

EXECUTIVE SUMMARY

INTRODUCTION

The project applicant, The Boeram Venter Trust, proposes the construction and operation of a 2.2MW Solar Photovoltaic (PV) facility, including associated support and ancillary infrastructure on a portion of Portion 10 and 40 of Farm T'Zoetgeneugd No. 192, known as Middledrift, near Addo in the Sundays River Valley Municipality. It is anticipated that the facility will have a development footprint of approximately 3 ha and will produce 2.2 MW of AC electricity for private use for existing agricultural activities on the farm Middledrift. It is proposed that the PV facility supplements Eskom supply by providing a more regular, reliable, affordable, and clean source of renewable energy on site. The farm portions under assessment measure approximately ~114ha in combined extent and are currently zoned Agriculture 1. Middledrift is a working farm located within an agricultural area and consists predominantly of transformed land for pastures for grazing of domestic cattle and associated infrastructure, offices, dairy, staff housing, farm dams and a cleared area for the construction of a poultry breeder facility (a separate assessment and environmental authorisation).

It is proposed that the PV facility is constructed on the western boundary of a portion of Portion 40, with a 100-meter length of 22kV cable being installed underground on Portion 10. The PV facility will have a total development footprint of 3 hectares comprising of a ~2.6 ha photovoltaic solar panel array, a ~750m² Battery Energy Storage System (BESS), a ~200m² inverter room, and ~200m² generator room. The generator room is proposed to be constructed on the southern boundary of the site and will include a new Power Plant Controller (PPC) transformer.

The farm Middledrift is located ~4.6km south of Addo/ Valentia (as the crow flies) in the Sundays River Valley Municipality. The farm can be accessed by turning off the R335 road onto the MN50595 gravel road and continuing for a distance of ~2.7km, which intersects a private access road situated along the southern boundary of Portion 10 and gives access to the farm. The nearest boundary of the Addo Elephant National Park is located ~5.2km east of portion 40 of Farm 192 and ~5.6km from the proposed development footprint.

PROJECT DETAIL

It is the intention of the applicant to construct and operate a 2.2MW Solar (PV) Facility, including associated support and ancillary infrastructure, on ~3 ha of portion of Portion 40 and 10 of Farm 192. The PV Facility will consist of the following:

- A 2.6ha stationary solar PV array with internal roads approximately ~4 meters wide
- A ~750m² BESS area
- A ~200m² inverter room and 22kV transformer
- A ~200m² generator room, including a solar PPC transformer
- A new 22kV underground cable to be installed over a distance of approximately 950 meters, with the eastern 100 meters being on Portion 10 to connect into a 22kV transformer located adjacent to the pump house.

It is proposed that the entire facility is fenced in and will be remotely monitored for maintenance purposes.

The footprint for the PV facility and associated components is on a portion of the farm previously transformed to pastures. The total area proposed for the construction of the Solar PV Facility and associated infrastructure is anticipated to be ~3ha in extent.

Pre-construction Phase

During the detailed project design phase, micro-siting and positioning of the individual mounts within the PV array will be confirmed by the technical team based on the results of soil tests undertaken. Micro-siting will also be informed by detailed information climatic conditions, topographic features, soil stability, and hydrology of the site. The panels are however proposed to be erected facing a northerly direction. The type of PV panels and BESS to be installed will be based on the best available technology at the time of construction and site-specific requirements.

Construction Phase

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

- In order to limit windblown dust, which increases the need for maintenance, blanket clearing for the PV array area is not proposed.
- Clearing and levelling of the area for the establishment of a concrete slab for the generator and associated transformer will be required.
- During the detailed design phase of the project soil tests will be undertaken and based on the results of these tests either concrete pillars or piling of steel will be use for the PV mounts.

- The BESS and Inverter room will require the construction of concrete plinths the laying down of and collection of BESS containers. Thus, no blanket clearing of vegetation is proposed.
- Establishment of a project laydown area for equipment.
- Clearing of pastures and levelling of areas for the establishment of internal access roads for construction and operational purposes.
- Transportation and installation of the solar PV panels and BESS.
- Removal of topsoil for the installation of the new 22kV underground cable.
- Erection of the perimeter fence.

Operational Phase

Once the PV facility and associated infrastructure has been installed, the facility will become operational and start producing 2.2MW of renewable energy. The facility will function as a hybrid system meaning the facility will operate from battery storage and will directly be connected to the Poultry Facility during power outages.

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 24 months. The construction phase will commence within 24 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 in 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 Boeram Venter 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). The legislated 30-day comment period extends from **9 December 2022 to 30 January 2023**.

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, an **Archaeological Letter of Exemption and Paleontological Specialist Study**, which was undertaken as part of a previous environmental assessment on Portions 6, 10 & 40 of Farm T'Zoetgeneugd No. 192 (the same properties on which this application is proposed), have been used to assess the potential impacts on heritage resources, and are included as supporting information to this report, in Appendix G (ix) of the CBAR.

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 **VERY LOW NEGATIVE to NEUTRAL**.

Terrestrial Biodiversity impacts are not anticipated to be significant as the site is transformed to pastures, and no natural habitat remains within the proposed development footprint. With the implementation of the proposed mitigation measures, the impact has been rated as a **VERY LOW NEGATIVE** impact.

Aquatic Biodiversity impacts are not anticipated to be significant, as no natural aquatic features (rivers, drainage lines or wetlands) fall within any the proposed development footprint. The existing dam present on the site is artificial and will not be directly affected by the proposed development. With the implementation of proposed mitigation measures suggested by the Aquatic Biodiversity specialist, the impact has been rated as a **VERY LOW NEGATIVE** impact.

Archaeological and Paleontological Impact can be mitigated to **NEUTRAL** during the construction phase if the ECO and/or construction foreman are alerted to the possibility of important types of heritage artefacts which could be uncovered during excavation and levelling, and recommended actions are undertaken should a heritage material be uncovered.

The Visual impacts associated with this development is anticipated to be **VERY LOW NEGATIVE**. Impacts on sensitive receptors are anticipated to be low due to the transformed nature of the site and the surrounding agriculture activities.

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, which has been rated as **LOW POSITIVE** for the construction phase and **LOW POSITIVE** for the operational phase. Furthermore, the establishment of the PV facility will reduce the reliance on the coal-based electricity from the national Eskom grid, reducing the GHG pollution, rated **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 and the Poultry Facility currently under construction will also not be realised, which means more reliance on the national Eskom grid. These consequential impacts are regarded as **LOW NEGATIVE**.