

Hopefield 1.6GW Scoping Report
PROPOSED 1.6GW HOPEFIELD PV SOLAR ENERGY FACILITY
Western Cape Province



DOCUMENT DESCRIPTION

Client:	Solar Capital Pty Ltd
Project Name:	The proposed construction the 1.6GW Hopefield PV Solar energy Facility on Farm Portugeese Fontyn 167, Farm Portugeese Fontyn 2/167 and Farm Theewatervlei 315, Western Cape Province
Report Type:	Background Information Document
Ecocompliance Ref:	SCH2025/01
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1. Introduction

Ecocompliance was appointed by Solar Capital Pty Ltd (Solar Capital) as the lead consultant to manage the Environmental Impact Assessment (EIA) process for the establishment of the proposed Hopefield photovoltaic solar energy facility (PVSEF) and associated infrastructure located approximately 3km from the town of Hopefield and approximately 115km north of Cape Town city in the Western Cape province. The proposed project site is composed of different farm portions which together form the Hopefield Solar Energy Project. Those farm portions are as follows:

Property Name	Size (Ha)
Portion 2 (Portion of Portion 1) of the Farm No 166	84,89
Portion 2 of the Farm Portugeesche Fontyn No 167	343,37
Remainder of the Farm Portugeesche Fontyn No 167	1 594,24
Remainder of Portion 1 (Annex Portugeesfontein) of the Farm No 166	53,70
Remainder of the Farm Hopefield B Number 315	1 176,76

The total extent of all five farm portions is 3 302 Ha but the area considered for the proposed development is 2 998ha in extent (see Figure 1). The proposed project is envisaged to make use of the photovoltaic (PV) technology with a maximum output of approximately 1.6GW which will be constructed in a phased approach over time. It is important to note that the proposed solar project will not be connected to the Eskom grid but will be used as part of a Green Hydrogen Production Campus proposed within the Saldanha Local Municipality. The Campus and associated infrastructure will be subject to a separate EIA process. Site alternatives for the campus are being considered and will be finalized in due time. The study area is located within the jurisdiction of the Saldanha Local Municipality. The nature and extent of the proposed facility is explored in more detail in this background document.

2. Aim of the Background information Document

This BID aims to provide you, as an interested and/or affected party (I&AP), with:

- An overview of the proposed Hopefield Solar Energy Project.
- An overview of the Environmental Impact Assessment process and studies being undertaken to assess the potential impacts, both positive and negative, associated with the proposed project.
- Details of how you can become be involved in the process, receive information, add value, or raise issues, which may concern and/or interest you.

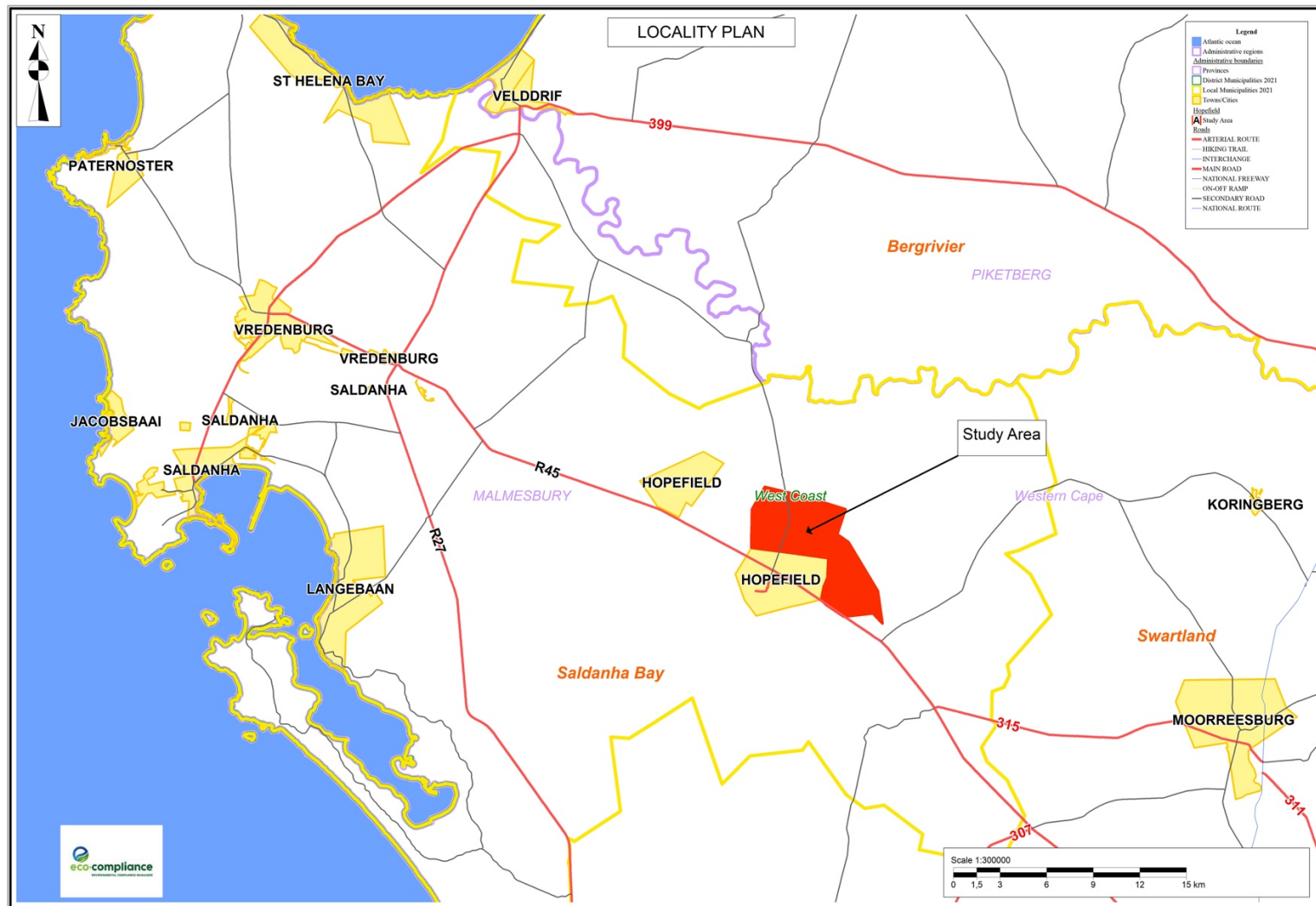


Figure 1: Locality Map

3. Project Overview

The facility is proposed on the above-mentioned properties and the power produced will be evacuated to a green hydrogen production Campus via a 132kV powerline into the facility once the location is finalised. The Campus and the powerline routes will not form part of this EIA but will be subject to a different EIA process which will also be communicated to the interested and affected parties as required by the EIA Regulations.

The study area is considered to be highly desirable for the establishment of a solar facility based on several key factors such as solar resource, climatic conditions, extent of the site, availability of land, and the site's close proximity to Aurora Substation.

A broader study area of approximately **3201 ha** is being considered within which the solar facility is to be constructed, although the actual development footprint of the proposed facility would be smaller in extent as some areas considered might be deemed sensitive based on outcomes from the specialist studies undertaken. Therefore, the PV panels and the associated infrastructure can be appropriately placed within the boundaries of the broader site to avoid any identified environmental sensitivities.

Infrastructure associated with the facility will include, *inter alia*:

- Photovoltaic solar panels with associated steel structures
- Foundations to support the PV panels;
- Cabling between the project components, to be laid underground where practical;
- Internal access roads; and
- Workshop area for maintenance and storage.

The overall aim of the design and layout of the facility is to maximise electricity production through exposure to the solar radiation, while minimising infrastructure, operation and maintenance costs, and social and environmental impacts. The use of solar energy for power generation can be described as a non-consumptive use of natural resources which emits zero greenhouse gas emissions. The generation of renewable energy contributes to South Africa's global commitments to reduce its carbon footprint.

4. Photovoltaic Solar Energy Facilities & Power Generation

Solar energy facilities, such as those using PV panels use the energy from the sun to generate electricity through a process known as the Photovoltaic Effect. This effect refers to photons of

light colliding with electrons, and therefore placing the electrons into a higher state of energy to create electricity.

A Photovoltaic Cell is made of silicone which acts as a semiconductor used to produce the photovoltaic effect. Individual PV cells are linked and placed behind a protective glass sheet to form a photovoltaic panel. The PV cell is positively charged on one side and negatively charged on the other side and electrical conductors are attached to either side to form a circuit. This circuit then captures the released electrons in the form of an electric current (direct current). An inverter must then be used to change the direct current (DC) produced to alternating current (AC). The electricity is then transmitted through a power line for distribution and use.



Figure 2: Photo showing an elevated view of PV panels & from ground level

The PV panels will be fixed to a support structure set at an angle so to receive the maximum amount of solar radiation. The angle of the panel is dependent on the latitude of the proposed facility and the angles may be adjusted to optimise for summer or winter solar radiation

characteristics. The PV panels are designed to operate continuously for more than 20 years, unattended and with low maintenance. It is also important to note the rapid evolution of solar energy technology over a relatively short time, which may result in improved technology for the future.



Figure 3: Photo showing the aerial view of the PV facility

5. Environmental Impact Assessment Process

In terms of the EIA Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998) as amended, Solar Capital (Pty) Ltd requires authorisation from the National Department of Environmental Affairs (DEA) (in consultation with the Western Cape Department of Environment and Development Planning (DEADP) for the construction and operation of the proposed renewable energy facility. In terms of sections 24 and 24D of NEMA, as read with the EIA Regulations a full Environmental Impact Assessment (EIA) process is required to be undertaken for this proposed project. In order to obtain authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations.

An EIA is an effective planning and decision-making tool. It allows the potential environmental consequences resulting from a technical facility during its establishment and its operation to

be identified and appropriately managed. It provides the opportunity for the applicant to be fore-warned of potential environmental issues, and allows for resolution of the issue(s) reported on in the Environmental Impact Report (EIR) as well as dialogue with interested & affected parties (I&APs).

Solar Capital has appointed Ecocompliance, as the independent environmental consultants, to undertake the required EIA process to identify and assess all the potential environmental impacts associated with the proposed project, and propose appropriate mitigation and management measures in an Environmental Management Programme (EMPr). As part of these environmental studies, I&APs will be actively involved through the public involvement process being undertaken by Ecocompliance.

6. Potential Impacts Associated with The Proposed Facility

A number of potential environmental impacts, both positive and negative, associated with the proposed Solar Energy Facility have been identified. These include the following:

Biodiversity	Construction of the facility and associated disturbance of vegetation and animals inhabiting the area may result in impacts on biodiversity.
Social	The construction and operation of the facility may result in job opportunities during both Construction and Operation phases. The proposed project could impact on local land use.
Agriculture	Potential impacts on agricultural potential and land capability of the site.
Visual	The proposed development has a potential impact on visual and aesthetic value of the site. This can, potentially, affect the sense of place
Heritage	Disturbance to or destruction of heritage sites and fossils/palaeontology may result during the construction of the facility

The potential environmental impacts associated with not undertaking the proposed project will also be explored through the EIA process. Specialist studies were guided by existing information, field observations and relevant Department protocols. As an I&AP, your input is considered an important part of this process, and we urge you to become involved.

7. Public Involvement

The sharing of information forms the basis of the public involvement process and offers you the opportunity to become actively involved in the EIA from the outset. Comments and inputs from I&APs during the EIA process are encouraged in order to ensure that potential impacts are considered within the ambit of the study. The public participation process has been designed to allow for safe consultation and gathering of valuable information which must be considered during the this specific EIA process.

The public involvement process aims to ensure that:

- Information that contains all the relevant facts in respect of the application is made available to I&APs for review.
- I&AP participation is facilitated in such a manner that they are provided with a reasonable opportunity to comment on the proposed project.
- Adequate review periods are provided for I&APs to comment on the findings of the draft Scoping Report.
- Focus group meetings will be conducted with key stakeholders surrounding landowners, authorities, business forums and any relevant bodies in Hopefield and surrounding areas.
- Site notices will be placed at strategic positions around the properties;
- EIA reports will be available at public libraries and municipal offices for further consideration and more information.

8. Your Responsibilities As An I&AP

In terms of the EIA Regulations, your attention is drawn to your responsibilities as an I&AP:

- In order to participate in this EIA process, you must register yourself on the project database.

- You must ensure that any comments regarding the proposed project are submitted within the stipulated time frames.
- You are required to disclose any direct business, financial, personal or other interest which that you may have in the approval or refusal of the application for the proposed facility.

9. How To Become Involved

- By responding (by phone and/or e-mail) to our invitation for your involvement which has been advertised in local newspapers.
- By returning the attached Reply Form to the relevant contact person.
- By attending the focus group meetings to be held during the course of the project. As a registered I&AP you will automatically be invited to attend these meetings. Dates for public meetings will also be communicated.
- By contacting the consultants with queries or comments.
- By reviewing and commenting on the draft Scoping and EIA Reports within the stipulated 30-day review periods.

If you consider yourself an I&AP for this proposed project, we urge you to make use of the opportunities created by the public involvement process to provide comment, or raise those issues and concerns which affect and/or interest you, and about which you would like more information. Your input into this process will add value to the EIA process and stakeholders who understands the area better than anyone.

By completing and submitting the accompanying reply form, you automatically register yourself as an I&AP for this project, and are ensured that your comments, concerns or queries raised regarding the project will be noted.

10. Comments & Queries

Direct all comments, queries or responses to:

Mr Percy Ngidi

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