ~4 meters in width, and the combined length that will exceed 1 kilometre in length. The roads will not require a road reserve.</p> <p><b>Thus, this listed activity is <u>not</u> applicable.</b></p> <p><i>“27. The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— “</i></p> <p>The solar PV facility is anticipated to have a combined footprint of ~3.6ha and is proposed to be located on an area that was lawfully disturbed within the last 10 years (~2016/2017), for the establishment of a Poultry Broiler facility which received Environmental Authorisation. The</p>	<p>Department of Economic Development, Environmental Affairs and Tourism (DEDEAT)</p>	<p>2014 (as amended)</p>

Ecological Specialist has confirmed that the area is irreversibly modified with no natural vegetation remaining on the proposed site. A mixture of grass species and herbaceous weeds are currently present on site and regular mowing of the site does occur. In addition, the proposed overhead powerline will be installed within the existing road reserve, thus additional vegetation clearance is not anticipated.

**This listed activity is thus not applicable.**

*“28. Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:*

*(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;”*

The PV facility will be grid-tied as part of a wheeling agreement with Eskom and will provide electricity security for the existing agricultural operations on the farm. The farm is currently utilized for agriculture (commercial citrus production and a Poultry Broiler Facility) and the solar PV facility is considered to be an agro-“industrial” development. The farm falls outside of an urban area, and the combined development footprint is anticipated to be ~3.6ha in extent.

**This listed activity will require Environmental Authorisation.**

*“56. The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—*

*(ii) where no reserve exists, where the existing road is wider than 8 metres;”*

The PV facility will require internal roads in order to gain access to the project components and solar panels for maintenance and cleaning purposes. The internal roads required for the PV facility will tie in with existing internal access roads provided for the Poultry Broiler facility, which range from between 5 and 7 meters in width. The internal roads are anticipated to be ~4 meters in width and will exceed 1 kilometre in length.

**Thus, this listed activity is not applicable.**

**GN R324 (LISTING NOTICE 3)**

*“4. The development of a road wider than 4 metres with a reserve less than 13,5 metres.*

**a. Eastern Cape**

*i. Outside urban areas:*

*(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve; excluding disturbed areas;...”*

The PV facility will require internal roads in order to gain access to the project components and solar panels for maintenance and cleaning purposes. The internal roads are not anticipated to be more than 4 meters in width.

The proposed development is falls within in the Eastern Cape, outside of an urban area and is located within 7.6 kilometers of the nearest boundary of the Addo Elephant National Park.

**Thus, this listed activity will not require Environmental Authorisation.**

*“12. The clearance of an area of 300 square meters of more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintained purposes undertaken in accordance with a maintenance management plan.*

**a. Eastern Cape**

*v. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conversation or had an equivalent zoning.”*

This listed activity was considered as part of this assessment as a portion of the proposed 22kV overhead powerline (~1.6km) will be required to be installed within an area that is zoned as Public Open Space III. It is proposed that the overhead powerline will be installed within an existing road reserve adjacent to an existing internal access road. The overhead powerline will be mounted on creosote poles spaced approximately 80 meters apart with a 1m<sup>2</sup> disturbance footprint at the base of each pole. It is anticipated that the total disturbance footprint for the portion of the powerline that will be within the Public Open Space III area will be ~20 square meters.

**Thus, this listed activity will not require Environmental Authorisation**

<p>“18. The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</p> <p>a. Eastern Cape</p> <p>i. Outside urban areas:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p> <p>The PV facility will require internal roads in order to gain access to the project components and solar panels for maintenance and cleaning purposes. The internal roads required will tie in with existing internal access roads provided for the Poultry Broiler facility and is anticipated to be ~4 meters in width and will exceed 1 kilometre in length.</p> <p>The proposed development falls within in the Eastern Cape, outside of an urban area and is located within ~7.6 kilometers of the nearest boundary of the Addo Elephant National Park.</p> <p><b>Thus, this listed activity requires Environmental Authorisation</b></p>		
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Other Legislation, Policy or guidelines applicable to the application:

TITLE OF LEGISLATION, POLICY OR GUIDELINE:	ADMINISTERING AUTHORITY:	DATE:
The Constitution of the Republic of South Africa (Act 108 of 1996)	Parliament of South Africa	1996
National Environmental Management Act (Act 107 of 1998) (as amended)	Department of Environmental Affairs	2014
Environmental Impact Assessment Regulations 2014 (as amended), published under Chapter Five of NEMA (GN R326, GN R327, GN R325 and GN R324)	Department of Economic Development, Environmental Affairs and Tourism	2017
National Environmental Management Biodiversity Act (Act 10 of 2004)	Department of Economic Development, Environmental Affairs and Tourism	2004
National Heritage Resources Act (Act 25 of 1999)	South African Heritage Resources Agency	1999
National Water Act (Act 36 of 1998)	Department of Water Affairs	1998
National Environmental Management Protected Areas Act (Act 57 of 2003)	Department of Environmental Affairs	2003
Conservation of Agricultural Resources Act (Act 43 of 1983)	Department of Agriculture, Forestry and Fisheries	1983
Occupational Health and Safety Act (Act 85 of 1993), as amended by Occupational Health and Safety Amendment (Act 181 of 1993)	Department of Labour	1993
Hazardous Substances Act (Act 15 of 1973) (as amended)	Department of Labour	1997

Cape Nature and Environmental Conservation Ordinance (Act 19 of 1974)	Department of Economic Development, Environmental Affairs and Tourism (DEDEAT)	1974
Eastern Cape Provincial Heritage Resources Act (Act 9 of 2003)	Eastern Cape Provincial Heritage Resources Agency	2003
Sundays River Valley Municipality Integrated Development Plan 2021/2022	Sundays River Valley Municipality	2021/2022
Sundays River Valley Municipality Spatial Development Plan 2013	Sundays River Valley Municipality	2013
South African National Development Plan 2030	South African National Planning Commission	2030
Guideline 5: Assessment of Alternatives and Impacts	Department of Environmental Affairs	June 2006
Guideline 7: Public Participation	Department of Environmental Affairs	October 2012
Guideline on Need and Desirability	Department of Environmental Affairs	2017
SANS 10234 Globally Harmonized System of classification and labelling of chemicals 2008	South African Bureau of Standards	December 2008

## 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

### 11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

<b>YES</b>	<b>NO</b>
------------	-----------

If yes, what estimated quantity will be produced per month?

<b>20m<sup>3</sup></b>
------------------------

How will the construction solid waste be disposed of (describe)?

Construction phase waste is expected to be limited to packaging materials (shrink wrap, cardboard, packaging material, wooden pallets), builder's rubble (cement/ concrete) and litter generated by the construction staff. Waste will be recycled as far as possible. Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility.

Where will the construction solid waste be disposed of (describe)?

Construction phase solid waste will be disposed of at the nearest licensed waste disposal site (Kirkwood Waste Disposal Site). Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (Koedoeskloof Waste Disposal Site).

Will the activity produce solid waste during its operational phase?

<b>YES</b>	<b>NO</b>
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If yes, what estimated quantity will be produced per month?

<b>m<sup>3</sup></b>
----------------------

How will the solid waste be disposed of (describe)?

It is not anticipated that the Photovoltaic facility will not produce solid waste during the operational phase, however, should solid waste be generated (i.e., broken glass panels, electrical wires etc) it will be disposed of at the nearest licensed disposal site (Kirkwood Waste Disposal Site).

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (Koedoeskloof Waste Disposal Site).

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? 

YES	<b>NO</b>
-----	-----------

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility? 

YES	<b>NO</b>
-----	-----------

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

**11(b) Liquid effluent**

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? 

YES	<b>NO</b>
-----	-----------

If yes, what estimated quantity will be produced per month? 

m <sup>3</sup>	
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Will the activity produce any effluent that will be treated and/or disposed of on site? 

Yes	<b>NO</b>
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility? 

YES	<b>NO</b>
-----	-----------

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:



It is not anticipated that the Photovoltaic Facility will produce any wastewater directly, thus no reuse or recycling will be required. The solar panels will require cleaning from time to time, which will involve spraying foreign contaminants, such as dust, from the panels with water and a high-pressure cleaner. Cleaning intervals are based on local climatic conditions and seasonal variations.

**11(c) Emissions into the atmosphere**

Will the activity release emissions into the atmosphere?

YES	<b>NO</b>
YES	<b>NO</b>

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

--

**11(d) Generation of noise**

Will the activity generate noise?

<b>YES</b>	NO
YES	<b>NO</b>

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise associated with normal construction activities will be generated during construction phase i.e., construction vehicles, generators, and plant equipment being used on the site. However, construction activities will as far as possible be limited normal working hours (weekdays 7am to 6pm).

Noise levels are to be kept within limits for the area, in accordance with the requirements of the relevant national and local noise control statutes.

During the operational phase of the project inverters and transformers are used to convert the current, which can generate noise. However, these will be contained within enclosed structures to protect and secure the equipment, and to minimise any potential noise emissions.

**12. WATER USE**

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	<b>water board</b>	groundwater	river, stream, dam or lake	other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

litres	
	<b>NO</b>

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

The solar panels will require cleaning from time to time, which will involve spraying foreign contaminants, such as dust, from the panels with water and a high-pressure cleaner. The combined use of compressed air and clean water is optimal and reduces the water requirements. Cleaning intervals are based on local climatic conditions and seasonal variations, thus the amount of water required for cleaning operations will vary.

Water will be sourced from the applicant's existing water use entitlements. Since the water is already treated for use in the poultry broiler facility, it is anticipated that it will be suitable for use on the panels.

### 13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

- The PV facility in itself is a means to improve energy efficiency on the farm, by reducing the applicant's reliance on electricity from the national grid.
- Use minimum lamp wattage within safety/ security requirements;
- Where possible, use timer switches or motion detectors to control lighting in areas that are not occupied continuously (if permissible and in line with minimum security requirements); and
- Switch off lights when not in use in line with safety and security.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

This is an alternative energy project.

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

**Important notes:**

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

<b>YES</b>	NO
------------	----

If YES, please complete form XX for each specialist thus appointed:

Specialist declarations forms have been completed by the respective specialists and are included in Appendix G(viii).

All specialist reports must be contained in Appendix D.

The following independent specialist studies, which have been reviewed by the EIA project team, are included in Appendix D:

- Appendix D(i): Aquatic Biodiversity Compliance Statement
- Appendix D(ii): Terrestrial Biodiversity Compliance Statement
- Appendix D(iii): Visual Specialist Opinion Report

In addition, a Phase 1 Heritage Impact Assessment, which was undertaken as part of a previous environmental assessment on Farm 713, has also been used to assess potential impacts on heritage resources (Archaeological and Paleontological), and has thus been included as supporting information to this report, in Appendix G (ix).

### 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

**Alternative S1:**

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

**Alternative S2 (if any):**

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

**Alternative S3 (if any):**

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

## 2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley

### 2.6 Plain

- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

## 3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	NO	YES	NO	YES	NO

While a geotechnical investigation has not been undertaken for the site, the following observations were made by the Engineer who compiled the Road and Wet Services Report that formed part of the Basic Assessment Report for the existing Poultry Broiler Facility adjacent to the proposed PV site:

- The topsoil can in general be described as clayey sand with roots
- Topsoil is underlain with Alluvium consisting of red-brown firm to stiff clayey sand or sandy clay with occasional calcrete patches

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

#### 4. GROUND COVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition <sup>E</sup>
- 4.2 Natural veld – scattered aliens <sup>E</sup>
- 4.3 Natural veld with heavy alien infestation <sup>E</sup>
- 4.4 Veld dominated by alien species <sup>E</sup>
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sport field	Cultivated land	Paved surface	<b>Building or other structure</b>	<b>Bare soil</b>

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

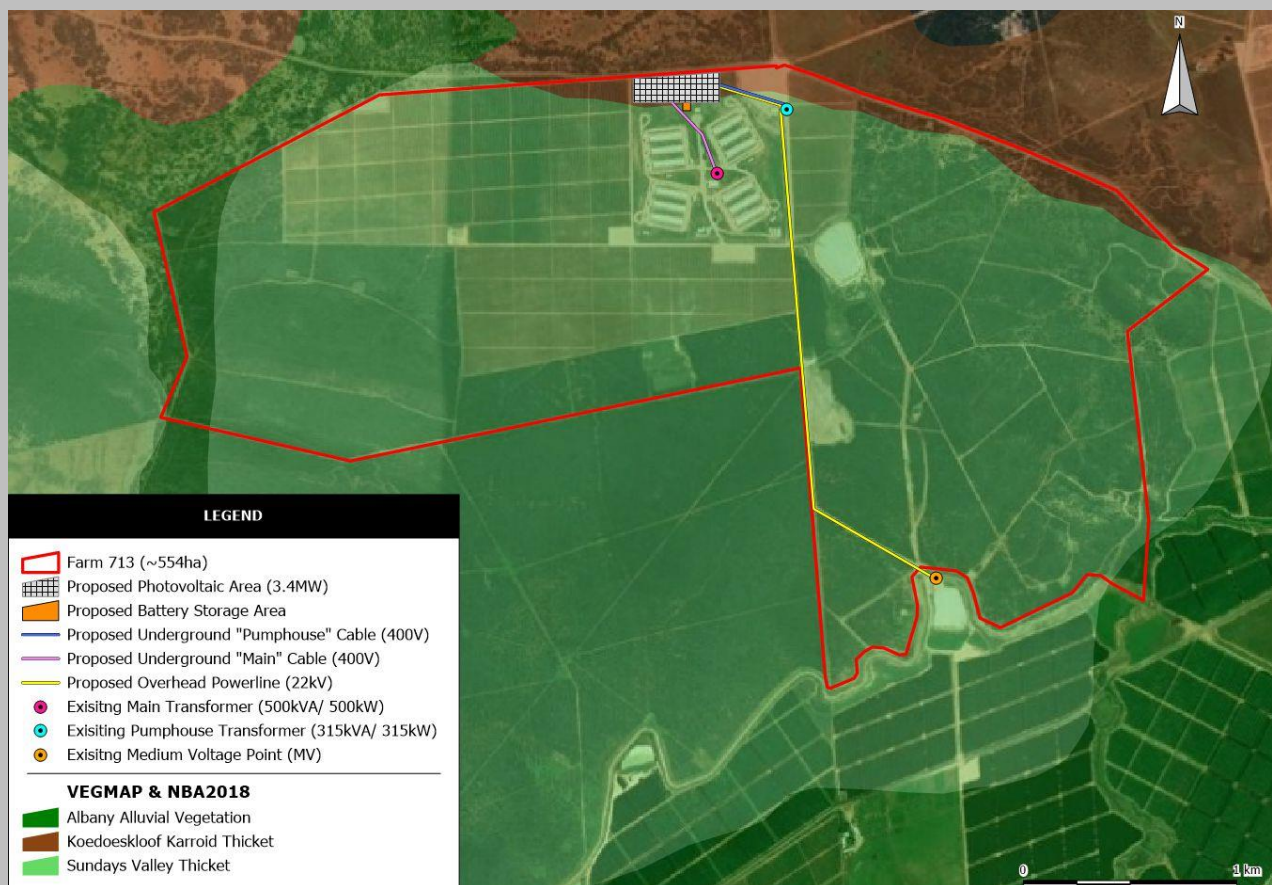
#### **CONSERVATION PLANNING FRAMEWORKS**

- ***Vegetation of South Africa, Lesotho and Swaziland Map (VegMap, 2018)***

According to the VegMap (2018) mapping resources, the majority of the farm has been identified as Sundays Valley Thicket, with a long section of Koedoeskloof Karroid Thicket running parallel to the northern boundary of the farm. A relatively small portion of Albany Alluvial Vegetation has been

identified on the western and south-eastern boundary of the farm (see Map 6). According to the National Biodiversity Assessment (NBA 2018), Koedoeskloof Karroid Thicket and Sundays Valley Thicket both have a conservation target of 19% and are classified as *Least Concern*. Koedoeskloof Karroid thicket is *Not Protected* (NP) and Sundays Valley Thicket is *Moderately Protected* (MP) Albany Alluvial Vegetation has a conservation target of 31%, is classified as *Endangered*, and is currently *Poorly Protected* (PP).

The majority of the proposed Photovoltaic development falls within an area classified as Koedoeskloof Karroid Thicket. However, the terrestrial biodiversity specialist has confirmed that the proposed development footprint is located within an area that was previously cleared as part of the adjacent Poultry Broiler Facility. No intact natural vegetation is currently remaining within the proposed footprint. See Appendix D(ii) for the full Terrestrial Biodiversity Compliance Statement Report.



Map 6: Vegetation on Farm 713, Hopefield, in terms of the VegMap (2018) mapping resources

- **Eastern Cape Biodiversity Conservation Plan (ECBCP, 2019)**

In terms of the ECBCP 2019 mapping resources, the entire Farm 713, including the proposed development footprint, has been identified as a Terrestrial ESA 1. (See Map 7). Ecological Support Area 1 should be maintained in a functional state i.e., a semi-natural state such that ecological function and ecosystem services are maintained. Ecosystems that are natural/ near-natural should be maintained and those that are moderately degraded / disturbed should be restored.

The ECBCP Handbook (2019), does include land-use management guidelines for Renewable energy (PV Facilities) and recommend that this type of activity is *Not Appropriate* for Ecological



Support Areas class 1 (ESA 1). The ECBCP Handbook (2019), states that activities that are classified as “Not appropriate” will result in destruction/degradation of important biodiversity and/ or ecological support areas, and such activities will require detailed specialist assessments by an appropriate specialist.

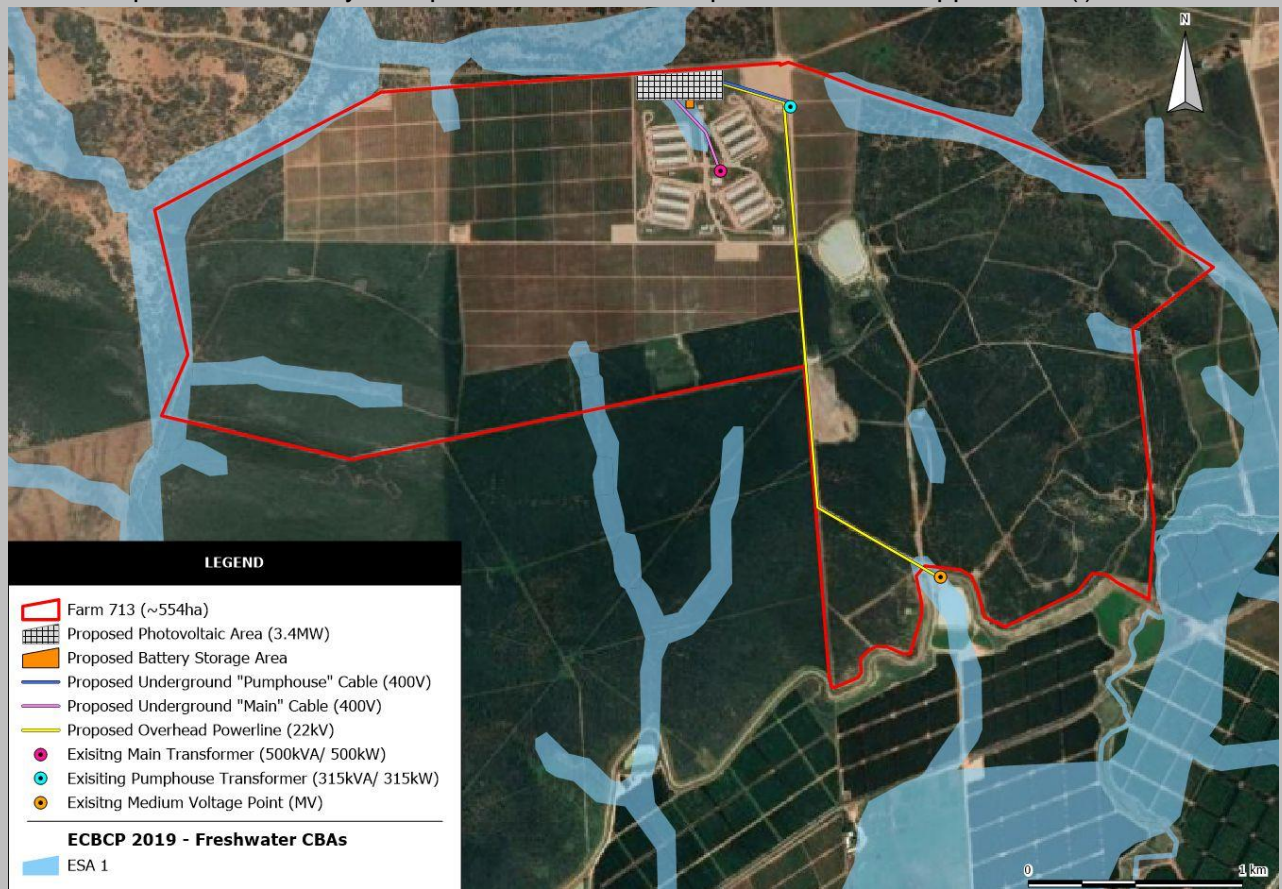
An appropriate terrestrial biodiversity specialist has prepared a Terrestrial Biodiversity Compliance Statement, as stipulated by the National Web based Environmental Screening Tool Assessment Protocols for Terrestrial Biodiversity and confirmed that the proposed site has been irreversibly transformed and no ecological processes will be significantly affected by the development. See the full Terrestrial Biodiversity Compliance Statement Report included in Appendix D(ii). Given that the site has been irreversibly modified, the designation of the site as ESA1, in the ECBCP 2019 mapping resources, appears to be incorrect.



Map 7: Farm 713 in terms of the ECBCP 2019 Terrestrial mapping resources

In terms of the ECBCP 2019 mapping resources portions of Hopefield has been identified as Aquatic ESA 1 associated with the Coerney River located adjacent to the eastern and south-eastern boundary of the farm (see Map 8). A protruding arm runs in a south-east to north-west direction across a portion of the proposed development footprint, on the northern boundary of the farm, and is presumably a historic tributary associated with the Coerney River. According to the ECBCP Handbook (2019), sites identified as Aquatic ESA1 should be maintained in a functional state i.e., a semi-natural state such that ecological function and ecosystem services are maintained. Ecosystems that are natural/ near-natural should be maintained and those that are moderately degraded / disturbed should be restored. However, the aquatic biodiversity specialist has confirmed that, given that the site has been irreversibly modified, the designation of portions of the site as

ESA1, in the ECBCP 2019 mapping resources, appears to be incorrect. For more information see the full Aquatic Biodiversity Compliance Statement Report included in Appendix D(i).

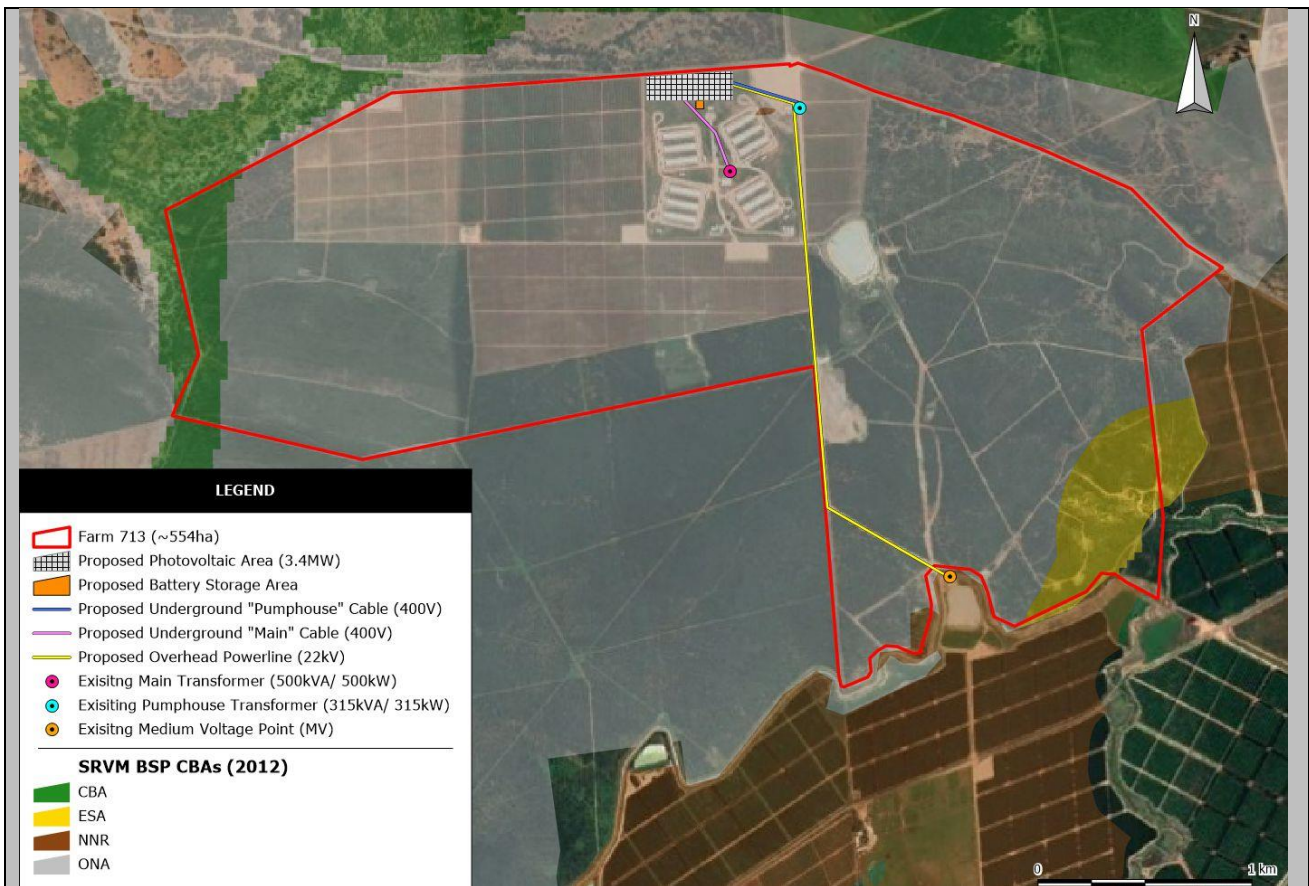


Map 8: Farm 713, in terms of the ECBCP 2019 Aquatic mapping resources

- **Sundays River Valley Municipality Biodiversity Sector Plan (SRVM BSP, 2012)**

According to the SRVM BSP (Skowno and Holness, 2012) mapping resources, the majority of Farm 713 is indicated as Other Natural Areas (ONA). A portion in the south-eastern section of the farm is classified as an Ecological Support Area (ESA), while a portion along the western boundary of the farm has been mapped as a Critical Biodiversity Area (CBA), associated with a drainage line, presumably a historic tributary of the Coerney River. The proposed development footprint is located in the ONA areas towards the northern part of the farm (Map 9). However, the terrestrial biodiversity specialist has confirmed that the proposed development footprint is located within an area that was previously cleared as part of the Poultry Broiler Facility. No intact natural vegetation is currently remaining within the proposed footprint. See Appendix D(ii) for the full Terrestrial Biodiversity Compliance Statement Report. The designation of ONA is therefore incorrect and should be No Natural Area Remaining (NNR).

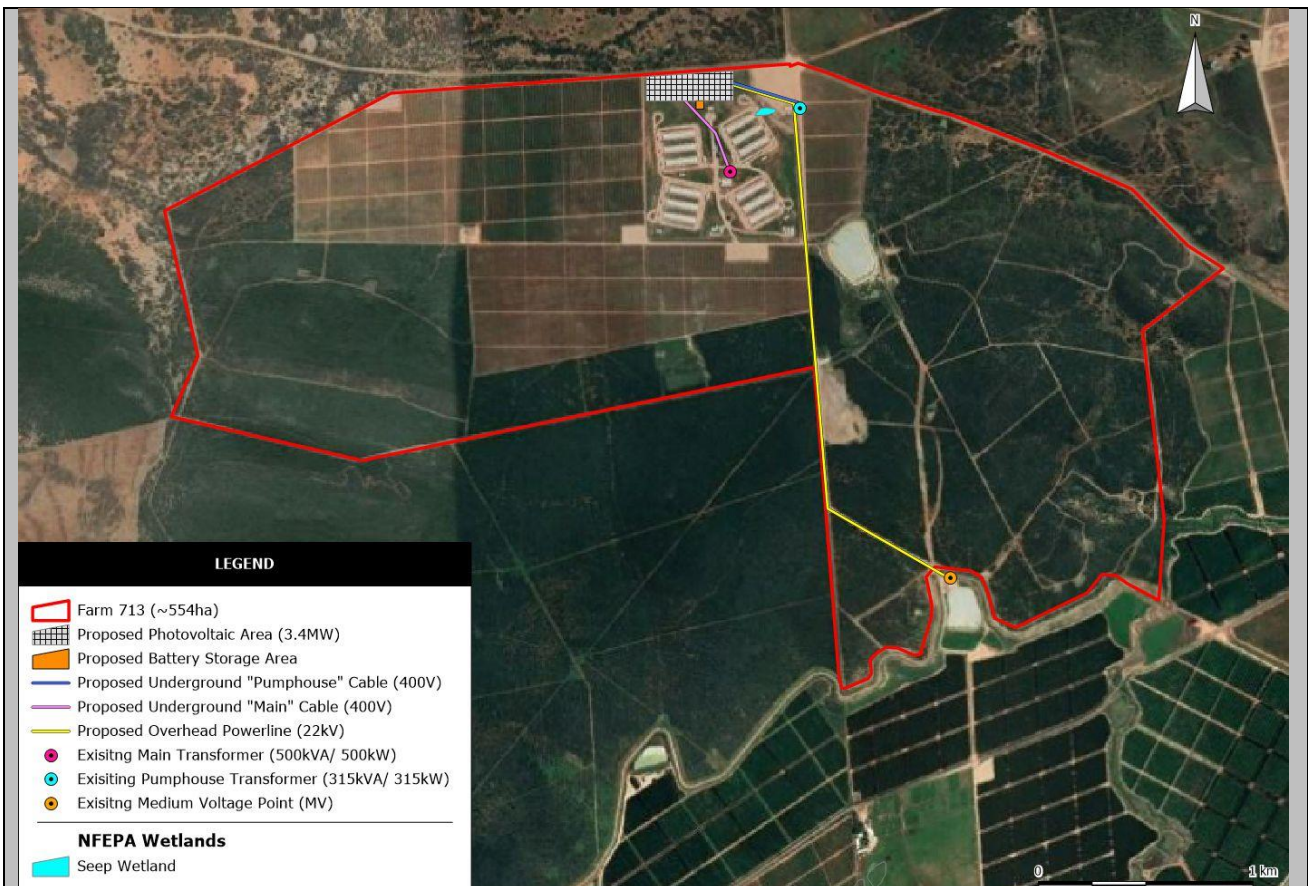




Map 9: Farm 713, in terms of the SRVM Biodiversity Sector Plan mapping resources.

- **National Freshwater Ecosystem Priority Areas (2011)**

According to the NFEPA (2011), one seep wetland has been mapped on Farm 713 adjacent to the proposed development on the northern section of the farm (See Map 10). However, the aquatic biodiversity specialist has confirmed that, given that the area where the wetland is indicated, has been irreversibly modified for a Poultry Broiler Facility, the designation of a Seep wetland, appears to be incorrect. For more information see the full Aquatic Biodiversity Compliance Statement Report included in Appendix D(i).



Map 10: Farm 713 in terms of the NFEPA (2011) mapping resources.

## NATIONAL ENVIRONMENTAL SCREENING TOOL

The National web-based Environmental Screening Tool allows for the generating of a Screening Report referred to in Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended, which is required to accompany any application for Environmental Authorisation. The National Environmental Screening Tool identifies the following Sensitivities on the site, which have relevance to this report:

- Terrestrial Biodiversity Sensitivity - Very High (Figure 1).
- Plant Species sensitivity – Medium and Low (Figure 2).
- Animal Species sensitivity – High and Medium (Figure 3).
- Aquatic Biodiversity Sensitivity - Low (Figure 4).



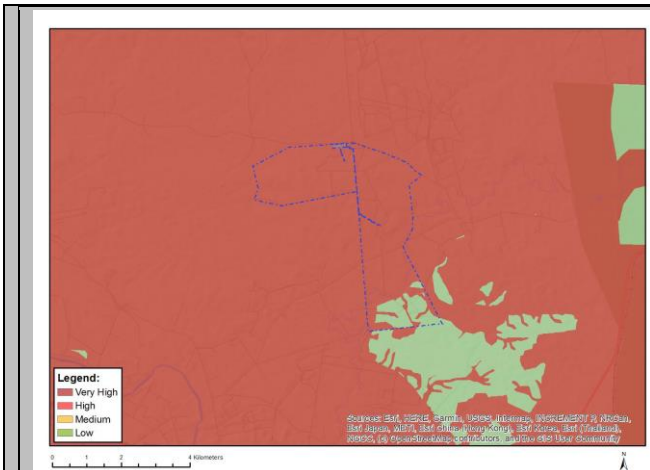


Figure 1.: Terrestrial Biodiversity Sensitivity.

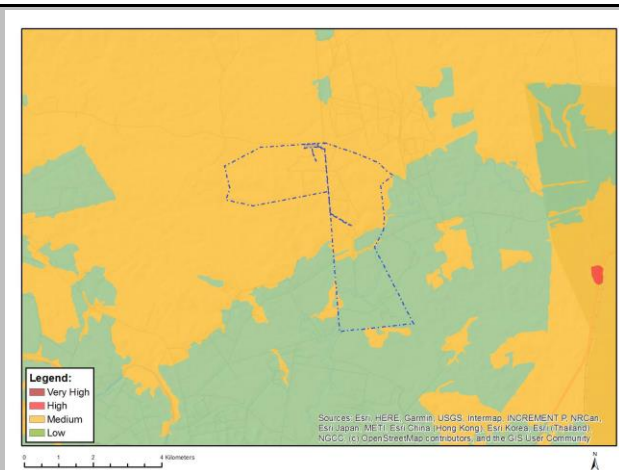


Figure 2.: Plant Species Sensitivity

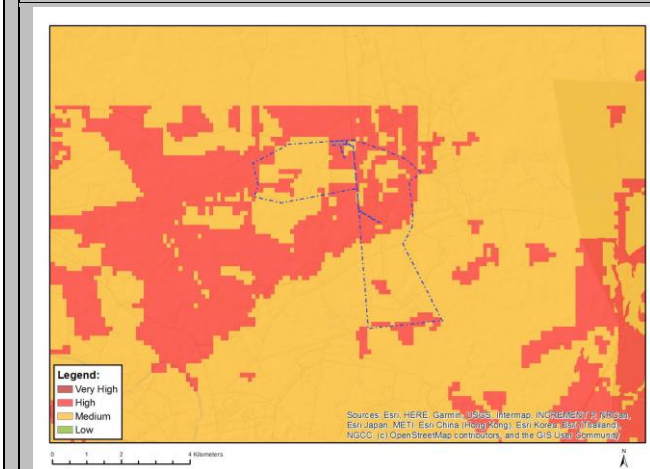


Figure 3.: Animal Species Sensitivity

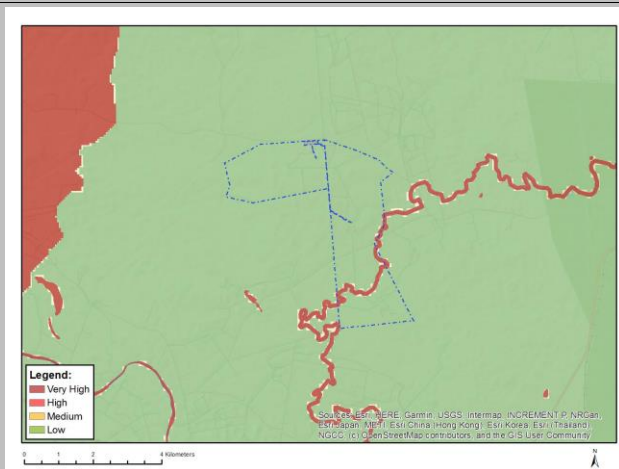


Figure 4.: Aquatic Sensitivity

The key biodiversity features that are indicative of this sensitivity, which will be assessed further in this report, include the following:

Sensitivity	Feature(s)	Affected Project Component/s
<b>Terrestrial Sensitivity</b>		
Very High	Ecological support area 1	The entire proposed development footprint
<b>Plant Sensitivity</b>		
Medium	Sensitive species 1252, 1268, 974, 91, 1248, 19, <i>Justicia orchoides subsp. orchoides</i> , <i>Duvalia pillansii</i> , <i>Selago zeyheri</i> , <i>Asparagus spinescens</i>	Potentially within the entire proposed development footprint
Low	Present	
<b>Animal Sensitivity</b>		
High	<i>Circus ranivorus</i>	Potentially within the entire PV array footprint area and portions of the powerline
Medium	<i>Aneuryphymus montanus</i> (Insect), <i>Acinonyx jubatus</i> (Mammal), Sensitive species 7	Potentially within portions of the proposed overhead powerline
<b>Aquatic Sensitivity</b>		
Low	Present	

## CURRENT STATE OF THE VEGETATION

### Terrestrial Environment

The following is an extract from the Terrestrial Biodiversity Compliance Statement Report provided by Mr Jamie Pote. The full statement report is attached as Appendix D (ii)

Due to the small area of the proposed development and transformed nature of the site (being cleared of vegetation within the last 10 years), no sampling sites were required, although the entire powerline route was assessed. Furthermore, vegetation within the proposed site comprised of a mix of grass species with occasional ruderal or ephemeral herbaceous weeds. The proposed PV site is located within a securely fenced off area adjacent to an existing chicken house facility and the area appears to be mowed on a regular basis.

#### *Terrestrial Biodiversity*

Habitat characteristics indicate the area is transformed and the likelihood of any terrestrial ecosystem (Biodiversity Priority Areas) BPA's, plant or animal Species of Conservation Concern being found at the site or within the area of influence is negligible (**Very low**).

Being transformed, the proposed site is surrounded by adjacent chicken houses to the south, citrus orchards to the west, with natural vegetation only to the north and east. The site is thus not considered to be an Ecological Support Area 1 nor likely to provide ecological function associated with such features. Furthermore, the PV site is within a fenced area, being part of the chicken house facility, which is a permanent structure and hence not suitable for rehabilitation.

NOTE: The Terrestrial Biodiversity Specialist Assessment and Minimum Report Content Requirements:

*'If any part of the proposed development footprint falls within an area of 'very high' sensitivity, the assessment and reporting requirements prescribed for the 'very high' sensitivity apply to the entire footprint, excluding linear activities for which impacts on terrestrial biodiversity are temporary and the land in the opinion of the terrestrial biodiversity specialist, based on the mitigation and remedial measures, can be returned to the current state within two years of the completion of the construction phase, in which case a compliance statement applies. Development footprint in the context of this protocol means the area on which the proposed development will take place and includes any area that will be disturbed.*

Based on the above reporting protocol condition, the entire overhead powerline will fall into the above category, which implies that for a temporary linear activity, such as a powerline, any screening tool designated high sensitivity should be reduced to a low sensitivity and only a compliance statement would be required. The proposed powerline to the Eskom grid will pass along the edge of an access road to the dam, as described in the project description. So long as the road reserve is not widened nor a separate powerline servitude cleared of natural thicket vegetation, the impact to terrestrial biodiversity, including associated flora and fauna will be negligible.

The powerline is linear, and any vegetation clearing will likely rehabilitate within 2 years, providing it is placed next to the road, where thicket vegetation is already cleared. **Hence the activity is deemed low sensitivity** and a Compliance Statement is deemed adequate. In addition, since the powerline is a linear activity and not within a Critical Biodiversity Area, or requiring excavation within a watercourse, it will not trigger a listing activity in terms of the EIA Regulations (2014).

#### ***Aquatic Environment***

The following is an extract from the Aquatic Biodiversity Compliance Statement Report provided by Ms. Jaclyn Smith. The full Statement report is attached as Appendix D(i).

A transformed drainage line system along the southern portion of the powerline is disconnected from any downstream river systems (namely the Coerney River system) and has been historically

altered by roads, dams and irrigation canal infrastructure as well as cultivated areas. These drainage lines lack a well-developed active channel or a well-developed riparian zone and is considered to be non-perennial in nature. The transformed drainage line is considered to be of moderate sensitivity and of low ecological importance and has been transformed to some extent due to existing and surrounding agricultural activities, developments and is disconnected from the downstream river systems associated with the Coerney River.

Due to the distance of the proposed development from the Coerney River system, it is the opinion of this specialist that the proposed development will have a no significant direct impact on the surrounding drainage lines or rivers.

It should be noted that the project footprint is considered to be of low aquatic sensitivity. The drainage lines occurring in the general area and surrounding the southern portion of the proposed powerline is considered to be of moderate sensitivity and is anticipated to be unaffected by the proposed development. No watercourses will be directly impacted by the proposed footprint of the proposed development.

The proposed development footprint falls within existing transformed area assessed to be of LOW aquatic sensitivity. There are areas of moderate sensitivity (drainage lines) surrounding the project area which will be unaffected by the proposed development. The proposed overhead powerline will be installed within an existing road reserve and no additional vegetation will be cleared nor will any aquatic features be negatively affected, including the crossing of the LSRWUA canal. Any vegetation that is cleared for the overhead powerline will be confined to the development footprint and will regenerate within 2 years after installation is complete.

## 5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

### 5.1 Natural area

5.2 Low density residential

5.3 Medium density residential

5.4 High density residential

5.5 Informal residential

5.6 Retail commercial & warehousing

5.7 Light industrial

5.8 Medium industrial<sup>AN</sup>

5.9 Heavy industrial<sup>AN</sup>

5.10 Power station

### 5.11 Office/consulting room

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam<sup>A</sup>

5.14 Quarry, sand or borrow pit

### 5.15 Dam or reservoir

5.16 Hospital/medical centre

5.17 School

5.18 Tertiary education facility

- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant<sup>A</sup>
- 5.22 Train station or shunting yard<sup>N</sup>
- 5.23 Railway line<sup>N</sup>
- 5.24 Major road (4 lanes or more)<sup>N</sup>
- 5.25 Airport<sup>N</sup>
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station<sup>H</sup>
- 5.31 Landfill or waste treatment site
- 5.32 Plantation

**5.33 Agriculture**

**5.34 River, stream or wetland**

- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

**6. CULTURAL/HISTORICAL FEATURES**

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

Archaeological or palaeontological sites, on or close (within 20m) to the site?

YES	<b>NO</b>
<b>Uncertain</b>	

If YES,  
explain:

--

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

## Heritage Impact Assessment

**The following is an extract from the Phase 1 Heritage Specialist Assessment that was undertaken by Dr L. Rossouw (2013) on Farm 713, which formed part of the Basic Assessment Process for the Poultry Broiler Facility, which has subsequently been constructed and is currently operational.**

### Palaeontology

There is a long history of vertebrate fossil collection from the Kirkwood Formation, beginning in 1845 with the discovery of a number of fragmentary bones including a partial skull with teeth now identified as the stegosaur *Paranthodon africanus* (Galton and Coombs, 1981). Several key fossil sites are found to the west of the present study area along the junction of the Bezuidenhouts, Wit and Sundays River near Dunbrodie and Blue Cliff Station, as well as near Kirkwood (Kirkwood Cliffs)

Fossils include a range of plant remains (fern, cycad and conifer taxa) and vertebrate bones, including those of large dinosaurs (McLachlan and Anderson 1976; Rich *et al.* 1983; Ross *et al.* 1999; de Klerk *et al.* 1998; de Klerk *et al.* 2000). Invertebrate fossils associated with the Kirkwood Farm plant bed localities seem to be commonly associated with either fresh-water or estuarine conditions. Calcrete-rich palaeosols and palaeobotanical evidence within the Kirkwood alluvium indicate that semi-arid and warm climates prevailed at the time of its formation.

### Archaeology

Earliest human habitation in the Sundays River Valley is indicated by the presence by bifacial stone tools, which are assigned to Early Stone Age (ESA). ESA bifaces that possibly dates back to between 1.5 million and 300 000 years ago, and younger, Middle Stone Ages flake-blade industries generally occur as contextually derived individual finds on the landscape or occasionally as capped assemblages within Quaternary alluvial deposits. Stone Age sites have been recorded along the Sundays River Valley near Addo and Kirkwood. The incidence of surface scatters usually declines further away from localized areas such as riverine or spring sites. At Amanzi Springs, west of Grassridge near Addo, ESA *in situ* artefacts were found along with well-preserved plant and faunal remains within spring sediments (Deacon 1970).

Cave and rock shelters in the adjacent mountains to the north and east frequently contain archaeological remains and rock art associated with San hunter-gatherers who inhabited the area during the last ten thousand years (Deacon 1976). The Melkhoutboom Cave, located in the Suurberg Mountains, is a Later Stone Age site that dates back 15000 years. Nearby rock paintings in the Suurberge confirm that this area was inhabited by San hunter-gatherers. Khoi pastoralists occupied the region some 2000 years ago and introduced domesticated animals and pottery to the region (Deacon 1984). Khoi pastoralist sites are often found close to the banks of large streams and rivers. Khoi groups who lived in the area during historical times include the Iqua, Damasqua and Gonaqua clans. The Suurberg area is also known for numerous skirmishes that took place between the Xhosa inhabitants, European settlers, British military and Khoi pastoralists during the 18th and 19th centuries and some historical remains related to these events may still be preserved.



### Findings

The proposed development area is underlain by Kirkwood Formation bedrock, which is capped by a >1m -thick cover of Quaternary colluvium and residual soils of low palaeontological sensitivity.

- As a result of the comparatively thick mantle of superficial sediments that blanket the affected area, potential palaeontological impact during the construction and operational phase of the development is considered to be improbable. There are no major palaeontological grounds to halt the proposed development.

There are no indications of aboveground prehistoric structures, or rock art within the survey area. There is no evidence of graves, graveyards or historical structures older than 60 years at the site. The survey has yielded number of stone tools distributed as contextually derived surface scatters at the site. The artefacts are not associated with any other archaeological material. Overall, the site is considered to be of **low** archaeological sensitivity.

- However, although there are no major archaeological grounds to halt the proposed development it is noted that the archaeological assessment is based solely on surface visibility and evidence provided by existing soil cuttings.

It is advised that any **in situ** archaeological material found during the course of excavation/ ground clearing activities should be reported to the relevant heritage resources authority (ECPHRA Contact details: Mr Sello Mokhanya, 74 Alexander Road, King Williams Town 5600; smokhanya@ecphra.org.za) and that possible intact find may require further investigation and/or a rescue operation at the cost of the developer.

The full Heritage Impact Assessment is included in Appendix G(ix) Supporting Documentation

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;

A copy of the site notice board is attached in Appendix G(i)

- (b) giving written notice to—
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;

The applicant is the landowner

- (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
- (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

#### Database Development, Maintenance and Ongoing Information Sharing

The following provides an outline of the approach to the development to the project announcement database (Pre-Application), as well as the maintenance of the database and ongoing information sharing throughout the BA process.

Prior to the advertising of the BA Process, the EAP, drawing on experience in the local SRV municipal area, developed an initial database of potential I&APs for the proposed development. Adjacent landowners / tenants were identified through a deeds search (Windeed) and, where required, amongst others, adjacent landowners/ tenants, affected/ Juristic Organs of State and State Departments, as well as the competent authority (DEDEAT, Sarah Baartman Region), the ward councillor for Ward 8 and other potential I&APs.

All potential I&APs were notified via Letter 1, sent with email, of the intention to commence with a Basic Assessment Process and the legislated 30-day comment period provided in which to raise issues of concern for inclusion in the Consultation Basic Assessment Report (CBAR). Included with this notification was a comment form and locality map, as well as the Background Information Document (BID). The comment and registration period extended from the **21 April 2022 to the 24 May 2022**. Prior to advertising the Basic Assessment Process, the project database included **38 Registered I&APs**.

The assessment process was advertised in a local newspaper (The Herald), and a notice board was placed on the fence adjacent to the entrance to the site, on the **21 April 2022**. All I&APs registered on the project database will be notified of the release of the CBAR for a legislated 30-

day I&AP review period. Copies of the photographs taken of the notice board placed at the entrance of the site is included in Appendix G(i).

Comments were received from six (6) I&APs, namely Gcinile Dumse (Department of Agriculture, Land Reform and Rural Development, Howard Blane (ESKOM: Distribution Division: Cape Coastal Cluster), Khulile Siqiti (Eastern Cape Department of Transport), Randall Moore (Eastern Cape Department of Transport), Zinzile Mtotywa (Department of Forestry, Fisheries and the Environment: Forestry) and Ms Babalwa Layini (Department of Forestry, Fisheries and the Environment: Forestry).

At the time of the preparation of the CBAR, **39 Registered I&APs** were registered on the project database. Copies of correspondence sent to I&APs and Organs of State is contained in Appendix G(iii), and copies of correspondence received from I&APs has been included in Appendix G(iv).

The identification and registration of I&APs will be ongoing for the duration of the BA Process. While not required by the regulations, those I&APs identified at the outset of the BA Process will remain on the project database and be kept informed of all opportunities to comment and will only be removed from the database by request.

- (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;

Cllr Princess Ncambele, SRVM Ward 8 Councillor has been included on the project database and provided with copies of all the relevant and available correspondence, via email. See Section 4 below for more detail on the Public Participation Process.

- (v) the municipality which has jurisdiction in the area;

Mr Rudi Herholdt, SRVM Town Planning, Mr Sydney Fadi, SRVM Municipal Manager (MM), Mr Xola Mntonintshi (Infrastructure Planning and Development) and Miss Susan Fourie (Archives Manager) were included on the project database during the project announcement and registration phase of this assessment. Both Mr. Herholdt and Mr Fadi were provided with the relevant and available correspondence, via email.

- (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and

### **Authority Consultation**

Notification of the intention to commence with a BA Process, was submitted to the competent authority (DEDEAT – Sarah Baartman Region) and to affected/ Juristic Organs of State and State Departments on **21 April 2022**. Included with this correspondence was a comment form and locality map of the area under assessment, as well as a Background Information Document (BID). Correspondence sent to I&APs and authorities has been attached as Appendix G(iii) to this report.

Affected/ Juristic Organs of State and State Departments which may be required to issue a licence or permit prior to commencement of the project, have been consulted and are included on the project database.

All Public Participation documentation (Drafts and Final Reports) will be sent to the competent authority (DEDEAT – Sarah Baartman Region), as well as affected/ Juristic Organs of State and State Departments, which are registered on the project database in the format, as agreed to with the respective Departments. Authorities are required to provide their input on the proposed development within the timeframes stipulated. Input from authorities will be included in the Comments and Responses for the Basic Assessment Process.

The following affected/ Juristic Organs of State and State Departments were proactively identified and included on the project database, prior to advertising the project (Pre-Application Phase) and will be notified of the various stages to comment during the BA Process:

- Maretha Alant - Garden Route National Park: Environmental Planner
- Charlene Bissett – South African National Parks: Regional Ecologist
- Nick de Goode – South African National Parks: Addo Elephant Park – Park Manager
- Evans Mkansi – South African National Parks: Conservation Manager
- Howard Blane – ESKOM Distribution Division: Cape Coastal Cluster – Land and Right Manager
- Luzuko Dali - Department of Economic Development, Environmental Affairs and Tourism: Biodiversity
- Gcinile Dumse – Department of Agriculture, Forestry & Fisheries: LUSM
- Sydney Fadi - Sundays River Valley Municipality: Municipal Manager.
- Susan Fourie – Sundays River Valley Municipality: Archives Manager
- Rudi Herholdt – Sundays River Valley Municipality: Infrastructure Planning and Development.
- Babalwa Layini - Department of Forestry, Fisheries and the Environment
- Peter Lotter - Eastern Cape Department of Transport.
- Ruffus Maloma – Provincial Department of Rural Development and Agrarian Reform: Soil Scientist.
- Simpiwe Minine – ESKOM: Transmission Division – Lines and Servitudes
- Xolani Mntonintshi – Sundays River Valley Municipality: Director of Infrastructure Planning and Development
- ~~Sello Mokhanya – Eastern Cape Provincial Heritage Resources Authority.~~
- Randall Moore - Eastern Cape Department of Transport: District Roads Engineer.
- Anban Padayachee – South African National Parks: Section Ranger / Acting Conservation Manager
- Angelina Shalang – ESKOM Cape Coastal Cluster: Environmental Management Manager
- Khulile Siqiti – Eastern Cape Department of Transport
- Russel Smart – South African National Parks: Parks Planning and Development Coordinator
- Xolisa Songcaka – ESKOM Cape Coastal Cluster: Land Development and Environmental Manager
- Andries Struwig – Dept. of Economic Development, Environmental Affairs and Tourism: Deputy Director IEM (Competent Authority).

Subsequent to the commencement of the BA process, Ms. Babalwa Lyini (Department of Forestry, Fisheries and the Environment) requested that Mr. Zinzile Mtotywa (Department of Forestry, Fisheries and the Environment: Director General) be registered on the project database. Mr Mtotywa was placed on the project database and provided with the information available for this project, namely: Letter 1 sent to I&APs, locality map, Background Information Document (BID), and comment form. Mr Mtotywa subsequently requested a site visit and a site visit was held with Mr Mtotywa together with Ms Layini accompanied by the EAP on 13 July 2022. A copy of the meeting register is included in Appendix G(iv).

In addition, prior to the release of the Consultation Basic Assessment report (CBAR) for review, it has come to the EAPs attention that Mr Sello Mokhanya (Eastern Cape Provincial Heritage Resources Authority) is no longer the representative for the Eastern Cape Heritage Resources Authority and has subsequently been replaced by Ms Ayanda Mncwabe-Mama (Eastern Cape Provincial Heritage Resources Authority: Acting Manager). Ms Mncwabe-Mama was placed on the

project database, will remain on the database and will be notified of the various opportunities to comment for the remainder of this assessment the public participation process.

- (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
  - (i) one local newspaper; or
  - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

A newspaper advertisement was placed in “The Herald” of **21 April 2022**. A copy of the advertisement is included in Appendix G(i)

- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in sub regulation 54(c)(ii); and

It is not anticipated that the proposed development will have any impact that will extend beyond the boundaries of the local municipality.

- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
  - (i) illiteracy;
  - (ii) disability; or
  - (iii) any other disadvantage.

None have been identified to date

## 2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
  - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
  - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
  - (iii) the nature and location of the activity to which the application relates;
  - (iv) where further information on the application or activity can be obtained; and
  - (iv) the manner in which and the person to whom representations in respect of the application may be made.

In line with these requirements, an advert notifying all I&APs on the project database of the commencement of the Basic Assessment Process, appeared in “The Herald” on **21 April 2022** and a notice board was placed on the fence adjacent to the entrance to the site. A copy of the notice board and newspaper advert are contained in Appendix G(i).

## 3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

A copy of the notice board and newspaper advert are contained in Appendix G(i).

## 4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

The following provides an overview of the Public Participation Process proposed for this BA:

### 1. Pre-Application Phase (Completed)

- Project announcement identification, notification, and registration of I&APs, including the competent authority, DEDEAT – Sarah Baartman Region (Legislated 30-day comment period)
- Preliminary Specialist input.

### 2. Application and Basic Assessment Phase (**We are here**)



- Submission of Application Form for Environmental Authorisation to DEDEAT
- Consultation Basic Assessment Report Review (**legislated 30-day comment period**)
- Submission of Final Basic Assessment Report to DEDEAT

### 3. Decision Making and Appeal Period

As indicated above, the BA Process has been divided into three phases. The purpose of this approach is to, amongst others, achieve the following:

- To ensure all I&APs (including the competent authority, affected/ Juristic Organs of State and State Departments) have access to information on the proposed project from the outset of the BA Process.
- To facilitate the identification of issues of concern, to inform the range of specialist studies/ compliance statements being conducted for this BA
- To assist in the identification of alternatives for assessment in this BA.
- To facilitate the refinement of the project description and preferred development footprint within the property under assessment.

#### 1. PRE-APPLICATION PHASE

##### Project Announcement, Identification, Notification and Registration of I&APs

In order to notify and inform the public, potential I&APs, affected/ Juristic Organs of State and State Departments, as well as the competent authority of the proposed project, the opportunity to register as an I&AP, as well as to raise issues of concern, the BA Process was announced as follows:

- **Advertisement** in one Local Newspaper:
  - The Herald, 21 April 2022 (Provincial Distribution)
- **Site Notice Board:**
  - A notice board was placed on the fence adjacent to the main entrance of Farm 713, Hopefield, identifying the area under assessment, potential listed activities and contact details for further information and registration as an I&AP.
- **Letter 1 to I&APs** - Notice of the BA Process, Comment and Registration Period:
  - Letter 1 included a Background Information Document (BID), locality map and comment form. Written notification of the BA Process was sent to the competent authority and to all I&APs, including affected/ Juristic Organs of State and State Departments on the project database, on **21 April 2022**, via email. A **33-day** comment and registration period was allowed for I&APs to register their interest on the project database and raise issues of concern for inclusion in the CBAR.
- **Available Information** – all project information has been made available on the website [www.publicprocess.co.za](http://www.publicprocess.co.za).

Appendix G(i) contains a copy of the newspaper advertisement placed in “The Herald”, as well as photos taken of the site notice board placed at the entrance to Farm 713. Appendix G(iii) contains copies of the correspondence sent to all I&APs and authorities and Appendix G(iv) contains copies of correspondence received from I&APs and authorities in response to the project announcement. Comments were received from Six (6) Organs of State / State Departments during the project announcement phase, which included a request for a site visit by DFFE (Forestry) officials. These comments have been included in the Comments and Responses Report in Appendix E of the report. Copies of correspondence received as well as meeting registration forms are included in Appendix

G(iv) All I&APs registered on the project database will be notified of the release of the CBAR for a legislated 30-day review period.

## 2. APPLICATION AND BASIC ASSESSMENT PROCESS (We are Here)

This phase of the BA process entails the following, which is outlined in more detail below:

- Submission of the Application Form for Environmental Authorisation to DEDEAT
- Consultation Basic Assessment Report Review period (Legislation 30-day comment period)
- Submit Final Basic Assessment Report to DEDEAT

### Submission of Application Form for Environmental Authorisation to DEDEAT

This step entails the submission of an Application Form for Environmental Authorisation to the competent authority (DEDEAT – Sarah Baartman Region), which has **10 days** within which to acknowledge receipt of the application. An electronic copy of the application form, including cover letter will be emailed in pdf format to Dayalan Govender and Andries Struwig, DEDEAT (Sarah Baartman Region; Competent Authority). Charmaine Struwig will be copied in on this email correspondence.

The applicant must within **90 days of receipt** of the application by the competent authority, submit a Basic Assessment Report (BAR), inclusive of specialist reports and EMPr, to the competent authority, which has been subjected to a Public Participation Process of at least **30 days** and which reflects the incorporation of comments received from I&APs, including any comments from the competent authority. Failure to comply with these timeframes will result in the application having deemed to be lapsed by the competent authority.

### Consultation Basic Assessment Report Review

In parallel to the submission of the Application Form to the competent authority, the CBAR will be released for a minimum legislated **30-day comment period**. The following indicates the process for the distribution of information during the review of the CBAR:

- **Letter 2** to I&APs – Notification of comment period on the CBAR:
- All I&APs on the project database will be notified of the comment period on the CBAR via email, which will include an executive summary of the CBAR, as well as a comment form.
  - Affected/ Juristic Organs of State and State Departments will be provided with a copy of the CBAR, in the format as agreed to with the respective Departments, namely, emailed link to the report on the website or electronic version of the report via email.
  - Project Information available for the CBAR will be placed on the project website: [www.publicprocess.co.za](http://www.publicprocess.co.za)
  - As far as practically possible, telephonic consultation will be held with I&APs, when requested, and such discussions to be confirmed by email. If required, Zoom meetings or WhatsApp video calls can also be held as a means of communication/ consultation.
- **Submission of CBAR to DEDEAT**
  - Dayalan Govender and Andries Struwig will be emailed notification regarding the 30-day comment period to be provided for the Consultation BAR and this will include a link to the project website where the report can be downloaded. A link to a Dropbox folder containing the report will also be included in the email. Charmaine Struwig will be copied in on the email correspondence. Should the EAP be notified of the appointment of a

case officer, the case officer will be included on the project database and will be sent a copy of the above email notification.

The issues raised by I&APs and Juristic Organs of State and State Departments will be included in the Comments and Issues report attached as Appendix E of the Final BAR.

### **Submission of Final Basic Assessment Report to DEDEAT**

The FBAR, inclusive of specialist reports and EMPr, will be submitted to the competent authority for their decision-making, within 90 days of submission of the Application Form. The FBAR will include all the comments received from I&APs during the Pre-Application (Project Announcement), as well as the Application and BA Phase (CBAR) of the Assessment process. The following indicates the process for the distribution of information during the submission of the FBAR:

- **Letter 3** to I&APs – Notification of the submission of the FBAR:
  - All I&APs, including the competent authority, affected/ Juristic Organs of State and State departments will be notified of the submission of the FBAR via email.
  - No additional comment period is proposed for the FBAR.
- **Available Information:** all project information will be made available on the project website: [www.publicprocess.co.za](http://www.publicprocess.co.za).
- **Submission of FBAR to DEDEAT:**
  - The project case officer will be emailed notification regarding the submission of the Final BAR and Appendices, and this will include a link to the project website where the report can be downloaded. A link to a Dropbox folder containing the report will also be included in the email. Dayalan Govender, Andries Struwig and Charmaine Struwig will be copied in on the email notification.

The competent authority (DEDEAT- Sarah Baartman Region) will have 107 days from receipt of the FBAR, inclusive of specialist reports and EMPr, to either grant Environmental Authorisation in respect of all or part of the activity applied for; or refuse Environmental Authorisation.

### **3. DECISION MAKING AND APPEAL PERIOD**

In terms of Regulation 4 (2) of the NEMA EIA Regulations 2014 (as amended), the applicant must, in writing, within 14 days of the date of the decision on the application by the competent authority, notify all I&APs on the project database of the decision and provide them with access to the decision and reasons for the decision, as well as draw their attention to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations. The following indicates the process for the notification of I&APs of the decision on the application by the competent authority:

- **Letter 4** to I&APs – Notification of the decision and appeal period:
  - All I&APs, including affected/ Juristic Organs of State and State departments will be notified of the decision reached by the competent authority, via email.
  - A copy of the Environmental Authorisation, granted, partially granted or refused, will be placed on the website [www.publicprocess.co.za](http://www.publicprocess.co.za)
- **Letter 5** to I&APs – Notification of the outcome of the appeal period:
  - All I&APs on the project database will be notified, via email, of the outcome of the appeal period if an appeal is lodged.

### **Identification of issues for inclusion in the Basic Assessment Report**

An important element of the BA Process is to identify issues for inclusion in the BAR and to record comments received from I&APs, including the competent authority, affected/ Juristic Organs of State and State Departments. These comments provide input towards the assessment of alternatives and the scope of the specialist assessment proposed for the BA Process.

Copies of comments received from I&APs will be included in Draft and Final reports for submission to the competent authority. Comments have been received from six (6) Organs of State / State Departments. The issues raised can be divided into the following categories, the number in brackets indicate the number of a specific issues was raised:

- Public Participation Process (9)
- Protection of Agricultural Resources (5)
- Biodiversity (1)

As required by the NEMA EIA Regulations, 2014 (as amended), this report includes a Comments and Responses Report (See Appendix E) which outlines the issues raised, by whom, the date and manner of receipt of the comment. In compliance with Regulation 44 of the EIA Regulations, any information contained in comments made during the assessment process must be included in the reports that are made available for public review. However, this will not include any personal contact information. A response to the issue raised has been provided by the EAP, relevant specialist or the project applicant and where the issue raised falls outside of the scope of this BA, clear reasoning for such has been provided.

## **5. COMMENTS AND RESPONSE REPORT**

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The Comments raised to date have been included in the Comments and Responses Report included in Appendix E of this report.

## **6. AUTHORITY PARTICIPATION**

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

- Maretha Alant - Garden Route National Park: Environmental Planner
- Charlene Bissett – South African National Parks: Regional Ecologist
- Nick de Goode – South African National Parks: Addo Elephant Park – Park Manager
- Evans Mkansi – South African National Parks: Conservation Manager
- Howard Blane – ESKOM Distribution Division: Cape Coastal Cluster – Land and Right Manager
- Luzuko Dali - Department of Economic Development, Environmental Affairs and Tourism: Biodiversity

- Gcinile Dumse – Department of Agriculture, Forestry & Fisheries: LUSM
- Sydney Fadi - Sundays River Valley Municipality: Municipal Manager.
- Susan Fourie – Sundays River Valley Municipality: Archives Manager
- Rudi Herholdt – Sundays River Valley Municipality: Infrastructure Planning and Development.
- Babalwa Layini - Department of Agriculture, Forestry & Fisheries
- Zinzile Mtotywa - Department of Agriculture, Forestry & Fisheries
- Peter Lotter - Eastern Cape Department of Transport.
- Ruffus Maloma – Provincial Department of Rural Development and Agrarian Reform: Soil Scientist.
- Simpiwe Minine – ESKOM: Transmission Division – Lines and Servitudes
- Xolani Mntonintshi – Sundays River Valley Municipality: Director of Infrastructure Planning and Development
- ~~Sello Mokhanya – Eastern Cape Provincial Heritage Resources Authority.~~
- Randall Moore - Eastern Cape Department of Transport: District Roads Engineer.
- Anban Padayachee – South African National Parks: Section Ranger / Acting Conservation Manager
- Angelina Shalang – ESKOM Cape Coastal Cluster: Environmental Management Manager
- Khulile Siqiti – Eastern Cape Department of Transport
- Russel Smart – South African National Parks: Parks Planning and Development Coordinator
- Xolisa Songcaka – ESKOM Cape Coastal Cluster: Land Development and Environmental Manager
- Andries Struwig – Dept. of Economic Development, Environmental Affairs and Tourism: Deputy Director IEM (Competent Authority).

List of authorities from whom comments have been received:

#### **Project Announcement and Registration Phase**

- Randall Moore - Eastern Cape Dept. Transport: District Roads Engineer
- Khulile Siqiti – Eastern Cape Department of Transport
- Howard Blane – ESKOM Distribution Division: Cape Coastal Cluster – Land and Right Manager
- Gcinile Dumse – Department of Agriculture, Forestry & Fisheries: LUSM
- Zinzile Mtotywa - Department of Agriculture, Forestry & Fisheries
- Babalwa Layini - Department of Agriculture, Forestry & Fisheries

### **7. CONSULTATION WITH OTHER STAKEHOLDERS**

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES	NO
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If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

## SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

### IMPACT ASSESSMENT METHODOLOGY

As per GN R326 Appendix 1, 3. (1) (h) the assessment of impacts must include the alternatives to be assessed within the preferred site, including the option of not proceeding with the activity. The impact assessment methodology has been aligned with the requirements for Basic Assessment Reports, as stipulated in GN R326 Appendix 1, 3. (1) of the 2014 EIA Regulations (as amended), which states the following:

*“A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include—*

- (h) a full description of the process followed to reach the proposed preferred alternative within the site, including—*
  - (v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts—*
    - (aa) can be reversed;*
    - (bb) may cause irreplaceable loss of resources; and*
    - (cc) can be avoided, managed or mitigated;*
  - (vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;*
  - (vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;*
  - (viii) the possible mitigation measures that could be applied and level of residual risk;*
  - (ix) the outcome of the site selection matrix;*
- (i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including—*
  - (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and*
  - (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;”*

As per Guideline Document 5: Assessment of Alternatives and Impacts, the following methodology is to be applied to the prediction and assessment of impacts and risks. Potential impacts should be rated in terms of the direct, indirect and cumulative.

- **Direct** impacts are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.



- **Indirect** impacts of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
- **Cumulative** impacts are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
- **Spatial extent** – The size of the area that will be affected by the impact/ risk
  - Site specific
  - Local (<2 km from site)
  - Regional (within 30 km of site)
  - National
- **Consequence/ Intensity** –The anticipated severity of the impact/ risk
  - Extreme (extreme alteration of natural systems, patterns or processes, i.e. where environmental functions and processes are altered such that they permanently cease)
  - High (severe alteration of natural systems, patterns or processes i.e. where environmental functions and processes are altered such that they temporarily or permanently cease)
  - Medium (notable alteration of natural systems, patterns or processes i.e. where the environment continues to function but in a modified manner)
  - Low (negligible alteration of natural systems, patterns or processes i.e. where no natural systems/environmental functions, patterns, or processes are affected)
- **Duration** –The timeframe during which the impact/ risk will be experienced
  - Temporary (less than 1 year)
  - Short term (1 to 6 years)
  - Medium term (6 to 15 years)
  - Long term (the impact will cease after the operational life of the activity)
  - Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient)
- **Reversibility** – The degree to which the potential impacts/ risks can be reversed
  - Reversible
  - Partially Reversible
  - Irreversible
- **Irreplaceable loss of Resources** - The degree to which the impact/ risk may cause irreplaceable loss of resources
  - Replaceable
  - Partially Replaceable
  - Irreplaceable

Using the criteria above, the impacts will further be assessed in terms of the following:

- **Probability** –The probability of the impact/ risk occurring
  - Improbable (little or no chance of occurring)
  - Probable (<50% chance of occurring)
  - Highly probable (50 – 90% chance of occurring)
  - Definite (>90% chance of occurring)

- **Significance** – Will the impact/ risk cause a notable alteration of the environment?
  - Low to very low (the impact/risk may result in minor alterations of the environment and can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making)
  - Medium (the impact /risk will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated).
  - High (the impact/risk will result in major alteration to the environment even with the implementation of the appropriate mitigation measures and will have an influence on decision-making)
  - Very high (the impact/impact will result in very major alteration to the environment even with the implementation on the appropriate mitigation measures and will have an influence on decision-making i.e. the project cannot be authorised unless major changes to the engineering design are carried out to reduce the significance rating).
- **Status** - Whether the impact/ risk on the overall environment will be positive, negative or neutral
  - “+” (positive - environment overall will benefit from the impact/risk).
  - “-“ (negative - environment overall will be adversely affected by the impact/risk).
  - “o” (neutral - environment overall will not be affected).
- **Confidence** – The degree of confidence in predictions based on available information and specialist knowledge
  - Low
  - Medium
  - High

Impacts, mitigatory measures and the monitoring of impacts will then be collated into the EMPr and these will include the following:

- Quantifiable standards for measuring and monitoring mitigatory measures and enhancements will be set. This will include a programme for monitoring and reviewing the recommendations to ensure their ongoing effectiveness.
- Identifying negative impacts and prescribing mitigation measures to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated.
- Positive impacts will be identified, and mitigation measures will be identified to potentially enhance positive impacts where possible.

Management Actions and Monitoring of the Impacts:

- Where negative impacts are identified, mitigatory measures will be identified to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated.
- Where positive impacts are identified, mitigatory measures will be identified to potentially enhance positive impacts.

The table below is to be used by specialists for the rating of impacts:

*Table 1.1: Rating of impacts.*

<b>Nature of the Impact</b>	<b>This should include a description of the proposed impact to indicate if the impact is a direct, indirect or a cumulative impact.</b>
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<b>Extent</b>	Site specific, local, regional or national
<b>Duration</b>	Temporary, short term, medium term, long term or permanent
<b>Consequence /Intensity</b>	Extreme, High, medium or low
<b>Probability</b>	Improbable, probable, highly probable, definite
<b>Degree of Confidence</b>	Low, medium or High
<b>Reversibility</b>	Reversible, Partially Reversible, Irreversible
<b>Irreplaceable Loss of Resources</b>	Replaceable, Partially Replaceable, Irreplaceable
<b>Status and Significance (without mitigation)</b>	Low, medium or High indicating whether Positive (+), Negative (-) or Neutral (o)
<b>Mitigation</b>	Overview of mitigatory measures to mitigate potentially negative impacts or enhance potential positive impacts indicating how this mitigatory measure impacts on the significance of the impact
<b>Status and Significance (after mitigation)</b>	Low, medium or High indicating whether the status of the impact is Positive (+), Negative (-) or Neutral (o)

Other aspects to be taken into consideration in the assessment of impact significance are:

- Impacts will be evaluated for the construction and operational phases of the project:
  - **NOTE:** No assessment of impacts during the decommissioning phase of the project is proposed. The relevant guidelines and rehabilitation requirements applicable at that time will need to be applied.
- Impacts will be evaluated with and without mitigation in order to determine the effectiveness of mitigation measures on reducing the significance of a particular impact; and
- The impact evaluation will, where possible, take into consideration the cumulative effects associated with this and other projects which are either developed or in the process of being developed in the local area.
- The impact assessment will attempt to quantify the magnitude of potential impacts (direct and cumulative effects) and outline the rationale used. Where appropriate, National standards are to be used as a measure of the level of impact.

## 1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

### **Project Announcement and Registration Phase**

Comments were received from five (5) Organs of State / State Departments during the project announcement and registration phase as follows:

#### **EIA and Public Participation Process**

- 1.) Mr. Howard Blane (ESKOM: Distribution Division: Cape Coastal Cluster – Land Right Manager), requested to be registered as an Interested and Affected Party.
- 2.) Mr. Randall Moore (Eastern Cape Department of Transport – District Roads Engineer), forwarded the email of notification of the project announcement and registration, sent to Mr

Moore by the EAP, to Mr. Khulile Siqiti (Eastern Cape Department of Transport), requesting him to register as an Interested and Affected Party.

- 3.) Mr. Khulile Siqiti (Eastern Cape Department of Transport) replied to confirmation that he was registered.
- 4.) Mr. Zinzile Mtotywa (Department of Forestry, Fisheries and the Environment: Forestry), expressed the department's interest in the project in terms of the National Forest Act and further requested the department's participation in the assessment process.
- 5.) Ms Babalwa Layini (Department of Forestry, Fisheries and the Environment: Forestry) requested a site visit.

#### **Protection of Agricultural Resources**

- 1.) Mr. Gcinile Dumse (Department of Agriculture, Land Reform & Rural Development (DALRRD): LUSM), recommended measures to be employed to protect agricultural resources including soil management practices and control of alien invasive vegetation on site.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

#### **Project Announcement and Registration**

##### **EIA and Public Participation Process**

- 1.) Mr. Howard Blane was proactively included on the project database at the outset of this assessment.
- 2.) Mr Khulile Siqiti was proactively included on the project at the onset of this assessment.
- 3.) Representative of the Department of Forestry, Fisheries and the Environment (Forestry), namely: Ms Babalwa Layini and Mr Zinzile Mtotywa, were proactively included on the project database at the outset of this assessment. A site visit has been undertaken with the representatives, as requested.

##### **Protection of Agricultural Resources**

- 4.) The mitigation measure recommended by the commentator have been included in the draft Construction EMP and Operational EMP, where applicable. This includes the development of a soil erosion management plan and a weed control management plan (alien invasive management plan).

## **2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES**

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative (preferred alternative)

**1. CONSTRUCTION PHASE**

**DIRECT IMPACTS:**

➤ **Clearance of vegetation (Terrestrial Biodiversity)**

**Extent:** Site Specific

**Duration:** Short-term

**Intensity:** Low

**Probability:** Probable

**Reversibility:** N/A

**Irreplaceable Loss of Resources:** No

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Any indigenous vegetation removed during clearing on site should be stockpiled and used in rehabilitation of disturbed areas

**Significance and Status (with mitigation):** Low Negative (-)

➤ **Dust generation during the construction phase**

**Extent:** Local

**Duration:** Temporarily

**Intensity:** Low

**Probability:** Highly Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** Partially Replaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Limit disturbance outside of the development footprint
- Erosion protection measures must be implemented on disturbed areas.
- Vegetation and topsoil should be cleared in a phased manner to avoid large areas of unconsolidated soils
- Topsoil and soil stockpiles should be covered, wetted or otherwise stabilised to prevent wind erosion and dust generation.
- A water cart must be employed on windy days to wet soils that would be prone to wind erosion to limit dust generation.
- Disturbed areas should be rehabilitated in parallel with construction completion
- Compile an implement an Environmental Management Programme; and audit reporting by an ECO during construction.

**Significance and Status (with mitigation):** Low Negative (-)

➤ **Noise and disturbance during the construction phase**

**Extent:** Local

**Duration:** Short-term

**Intensity:** Low

**Probability:** Highly Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Limit activities, as far as possible, to working hours (i.e., 7am – 6pm weekdays).
- Encourage personal not to make any unnecessary noise.
- Signage with the contact details of the responsible person must be provided at the site, to register any complaints in this regard.
- A complaints register must be kept to document complaints and the corrective action taken.

**Significance and Status (with mitigation):** Low Negative (-)

➤ **Temporary employment and skills development opportunities will be created during the construction phase**

**Extent:** Local

**Duration:** Temporary

**Intensity:** Medium

**Probability:** Definite

**Reversibility:** Irreversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Positive (+)

**Mitigation**

- Local labour must be sourced from local communities (i.e., Addo, Kirkwood and Motherwell), as far as possible, to maximise the economic benefits for the local community.

**Significance and Status (with mitigation):** Low Positive (+)

➤ **Traffic – Impacts on Districts roads**

It is not anticipated that there will be significant impact on the district roads, as construction equipment will be kept on site and all necessary materials (i.e., steel and solar panels) will be trucked onto site prior to the commencement of the construction phase.

**Extent:** Local

**Duration:** Temporary

**Intensity:** Low

**Probability:** Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Keep construction and earth-moving vehicles on site during construction phase.
- Hauling vehicles must operate during normal operational times and allow for adequate spacing between trucks to allow for passing motorists.
- Vehicles must be in good working order to avoid unnecessary damage to roads
- Appropriate signage should be erected to warn of slow-moving vehicles as well as wide turning vehicles.

**Significance and Status (with mitigation):** Low Negative (-)

➤ **Runaway bush fires during construction phase**

**Extent:** Local

**Duration:** Temporary

**Intensity:** High

**Probability:** Probable

**Reversibility:** Partially Irreversible

**Irreplaceable Loss of Resources:** Partially Reversible

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Medium Negative (-)

**Mitigation**

- No open fires should be allowed on site, except on designated areas
- No fires should be left unattended
- Suitable firefighting equipment should be kept on site

**Significance and Status (with mitigation):** Low Negative (-)

➤ **Generation of waste during the construction phase**

Generation of waste is anticipated to be limited to litter by construction personnel.

**Extent:** Local

**Duration:** Temporary

**Intensity:** Medium

**Probability:** Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** Replaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- No waste from construction or otherwise may be disposed of on site
- No construction waste to be stockpiled on site
- All waste may temporarily be stored at site before being suitably disposed of at an appropriately licensed and registered waste disposal facility
- Collection of waste to be contracted to an approved contractor and disposed of at an appropriate licensed site. Safe disposal certificate to be obtained and kept as a record.
- Hazardous waste generated at the site should be disposed of at a suitably licensed hazardous waste disposal facility.
- Adequate litter drums or other suitable containers must be located on site and emptied on a weekly basis at a minimum and waste disposed of at an appropriately licensed waste disposal facility
- Appropriate ablution facilities to be provided on site. If portable toilets are utilised these must be emptied timeously.
- Environmental Officer to perform frequent audits in the waste storage area.

**Significance and Status (with mitigation):** Very Low Negative (-)

➤ **Generation of hazardous waste during the construction phase**

Small amounts of hazardous waste such as oil, grease, or chemicals may be generated on site. These will be stored in a secure facility on site until it can be disposed of at an appropriately licensed hazardous waste disposal facility.

**Extent:** Site specific

**Duration:** Temporary

**Intensity:** Low

**Probability:** Probable

**Reversibility:** Reversible



**Irreplaceable Loss of Resources:** Replaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Medium Negative (-)

**Mitigation**

- Hazardous waste from construction activities to be separated and stored in acceptable receptacles and disposed to appropriately licenced site.
- Hazardous waste to be classified, Safety Data Sheets to be compiled and waste manifest to record the generation, transporting and disposal of the waste.
- Initial waste classification to be performed on all hazardous waste generated.
- Environmental Control Officer to perform frequent audits in the waste storage area.
- Monthly waste disposal record must be kept of all waste disposed.
- Spill response plans and equipment should be available to deal with emergency situations that can arise during the management of waste.
- All staff should be trained in the correct handling, storage and disposal of hazardous wastes.

**Significance and Status (with mitigation):** Very Low Negative (-)

➤ **The exposure of significant archaeological material or artefacts on site**

**Extent:** Local

**Duration:** Temporary

**Intensity:** Medium

**Probability:** Improbable

**Reversibility:** Irreversible

**Irreplaceable Loss of Resources:** Irreplaceable

**Degree of Confidence:** Medium / High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- It is recommended that in the unlikely event that any archaeological materials are exposed during the development, it should be reported immediately to the nearest museum/archaeologist or to the EC Provincial Heritage Resources Authority (ECPHRA) so that a systematic and professional investigation can be undertaken.
- If any evidence of archaeological sites or artefact, graves or other heritage resources are found during development or construction, ECPHRA and an accredited professional archaeologist or must be alerted immediately.
- If the newly discovered heritage resources prove to be of archaeological significance a phase 2 rescue operation might be necessary at the cost of the developer. Sufficient time must be allowed to remove / collect such material.
- Site foremen should be informed before vegetation clearing commences on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites: i.e. human skeletal material, stone artefacts, fossil bone, stone features and historical artefacts or features.

**Significance and Status (with mitigation):** Neutral (0) to Very Low Negative (-)

➤ **Impacts on potential undiscovered palaeontological material on site.**

**Extent:** Local

**Duration:** Temporary

**Intensity:** Medium

**Probability:** Improbable

**Reversibility:** Irreversible

**Irreplaceable Loss of Resources:** Irreplaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Very Low Negative (-)

It is unlikely that such material will be found on site. However, if it is discovered, the following mitigation measures have been proposed.

**Mitigation:**

- Should substantial fossil remains be exposed during vegetation clearing and site preparation, the ECO should safeguard these, preferably in situ, and alert EC Provincial Heritage Resources Authority (ECPHRA) as soon as possible so that appropriate action (e.g. recording, sampling or collection) can be taken by a professional palaeontologist.
- If any evidence of palaeontological fossils, graves or other heritage resources are found during development, ECPHRA and an accredited professional palaeontologist must be alerted immediately.
- The palaeontologist will need to apply beforehand for a collecting permit from ECPHRA for which an approved depository for any fossil material collected will need to be designated (eg Albany Museum, Grahamstown).
- Sufficient time must be allowed to remove/collect such material.

**Significance and Status (with mitigation):** Neutral (0)

**INDIRECT IMPACTS:**

➤ **General health and safety risks associated with the construction personnel activities on site**

With construction activities and the associated personnel comes potential on-site risks such as fires and waste generation or pollution.

**Extent:** Site Specific

**Duration:** Temporary

**Intensity:** Low

**Probability:** Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Construction personnel must not be allowed to light fires on site.
- Construction personnel may not stay on site after working hours or set up temporary residences.
- Ablution facilities must be provided to construction personnel to prevent ablutions being performed in public.
- Litter bins must be provided at the construction footprint for waste generated by construction personnel.
- Litter bins must be emptied on a weekly basis at a minimum and waste disposed of at an appropriately licensed waste disposal facility.

**Significance and Status (with mitigation):** Low Negative (-)

**CUMULATIVE IMPACTS:**

None Anticipated

**2. OPERATIONAL PHASE**

## **DIRECT IMPACTS:**

### ➤ **Loss of agricultural land**

The proposed PV facility will result in the loss of ~ 3.6ha of land that is currently zoned for agriculture. However, the PV facility and associated infrastructure is proposed will ensure stable source of electricity supply during power outages for the existing Broiler facility, thus supporting the applicant's current agricultural activities.

**Extent:** Site Specific

**Duration:** Permanent

**Intensity:** Low

**Probability:** Definite

**Reversibility:** Irreversible

**Irreplaceable Loss of Resources:** Partially replaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

#### **Mitigation**

- Construction personnel must not be allowed to light fires on site.
- Construction personnel may not stay on site after working hours or set up temporary residences.
- Ablution facilities must be provided to construction personnel to prevent ablutions being performed in public.
- Litter bins must be provided at the construction footprint for waste generated by construction personnel.
- Litter bins must be emptied on a weekly basis at a minimum and waste disposed of at an appropriately licensed waste disposal facility.

**Significance and Status (with mitigation):** Low Negative (-)

### ➤ **Visual impacts – Change in landscape character**

Potential visual impacts on the landscape Character and Sense of Place as a result of the development.

**Extent:** Local

**Duration:** Permanent

**Intensity:** Low

**Probability:** Definite

**Reversibility:** Reversible – Should the Facility not move to the operational phase, the impact is removed.

**Irreplaceable Loss of Resources:** Replaceable

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

#### **Mitigation**

- Development footprints should be demarcated and clearing to occur within demarcated areas
- Maintain solar panels and replace any broken or cracked panels
- Clean regularly to remove foreign contaminants

**Significance and Status (with mitigation):** Low Negative (-)

### ➤ **Erosion on site on cleared areas**

**Extent:** Local

**Duration:** Short-term

**Intensity:** Low

**Probability:** Probable

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- An erosion protection plan must be developed and implemented on site.
- The site must be inspected on a regular basis (quarterly and after a heavy rainfall event) for any erosion on site, and any erosion must be rectified immediately through fill and compaction.
- The disturbed areas must be revegetated with local grass species to assist with erosion protection.

**Significance and Status (with mitigation):** Very Low Negative (-)

### **3. NO GO ALTERNATIVE**

#### **DIRECT IMPACTS**

➤ **Not establishing a stable source of Electricity for the Poultry Broiler Facility**

The farm is currently used as a working farm and amongst others include a Poultry Broiler facility. Should an emergency situation arise where there is no electricity from ESKOM, this could have a severe consequence on the applicant's ability to safely operate the Poultry Broiler Facility and will result in mortalities, financial loss and negatively impact food security.

**Extent:** Local

**Duration:** Permanent

**Intensity:** Medium

**Probability:** Definite

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** Low Negative (-)

**Mitigation**

- Construct the Photovoltaic Facility and associated infrastructure to ensure a that the inverter will continue to function during periods when electricity is not available from ESKOM.

**Significance and Status (with mitigation):** Neutral (0)

#### **INDIRECT IMPACTS**

➤ **Non-realisation of job creation and skills development for the local community**

**Extent:** Local

**Duration:** Permanent

**Intensity:** Low

**Probability:** Definite

**Reversibility:** Reversible

**Irreplaceable Loss of Resources:** N/A

**Degree of Confidence:** High

**Status and Significance of Impact (no mitigation):** High Negative (-)

**Mitigation**

- None proposed

**Significance and Status (with mitigation):** High Negative (-)

### **CUMULATIVE IMPACTS**

None anticipated

### **3. ENVIRONMENTAL IMPACT STATEMENT**

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

#### **Alternative A (preferred alternative)**

The proposed construction of the Solar photovoltaic facility is anticipated to have an overall **LOW NEGATIVE** impact on the receiving environment during the construction phases, if all the recommended mitigation measures are applied. In the operational phase, the overall impact is **LOW NEGATIVE** to **NEUTRAL**

Terrestrial Biodiversity impacts are not anticipated to be significant, as the site is largely transformed and no significant vegetation other than some weeds that currently occur on site. The implementation of proposed mitigation measures, suggested by specialist, the impact has been rated as a **LOW NEGATIVE** impact.

Aquatic Biodiversity impacts are not anticipated to be significant, as no drainage lines occur within the development footprint and surrounding drainage line and river systems are likely to be unaffected due to distance from the site. The implementation of proposed mitigation measures, suggested by specialist, the impact has been rated as a **LOW** impact.

Heritage impact can be mitigated to **NEUTRAL** during the construction phase if the ECO and/or construction foreman are informed of the various types of heritage artefacts which could be uncovered during excavation and levelling, and what action is to be taken should a heritage material be uncovered.

The overall Visual impacts associated with this development is anticipated to be **LOW NEGATIVE**. Impacts on sensitive receptors are anticipated to be low due to the transformed nature of the site and the surrounding agricultural activities. Impact associated with visual impacts can be mitigated and is predicted to be **LOW NEGATIVE**.

The application of the proposed mitigation and design measures, as recommended by the respective specialists, to be effectively managed in order to reduce the identified impacts so as to not have a detrimental effect on the environment.

In addition, some positive impacts have also been predicted. These include the creation of a number of additional employment opportunities and associated economic growth for the local community, rated as **LOW POSITIVE**.

**NO-GO Alternative (Compulsory)**

The No-Go alternative will result in the potential employment and skills development opportunities for the local community not being realised. In turn, the potential opportunity for economic growth in the community will be lost. The securing a stable electricity supply for current agricultural activities will also not be realised. These consequential impacts are regarded as **HIGH NEGATIVE**.

## SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

<b>YES</b>	NO
<b>YES</b>	NO

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

All mitigation measures included in the impact section should be considered for inclusion in the Environmental Authorisation, should one be granted.



## **SECTION F: APPENDICES**

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs taken from the centre of the site

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information