

# HOTAZEL 2

Northern Cape Province

Social Impact Assessment – Scoping Report

June 2020

savannah  
environmental

t +27 (0)11 656 3237

f +27 (0)86 684 0547

e info@savannahsa.com

w www.savannahsa.com

**Prepared for:**

Hotazel Solar Facility 2 (Pty) Ltd  
Unit B1, Mayfair Square  
Century Way, Century City  
Western Cape, 7441



## REPORT DETAILS

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<b>Title</b>	:	Social Impact Assessment (SIA) Scoping Report for Hotazel 2, Northern Cape Province
<b>Authors</b>	:	Savannah Environmental (Pty) Ltd Lisa Opperman
<b>Client</b>	:	Hotazel Solar Facility 2 (Pty) Ltd
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## SPECIALIST DECLARATION OF INTEREST

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I, Lisa Opperman, declare that –

- » I act as the independent specialist in this application.
- » I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- » I declare that there are no circumstances that may compromise my objectivity in performing such work.
- » I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity.
- » I will comply with the Act, Regulations and all other applicable legislation.
- » I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- » I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the application by the competent authority; and – the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- » All the particulars furnished by me in this form are true and correct.
- » I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the Act.

Lisa Opperman

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Name

June 2020

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Date



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Signature

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## ACRONYMS

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DEA	Department of Environmental Affairs
DENC	Department of Environment and Nature Conservation
DMRE	Department of Mineral Resources and Energy
DM	District Municipality
EAP	Economically Active Population
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EP	Equator Principles
GDP	Gross Domestic Product
GGP	Gross Geographic Product
GNR	Government Notice
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IFC	International Finance Corporation
IPP	Independent Power Producer
km	Kilometre
kV	Kilovolt
LED	Local Economic Development
LM	Local Municipality
MW	Mega Watt
NEMA	National Environmental Management Act (No. 107 of 1998)
NC	Northern Cape
PGDS	Provincial Growth and Development Strategy
PSDF	Provincial Spatial Development Framework
PV	Photovoltaic
RE	Renewable Energy
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
S&EIA	Scoping and Environmental Impact Assessment
SDF	Spatial Development Framework
SIA	Social Impact Assessment
UNESCO	United Nations Educational, Scientific and Cultural Organisation

# 1. INTRODUCTION

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Hotazel Solar Facility 2 (Pty) Ltd proposes the development of Hotazel 2 and associated infrastructure, on a site near Hotazel in the Northern Cape Province (refer to **Figure 1.1**). Hotazel 2 comprises a commercial photovoltaic (PV) solar energy facility and is intended to form part of the Department of Mineral Resources and Energy's (DMRE's) Renewable Energy Independent Power Producer Procurement (REIPPP) Programme. The REIPPP programme aims to secure new generation capacity from renewable energy sources, while simultaneously diversifying South Africa's electricity mix, and positively contributing towards socio-economic and environmentally sustainable growth.

Hotazel Solar Facility 2 (Pty) Ltd requires Environmental Authorisation (EA) from the Department of Environmental Affairs (DEA) subject to the completion of an Environmental Impact Assessment (EIA) process in accordance with the National Environmental Management Act (No. 107 of 1998) (NEMA), and the 2014 EIA Regulations (GNR 326). Cape EAPrac has been appointed as the independent environmental consultant responsible for managing the EIA process.

This Social Impact Assessment (SIA) Scoping Report has been prepared by Lisa Opperman of Savannah Environmental (Pty) Ltd, and is intended to provide social input as part of the Scoping phase of the project.

## 1.1. Project Description

Hotazel 2 consists of solar photovoltaic (PV) facility with fixed, single or double axis tracking mounting structures, with a net generation (contracted) capacity of 100 MW<sub>AC</sub>, as well as associated infrastructure, which will include:

- » On-site substation / collector switching station.
- » Auxiliary buildings (gate-house and security, control centre, office, warehouse, canteen & visitors centre, staff lockers etc.).
- » Inverter-stations, transformers and internal electrical reticulation (underground cabling);
- » Access and internal road network.
- » Laydown area.
- » Grid connection: There are three options proposed PV facility to connect Hotazel 2 to the Eskom Hotazel Substation:
  - \* Option 1: New overhead 132kV power line from the proposed Hotazel 2 on-site substation/ collector switching station to the existing Eskom Hotazel substation. This option is the preferred option from a technical perspective.
  - \* Option 2: Via a loop in loop out (LILO) 132kV power line into the Hotazel-Eldoret 132kV line.
  - \* Option 3: New overhead 132kV power line from the proposed Hotazel 2 on-site substation/ collector switching station to the authorised Hotazel Solar collector switching station.
- » Rainwater tanks.
- » Perimeter fencing and security infrastructure.

The project will directly affect four properties namely the Remaining Extent (Portion 0) of the farm York A 279, Portion 11 of Farm York A 279, the Remaining Extent of Portion 3 of the Farm York A 279 and the Remaining Extent (Portion 0) of the Farm Hotazel 280 (refer to **Figure 1.1**). The project is located within Ward 4 of the Joe Morolong Local Municipality which falls under the jurisdiction of the John Taolo Gaetsewe District Municipality.

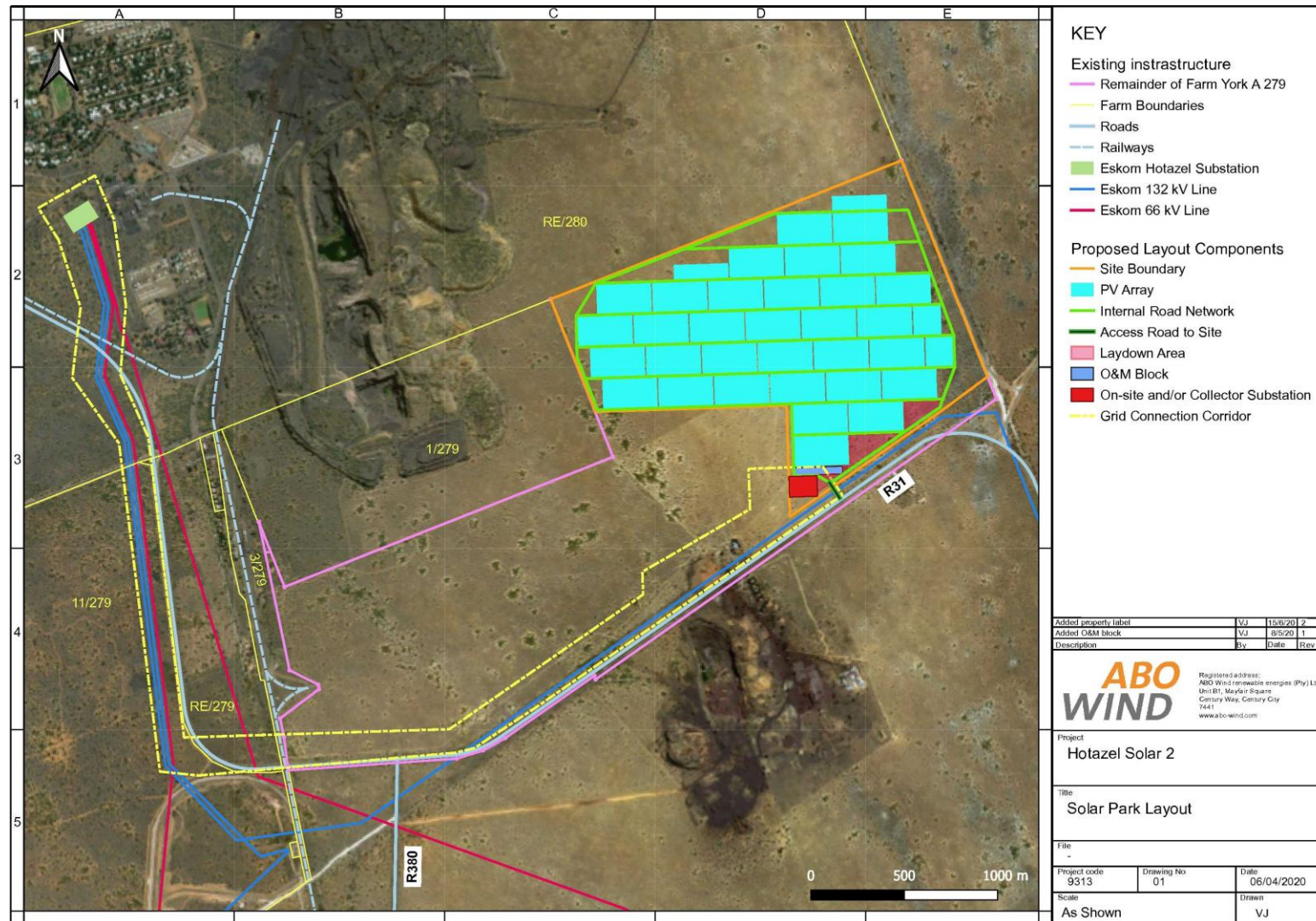


Figure 1.1: Proposed project site for Hotazel 2, Northern Cape Province.



**Table 1.1: Overview of Technical Details for the proposed facility**

Component	Description / Dimensions
Location of the site	Approximately 3km south-east of Hotazel
PV panel area	210ha with a total project footprint of approximately 230ha
Site access	Access to the site will be at a new access point from the R31
Contracted capacity	100MW
Grid Connection: On-site substation/ collector switching station	The maximum size of the on-site substation/ collector switching substation will be up to 2ha. The on-site substation/collector switching station will collect the power from the solar facility and transform it from a low voltage level (up to 33kV) to 132kV. The collector switching station component would be used if Eskom requires another solar energy facility (i.e. the authorised Hotazel Solar) to connect to the national grid via the same grid connection point.
Grid Connection Options	<p><u>Option 1 (Technically Preferred Option):</u> ±6.7km new overhead 132kV electrical transmission line. To assess the route, the line is buffered by 150 m (i.e. a 300 m corridor) in order to allow for micro-siting during final design. The power line will have a maximum height of 32m and a servitude width of between 31m and 36m. This option is considered to be the preferred option from a technical perspective.</p> <p><u>Option 2:</u> 100m new overhead 132kV electrical transmission line which will connect via a Loop in Loop out connection into the existing Hotazel/Eldoret 132kV line. The power line will have a maximum height of 32m and maximum servitude width of 52m. To assess the route, the line is buffered by 150 m (i.e. a 300 m corridor) in order to allow for micro-siting during final design</p> <p><u>Option 3:</u> ±1km new overhead 132kV power line from the Hotazel 2 on-site substation/ collector switching station to the authorised Hotazel Solar collector switching station. The power line will have a maximum height of 32m and a servitude width of between 31m and 36m. To assess the route, the line is buffered by 150 m (i.e. a 300 m corridor) in order to allow for micro-siting during final design</p>
Proposed technology	PV with fixed, single or double axis tracking technology.
Height of installed panels from ground level	PV structures not more than 4m in height.
Width and length of internal roads	Main access road - width: 8m, length: ± 100m Internal access roads – width: 5m, length: ± 17 km

The proposed project site was identified on the basis of various technical criteria including the solar resource available in the area, the accessibility of the site, accessibility to Eskom's national electricity grid, and local site characteristics and topography.

## 1.2. Objective of the Scoping Process

This SIA Scoping Report has been prepared as part of the Scoping Process being undertaken by Cape EAPrac for the Hotazel 2 project. The purpose of this SIA Scoping Report is to provide details on the nature and extent of Hotazel 2, as well as potential social impacts associated with the construction, operation, and decommissioning of the project. The inputs contained within this SIA Scoping Report are intended to provide

a high-level overview of the social environment within which Hotazel 2 is proposed, and sets the scene for issues which will be addressed in detail as part of the EIA Phase specialist investigations.

The objectives of this SIA Scoping Report is to:

- » Identify and review policies and legislation which may have relevance to the proposed activity from a social perspective.
- » Provide comment on the need and desirability of the proposed activity from a social perspective.
- » Identify potential impacts and risks associated with the preferred activity and technology alternatives.
- » Identify key social issues to be addressed in the EIA phase.
- » Agree on the level of assessment to be undertaken, including the methodology to be applied to determine the impacts and risks which the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site.
- » Identify suitable measures to avoid, manage or mitigate identified social impacts and determine the extent of residual risks that need to be managed and monitored.

### 1.3. Details of the Independent Specialist

This SIA has been undertaken by Lisa Opperman of Savannah Environmental.

Lisa Opperman is an Environmental Consultant at Savannah Environmental. She holds a Bachelor degree with Honours in Environmental Management and has five years of experience in the environmental field. Her key focus is on environmental and social impact assessments, public participation, environmental management plans and programmes, as well as mapping using ArcGIS for a variety of environmental projects. Lisa has undertaken 10 SIAs to date for various types of development.

### 1.4. Structure of this SIA Scoping Report

This SIA Scoping Report has been structured as follows:

- » **Chapter 1** provides an introduction to the proposed project and objectives of the SIA Scoping Report.
- » **Chapter 2** provides an overview of the methodology and approach utilised in preparing this SIA Scoping Report.
- » **Chapter 3** provides an overview of the legislative and policy environment within which Hotazel 2 is proposed.
- » **Chapter 4** provides an overview of the socio-economic profile of the Joe Morolong Local Municipality, John Taolo Gaetsewe District, Northern Cape Province, and South Africa as a whole.
- » **Chapter 5** describes the potential social impacts which have been identified for the project and which will be assessed in more detail as part of the EIA.
- » **Chapter 6** provides the conclusion of the scoping study and recommendations for further study to be incorporated into the Plan of Study for the EIA to be approved by the Department of Environmental Affairs (DEA).

## 2. METHODOLOGY AND APPROACH

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### 2.1. Purpose of the Study

The International Principles for Social Impact Assessment define SIA as:

*"The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions"*.

The International Principles for Social Impact Assessment define social impacts as changes to one or more of the following:

- » *People's way of life* – that is, how they live, work, play and interact with one another on a day-to-day basis.
- » *Their culture* – that is, their shared beliefs, customs, values and language or dialect.
- » *Their community* – its cohesion, stability, character, services and facilities.
- » *Their political systems* – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose.
- » *Their environment* – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources.
- » *Their health and wellbeing* – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity.
- » *Their personal and property rights* – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties.
- » *Their fears and aspirations* – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

The purpose of this SIA Scoping Report is therefore to:

- » Provide baseline information describing the social environment within which the project is proposed, and which may be impacted (both positively and negatively) as a result of the proposed development.
- » Identify, describe and assess possible social risks / fatal flaws and social impacts that may arise as a result of the proposed development (in terms of the detailed design and construction, operation, and decommissioning phases of the project).
- » Recommend ways in which negative impacts can be avoided, minimised, or their significance reduced; and positive impacts maximised or enhanced.

### 2.2. Approach to the Study

This SIA Scoping Report provides a snapshot of the current social setting within which Hotazel 2 is proposed. It provides an overview of the manner and degree to which the current *status quo* is likely to change or be impacted on by the construction, operation and decommissioning of the project; as well as the manner in which the social environment is likely to impact on the development itself.

The SIA process completed to date comprised the following:

- » Collection and review of existing information, including Provincial, District and Local plans, policies, programmes; Census data; and available literature from previous studies conducted within the area. Project specific information was obtained from the project proponent.
- » Identification of potential direct, indirect and cumulative impacts likely to be associated with the construction, operation, and decommissioning of the proposed project.
- » Preparation of an SIA Scoping Report for inclusion in the Scoping Report to be prepared for the project.

### **2.2.1. Collection and Review of Existing Information**

Existing desktop information which has relevance to the proposed project, project area and / or surrounds was collected and reviewed. The following information was examined as part of this process:

- » Project map.
- » Google Earth imagery.
- » A description of the project (as provided by the project proponent).
- » Census data (2011).
- » Planning documentation such as Provincial Growth and Development Strategies (PGDSs), Local and District Municipality Integrated Development Plans (IDPs), Spatial Development Frameworks (SDFs), and development goals and objectives.
- » Relevant legislation, guidelines, policies, plans, and frameworks.
- » Available literature pertaining to social issues associated with the development and operation of solar PV power plants and associated infrastructure.

### **2.3. Limitations and Assumptions**

The following assumptions and limitations are applicable to this SIA Scoping Report:

- » Data derived from the 2011 Census, Northern Cape Provincial Spatial Development Framework (PSDF) 2012, Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review - Executive Summary, John Taolo Gaetsewe District Municipality Draft Integrated Development Plan (IDP) 2019-2020 and the Joe Morolong Local Municipality Integrated Development Plan (IDP) 2017/2018 was used to generate the majority of information provided in the baseline profile of the study area and the surroundings. The possibility exists that some of the data utilised may be out of date, and may not provide an accurate reflection of the current status quo.
- » This SIA Scoping Report is intended to provide an overview of the current social environment and assist in the identification of potential social impacts which require further investigation as part of the EIA phase. As a result no consultation has been conducted with key stakeholders as part of the Scoping process to date.
- » This SIA Scoping Report was prepared based on information which was available to the specialist at the time of preparing the report. The sources consulted are not exhaustive, and the possibility exists that additional information which might strengthen arguments, contradict information in this report, and / or identify additional information might exist.
- » Some of the project projections reflected in this SIA Scoping Report may be subject to change, and therefore may be higher or lower than those estimated by the project proponent.

- » It is assumed that the motivation for, as well as the planning and feasibility study of the project were undertaken with integrity; and that information provided by the project proponent was accurate and true at the time of preparing this SIA Scoping Report.

### 3. LEGISLATION AND POLICY REVIEW

The legislative and policy context applicable to a project plays an important role in identifying and assessing the potential social impacts associated with the development and also informs the need and desirability of the project within the proposed location. In this regard a key component of the SIA process is to assess a proposed development in terms of its suitability with regards to key planning and policy documents.

The following key legislation and policies were reviewed as part of this legislation and policy review process:

#### **National Policy and Planning Context:**

- » Constitution of the Republic of South Africa, 1996
- » National Environmental Management Act (No. 107 of 1998) (NEMA)
- » White Paper on the Energy Policy of the Republic of South Africa (1998)
- » White Paper on the Renewable Energy Policy of the Republic of South Africa (2003)
- » National Energy Act (No. 34 of 2008)
- » Integrated Energy Plan (IEP) (2015)
- » Integrated Resource Plan (IRP) for Electricity (2010-2030) (2011) (and subsequent updates thereto)
- » National Development Plan (NDP) 2030 (2012)
- » Strategic Infrastructure Projects (SIPs)

#### **Provincial Policy and Planning Context:**

- » Northern Cape Provincial Spatial Development Framework (PSDF) 2012
- » Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review - Executive Summary

#### **Local Policy and Planning Context:**

- » John Taolo Gaetsewe District Municipality Integrated Development Plan (IDP), 2019-2020
- » Joe Morolong Local Municipality Integrated Development Plan (IDP), 2017-2018

#### **3.1. National Policy and Planning Context**

Any project which contributes positively towards the objectives mentioned within national policies could be considered strategically important for the country. A review of the national policy environment suggests that the increased utilisation of Renewable Energy (RE) sources is considered integral to reducing South Africa's carbon footprint, diversifying the national economy, and contributing towards social upliftment and economic development. As the project comprises a RE project and would contribute RE supply to national targets set out and supported within these national policies, it is considered that the project fits within the national policy framework.

A brief review of the most relevant national policies is provided below in table format (**Table 3.1**).

**Table 3.1: Relevant national legislation and policies for Hotazel 2**

Relevant legislation or policy	Relevance to the proposed project
Constitution of the Republic of South Africa, 1996	<p>Section 24 of the Constitution pertains specifically to the environment. It states that everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p> <p>The Constitution outlines the need to promote social and economic development. Section 24 of the Constitution therefore requires that development be conducted in such a manner that it does not infringe on an individual's environmental rights, health, or well-being. This is especially significant for previously disadvantaged individuals who are most at risk to environmental impacts.</p>
National Environmental Management Act (No. 107 of 1998) (NEMA)	<p>This piece of legislation is South Africa's key piece of environmental legislation, and sets the framework for environmental management in South Africa. NEMA is founded on the principle that everyone has the right to an environment that is not harmful to their health or well-being as contained within the Bill of Rights.</p> <p>The national environmental management principles state that the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.</p> <p>The need for responsible and informed decision-making by government on the acceptability of environmental impacts is therefore enshrined within NEMA.</p>
White Paper on the Energy Policy of the Republic of South Africa (1998)	<p>The White Paper on Energy Policy places emphasis on the expansion of energy supply options to enhance South Africa's energy security. This can be achieved through increased use of RE and encouraging new entries into the generation market.</p> <p>The policy states that the advantages of RE include, minimal environmental impacts during operation in comparison with traditional supply technologies, generally lower running costs, and high labour intensities. Disadvantages include, higher capital costs in some cases, lower energy densities, and lower levels of availability, depending on specific conditions, especially with sun and wind based systems. Nonetheless, renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future.</p>
White Paper on the Renewable Energy Policy of the Republic of South Africa (2003)	<p>The White Paper on Renewable Energy Policy supplements Government's predominant policy on energy as set out in the White Paper on the Energy Policy of the Republic of South Africa (DME, 1998). The policy recognises the potential of RE, and aims to create the necessary conditions for the development and commercial implementation of RE technologies.</p> <p>The White Paper on RE sets out Government's vision, policy principles, strategic goals and objectives for promoting and implementing RE in South Africa. The country relies heavily on coal to meet its energy needs due to its abundant, and fairly accessible and affordable coal resources. However, massive RE resources that can be sustainable alternatives to fossil fuels, have so far remained largely untapped.</p> <p>The White Paper on Renewable Energy of 2003 set a target of 10 000GWh to be generated from RE by 2013 to be produced mainly from biomass, wind, solar and small-scale hydro. The</p>

Relevant legislation or policy	Relevance to the proposed project
	target was subsequently reviewed in 2009 during the RE summit of 2009. The policy supports the investment in RE facilities as they contribute towards ensuring energy security through the diversification of energy supply, reducing GHG emissions and the promotion of RE sources.
National Energy Act (No. 34 of 2008)	<p>The purpose of the National Energy Act (No. 34 of 2008) is to ensure that diverse energy resources are available, in sustainable quantities and at affordable prices, to the South African economy in support of economic growth and poverty alleviation, while taking environmental management requirements into account. In addition, the Act also provides for energy planning, and increased generation and consumption of Renewable Energies (REs).</p> <p>The Act provides the legal framework which supports the development of RE facilities for the greater environmental and social good, and provides the backdrop against which South Africa's strategic planning regarding future electricity provision and supply takes place. It also provides the legal framework which supports the development of RE facilities for the greater environmental and social good.</p>
Integrated Energy Plan (IEP), 2015	The Integrated Energy Plan (IEP) (which was developed under the National Energy Act (No. 34 of 2008)), recognises that energy is essential to many human activities, and is critical to the social and economic development of a country. The purpose of the IEP is essentially to ensure the availability of energy resources, and access to energy services in an affordable and sustainable manner, while minimising associated adverse environmental impacts. Energy planning therefore needs to balance the need for continued economic growth with social needs, and the need to protect the natural environment.
Integrated Resource Plan for Electricity (IRP) 2010-2030 (2011)	<p>The Integrated Resource Plan (IRP) for Electricity 2010 – 2030 is a subset of the IEP and constitutes South Africa's National electricity plan. The primary objective of the IRP is to determine the long term electricity demand and detail how this demand should be met in terms of generating capacity, type, timing and cost. The IRP also serves as input to other planning functions, including amongst others, economic development and funding, and environmental and social policy formulation.</p> <p>On 27 August 2018, the then Minister of Energy published a draft IRP which was issued for public comment. The lengthy public participation and consultation process has culminated in the issue of the IRP 2019 which updates the energy forecast from the current period to the year 2030. Since the promulgated IRP 2010, the following capacity developments have taken place:</p> <ul style="list-style-type: none"> <li>» A total of 6 422MW has been procured thus far under the REIPPPP, with 3 876MW being currently operational and made available to the grid. In addition, IPPs have commissioned 1005MW from two (2) Open Cycle Gas Turbines (OCGT) peaking plants; and</li> <li>» Under the Eskom Build Programme, 1 332MW has been procured from the Ingula Pumped Storage Project, 1 588MW and 800MW from the Medupi and Kusile power stations and 100MW from the Sere Wind Farm.</li> </ul> <p>Provision has been made for the following new capacity by 2030:</p> <ul style="list-style-type: none"> <li>» 1 500MW of coal;</li> <li>» 2 500MW of hydro;</li> <li>» 6 000MW of solar PV;</li> <li>» 14 400MW of wind;</li> <li>» 1 860MW of nuclear;</li> <li>» 2 088MW of storage;</li> </ul>



Relevant legislation or policy	Relevance to the proposed project
	<ul style="list-style-type: none"> <li>» 3 000MW of gas/diesel; and</li> <li>» 4 000MW from other distributed generation, co-generation, biomass and landfill technologies.</li> </ul> <p>Based on the 2019 IRP, 1 474MW has been installed for solar PV facilities, whereas, 814MW has already been procured. In addition, 1 000MW has been allocated for solar PV facilities from 2022 to 2030. This will bring the total installed capacity of solar PV facilities by 2030 to 8 288MW</p>
National Development Plan 2030 (2012)	<p>The National Development Plan (NDP) 2030 is a plan prepared by the National Planning Commission in consultation with the South African public which is aimed at eliminating poverty and reducing inequality by 2030.</p> <p>In terms of the Energy Sector's role in empowering South Africa, the NDP envisages that, by 2030, South Africa will have an energy sector that promotes:</p> <ul style="list-style-type: none"> <li>» Economic growth and development through adequate investment in energy infrastructure. The sector should provide reliable and efficient energy service at competitive rates, while supporting economic growth through job creation.</li> <li>» Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households.</li> <li>» Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change.</li> </ul> <p>The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy.</p>
Strategic Infrastructure Projects (SIPs)	<p>The Presidential Infrastructure Coordinating Committee (PICC) are integrating and phasing investment plans across 18 Strategic Infrastructure Projects (SIPs) which have 5 core functions, including to unlock opportunity, transform the economic landscape, create new jobs, strengthen the delivery of basic services and support the integration of African economies.</p> <p>SIP 8 of the energy SIPs supports the development of RE projects as follows:</p> <ul style="list-style-type: none"> <li>» Green energy in support of the South African economy: Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP) and supports bio-fuel production facilities.</li> </ul> <p>The development of Hotazel 2 is aligned with SIP 8 as it constitutes a green energy initiative which would contribute clean energy in accordance with the IRP 2010 – 2030. It must be noted that the project would only be registered as a SIP should the project proceed to construction.</p>

### 3.2. Provincial Policies

This section provides a brief review of the most relevant provincial policies. Hotazel 2 is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant provincial policies is provided in table format (**Table 3.2**) below.

**Table 3.2: Relevant provincial policies for Hotazel 2**

Relevant policy	Relevance to the proposed project
Northern Cape Provincial Spatial Development Framework (PSDF) 2012	<p>The Northern Cape Provincial Spatial Development Framework (PSDF) 2012 states that the overarching goal for the province is to enable sustainability through sustainable development. The province considers social and economic development as imperative in order to address the most significant challenge facing the Northern Cape, which is poverty.</p> <p>The PSDF identifies key sectoral strategies and plans which are considered to be the key components of the PSDF. Sectoral Strategy 19 refers to a provincial renewable energy strategy. Within the PSDF a policy has been included which states that renewable energy sources (including the utilisation of solar energy) are to comprise 25% of the province's energy generation capacity by 2020.</p> <p>The overall energy objective for the province also includes promoting the development of renewable energy supply schemes which are considered to be strategically important for increasing the diversity of domestic energy supply and avoiding energy imports, while also minimising the detrimental environmental impacts. The implementation of sustainable renewable energy is also to be promoted within the province through appropriate financial and fiscal instruments.</p>
Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review - Executive Summary	<p>The review of the Northern Cape PSDF (2018) refers to infrastructure investment and that a balance must be maintained between investments aimed at meeting the social needs of communities and investment aimed at promoting economic development and job creation.</p> <p>The Spatial Development Strategy identified in the PSDF for basic infrastructure includes achieving the provision of green infrastructure which includes renewable energy.</p> <p>As part of the Vision 2040 of the PSDF key opportunities are identified for the Province. The strengthening of the development triangle that is formed by the linking of Kimberley, Vryburg, Upington and De Aar. The development triangle sustains a diverse economy with strong mining, agricultural and renewable energy sectors. It is stated in the PSDF that a sustainable and viable economic network must be driven within the development triangle to improve the return of public investment in the Province.</p> <p>The location of Hotazel 2 falls outside of the development triangle. However the project will still contribute to the economic network of the province, albeit to a limited extent, specifically in terms of the renewable energy sector.</p>

### 3.3. District and Local Municipalities Policies

The strategic policies at district and local level have similar objectives for the respective areas, namely to accelerate economic growth, create jobs, and uplift communities. Hotazel 2 is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant district and local municipal policies is provided in table format (**Table 3.3**) below.

**Table 3.3: Relevant district and local municipal policies for Hotazel 2**

Relevant policy	Relevance to the proposed project
John Taolo Gaetsewe District	The IDP make reference to the vision of the municipal Spatial Development Framework (SDF) which forms part of the sector plans integration in the IDP. The vision states that the John Taolo

Relevant policy	Relevance to the proposed project
Municipality Integrated Development Plan (IDP), 2019-2020	Gaetsewe District Municipality will become a district in which all its residents engage in viable and sustainable wealth-generating economic activities and that investment and exploitation of renewable energy sources will result in the district becoming self-reliant in the generation of electricity and provide a sizeable injection into the national electricity grid.
Joe Morolong Local Municipality Integrated Development Plan (IDP), 2017-2018	<p>The IDP identifies the following issues as significant challenges for the Joe Morolong Local Municipality:</p> <ul style="list-style-type: none"> <li>» Huge service delivery and backlog challenges</li> <li>» Maintenance of aging infrastructure</li> <li>» Poverty</li> <li>» Unemployment</li> <li>» Low Economic Growth</li> <li>» Rural development</li> </ul> <p>Within Ward 4 of the Joe Morolong Local Municipality, which is also the ward within which the project is located, Key Performance Areas have been identified. These Key Performance Areas include i) basic service delivery which in-turn includes the promotion of a safe and clean environment and ii) local economic development (LED) which in-turn includes the promotion of economic development. The development of a solar energy facility will assist the Local Municipality in reaching the objectives of the Key Performance Areas through the development of an electricity supply facility which will promote a clean environment due to the nature of the development. Local economic development will also take place with the construction and operation of a solar energy facility due to the fact that the development will promote skills development which will enable local residents to grow in terms of skill capacity and providing them with more opportunity for employment in the future.</p>

### 3.4. Conclusion

The review of relevant legislation, policies and documentation pertaining to the energy sector and planning indicate that renewable or green energy (i.e. energy generated by naturally occurring renewable resources), and therefore the establishment of Hotazel 2, is supported at a national, provincial, and local level, and that the proposed project will contribute positively towards a number of targets and policy aims throughout the various levels. The support on the various levels contributes to the need and desirability of the project from a social perspective. Specifically those relating to social and economic development and upliftment, and an increase in RE and electricity supply which has the potential to further improve individuals' standard of living.

## 4. SOCIAL PROFILE

This Chapter provides an overview of the social environment of the Province, District Municipality, and Local Municipality within which Hotazel 2 is proposed for development, and provides the social basis against which potential issues have been identified.

**Table 4.1: Spatial Context of the Proposed Project Site.**

Component	Description / Dimensions
Project Property Farm Name and Number	<ul style="list-style-type: none"> <li>» Remaining Extent (Portion 0) of the farm York A 279;</li> <li>» Portion 11 of Farm York A 279;</li> <li>» Remaining Extent of Portion 3 of the Farm York A 279; and</li> <li>» Remaining Extent (Portion 0) of the Farm Hotazel 280</li> </ul>
Closest Town	Hotazel (approximately 3km north-west)
Municipal Ward	Ward 04
Local Municipality	Joe Morolong Local Municipality
District Municipality	John Taolo Gaetsewe District Municipality
Province	Northern Cape Province
Preferred Access	Access to the site will be at a new access point from the R31

### 4.1. Northern Cape Province

The Northern Cape Province is located in the north-western extent of South Africa and constitutes South Africa's largest province, occupying an area 372 889km<sup>2</sup> in extent, equivalent to nearly a third (30.5%) of the country's total land mass. It is also South Africa's most sparsely populated province with a population of 1 145 861, and a population density of 3.1/km<sup>2</sup>. It is bordered by the provinces of the Western Cape, and Eastern Cape to the south, and south-east, the provinces of Free State, and North West to the east, Botswana and Namibia, to the north, and the Atlantic Ocean to the west. The Northern Cape is South Africa's only province which borders Namibia, and therefore plays an important role in terms of providing linkages between Namibia and the rest of South Africa. The Orange River is a significant feature within the province, is the main source of water, and also constitutes the international border between South Africa and Namibia.

The Northern Cape offers unique tourism opportunities including wildlife conservation destinations, natural features, historic sites, festivals, cultural sites, stars gazing, adventure tourism, agricultural tourism, ecotourism, game farms, and hunting areas, etc. The province is home to the Richtersveld Botanical and Landscape World Heritage Site, which comprises a United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Site under the World Heritage Convention. The Northern Cape is also home to two Transfrontier National Parks, namely the Kgalagadi Transfrontier Park, and the Richtersveld /Ai-Ais Transfrontier Park, as well as five national parks, and six provincial reserves.

The Northern Cape plays a significant role in South Africa's science and technology sector, and is home to the Square Kilometre Array (SKA), the Southern African Large Telescope (SALT), and the Karoo Array Telescope (MeerKAT).

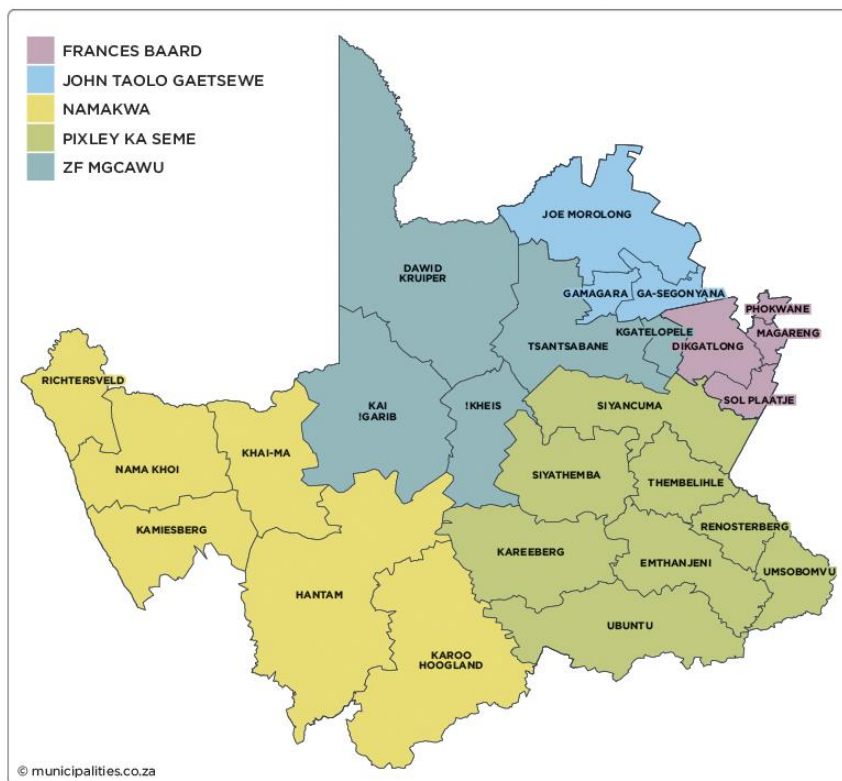
The Northern Cape makes the smallest contribution to South Africa's economy (contributing only 2% to South Africa's Gross Domestic Product per region (GDP-R) in 2007). The mining sector is the largest contributor to the provincial GDP, contributing 26%. The Northern Cape's mining industry is of national and international

importance, as it produces approximately 37% of South Africa's diamond output, 44% of its zinc, 70% of its silver, 84% of its iron-ore, 93% of its lead and 99% of its manganese.

In 2007 the agricultural sector contributed 5.8% to the Northern Cape GDP per region which was equivalent to approximately R1.3 billion. The agricultural sector also employs approximately 19.5% of the total formally employed individuals (LED Strategy). The sector is experiencing significant growth in value-added activities, including game-farming, while food production and processing for the local and export market is also growing significantly (PGDS, July 2011). Approximately 96% of the land is used for stock farming, including beef cattle and sheep or goats, as well as game farming, while approximately 2% of the province is used for crop farming, mainly under irrigation in the Orange River Valley and Vaalharts Irrigation Scheme (LED Strategy).

Further to the land uses indicated above, the Northern Cape Province currently houses 20 fully operational solar PV facilities scattered throughout the provincial area, with more development concentrated in certain areas.

The Northern Cape comprises five Districts, namely Frances Baard, John Taolo Gaetsewe, Namakwa, Pixley ka Seme, and ZF Mgcawu (refer to Error! Reference source not found.).



**Figure 4.1: Map showing the municipalities of the Northern Cape Province (Source: www.municipalities.co.za).**

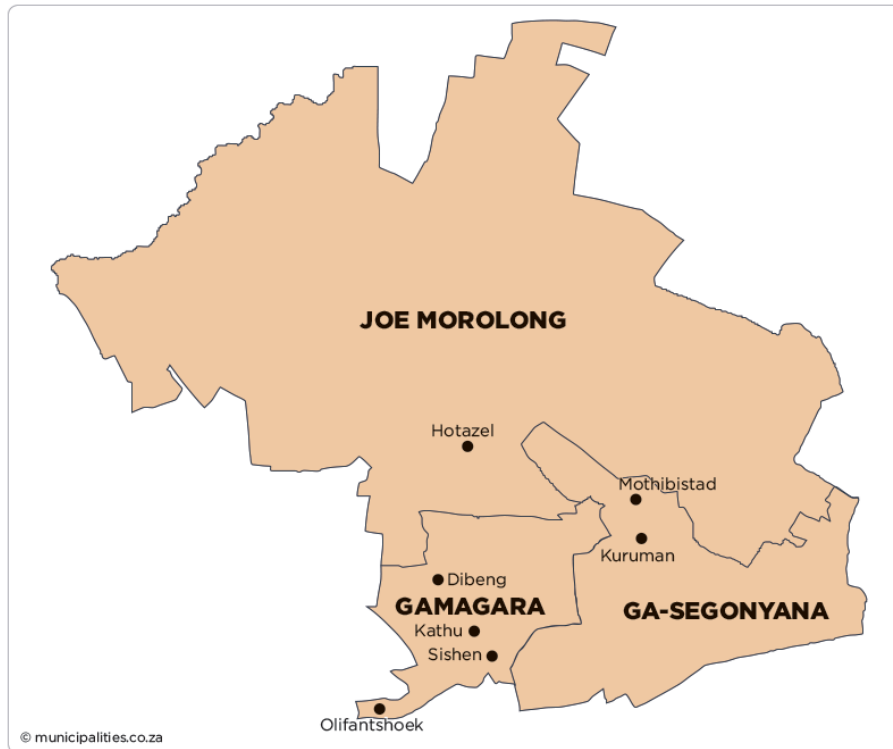
## 4.2. John Taolo Gaetsewe District Municipality

The John Taolo Gaetsewe DM is bordered by the ZF Mgcawu and Frances Baard DMs to the west and south and the North West Province to the east and north-east and Botswana to the north-west. The John Taolo Gaetsewe DM is the second smallest district in the Northern Cape, occupying only 7% of the Province. The John Taolo Gaetsewe DM comprises only three local municipalities which include the Gamagara Local Municipality, the Ga-Segonyana Local Municipality and the Joe Morolong Local Municipality (refer to Error! Reference source not found.). The Joe Morolong Local Municipality is the largest local municipality in terms of size, with the Ga-Segonyana Local Municipality and Gamagara Local Municipality covering 16% and 10% respectively.

The John Taolo Gaetsewe DM comprises of 186 towns and settlements of which the majority (80%) are villages located in the Joe Morolong Municipality. The population of the DM accounts for 20.3% of the total population in the Northern Cape Province, which is the third largest population size after the Frances Baard and ZF Mgcawu Districts.

The John Taolo Gaetsewe DM is characterised by a mixture of land uses of which agriculture and mining are dominant. Minerals mined include manganese ore, iron ore and tiger's eye. The Sishen iron-ore mine is one of the longest iron-ore carriers in the world. The rural land in the district is used extensively for cattle, sheep, goat and game farming.

The area is also well known for its good commercial hunting in the winter, and holds potential as a tourism destination. The north-eastern region is comprised principally of high-density rural and peri-urban areas while the western and southern areas are sparsely populated and consist mainly of commercial farms and mining activities.



**Figure 4.2: Map showing the local municipalities of the John Taolo Gaetsewe District (Source: [www.municipalities.co.za](http://www.municipalities.co.za)).**

#### 4.3. Joe Morolong Local Municipality

The Joe Morolong Local Municipality is the largest municipality in the John Taolo Gaetsewe District in terms of land mass (20 172km<sup>2</sup>, equivalent to 73.94% of the District land mass) and is categorised as a Category B municipality. There has been a major decline of ~25.11% in the population of the LM between 1996 and 2016. This is mainly due to the out-migration of people from the municipality to the Ga-Segonyana and Gamagara Local Municipalities as a result of mining related activities.

The Joe Morolong Local Municipality is bordered by the Gamagara and Ga-Segonyana Local Municipalities to the south; Greater Taung, and Kagisano-Molopo Local Municipalities of North West Province to the south-east, east, and north-east; Botswana to the north, and north-west; and Dawid Kruiper, and Tsantsabane Local Municipalities to the south-west.

The Joe Morolong Local Municipality is predominantly rural in nature, with approximately 60% of the municipality comprising virgin land surface. Although unemployment is high, the municipality has potential for developers, especially those interested in ecotourism and conservation. Predominant towns within the municipality include: Hotazel, Santoy, and Van Zylsrus. The predominant economic sectors within the municipality include agriculture, mining, and community services.

#### 4.4. Project Site

The project site proposed for the development of Hotazel 2 is located within an area consisting of a bush-covered landscape considered to be featureless and flat. The current land use of the project site includes limited cattle grazing. The mining town of Hotazel is the closest town to the project site and houses an open-

quarry manganese ore mine and what is considered to be the world's largest sinter plant, producing three million tons of ore per year.

Other towns in proximity of the project site include Kuruman, located approximately 52km south-east, and Kathu located approximately 60km south. Built infrastructure in the form of farm homesteads, workers quarters and storage areas occur in close proximity to the project site, and may be impacted on (i.e. in terms of nuisance and / or visual impacts) as a result of the proposed project.

A number of manganese mining operations occur within close proximity of the project site, with the Annex Langdon Manganese Mine located immediately south of the project site. Other mines in the surrounding area include the Hotazel Mine, the Devon Mine and the Kudumane Mine. As a result of the mining activities numerous waste rock dumps associated with these Manganese mines are located within the vicinity of the project site. The presence of these waste rock dumps has influenced the local landscape character and degraded the natural features present. The greater area within which the project is proposed has already been transformed as a result of mining, associated infrastructure, and waste rock dumps.

The vertical and horizontal landscapes are also disturbed within the area due to the presence of linear infrastructure within the surrounding area, including:

- » Power lines:
  - \* Hotazel SAR Traction / Hotazel 1 132kV power line traverses the area west of the project site in a north-to-south direction from the SAR Hotazel 132kV Traction Substation located adjacent to the south-western extent of the project site, coming to an end at the Hotazel 132 / 66 / 11kV Substation located north-west of the project site in Hotazel.
  - \* Hotazel / Middelplaats 1 66kV power line traverses the area west of the project site in a north-to-south direction coming to an end at the Hotazel 132 / 66 / 11kV Substation located north-west of the project site in Hotazel.
  - \* Hotazel / Riries 1 66kV power line traverses the south-western corner of the project site, and traverses the area west of the project site in a north-to-south direction, coming to an end at the Hotazel 132 / 66 / 11kV Substation located north-west of the project site in Hotazel.
  - \* Hotazel / Eldoret 132kV power line located along the southern boundary of the project site. The power line originates from the Eldoret substation, follows the R31 regional road, and runs adjacent to the existing power lines to the Hotazel substation.
- » Regional roads:
  - \* R31 Regional Road traverses the south-eastern boundary of the project site, and provides primary access to the project site.
  - \* R380 Regional Road joins the R31 in the south-western extent of the project site.
- » Railway line:
  - \* A railway line occurs along the south-western boundary of the project site, and also traverses the area just west of the project site in a north-to-south direction.

There are a number of solar facilities proposed in the broader area, with the Adams Solar PV facility being the closest operational facility (located ~18km south-east of Hotazel).

#### **4.5. Baseline Description of the Social Environment**



**Table 4.2** provides an overview of the socio-economic profile of the Joe Morolong Local Municipality within which Hotazel 2 is proposed. In order to provide context against which the Local Municipality's social profile can be compared, the social profiles of the John Taolo Gaetsewe District, Northern Cape Province, and South Africa as a whole have also been provided where applicable. The data presented in this section have been derived from the 2011 Census, the Local Government Handbook South Africa 2018, the Northern Cape Provincial Spatial Development Framework (PSDF), and the John Taolo Gaetsewe DM and Joe Morolong LM IDPs.<sup>1</sup>

**Table 4.2: Baseline description of the social characteristics of the area within which Hotazel 2 is proposed**

Location characteristics
<ul style="list-style-type: none"> <li>» The project is proposed within the Northern Cape Province, which is South Africa's largest, but least populated Province.</li> <li>» The project is proposed within the Joe Morolong LM of the John Taolo Gaetsewe DM.</li> <li>» The Joe Morolong LM covers an area of land 20 172km<sup>2</sup> in extent and comprises 1 semi-urban area, villages, and commercial farms. The LM is largely characterised by rural establishments that are mostly connected through gravel and dirt roads.</li> <li>» There are Tribal authorities with 8 Paramount Chiefs present within the Joe Morolong LM's area of jurisdiction.</li> <li>» The Joe Morolong LM is regarded as the poorest area in the John Taolo Gaetsewe DM.</li> </ul>
Population characteristics
<ul style="list-style-type: none"> <li>» The Joe Morolong LM municipal population is 84 201 (2016), and comprises 146 villages, 2 small towns, and surrounding private commercial farms and government owned farms (belonging to the Department of Rural Development and the Department of Public Works).</li> <li>» There has been a major decline of ~25.11% in the population of the LM between 1996 and 2016 mainly due to the out-migration of people from the municipality to the Ga-Segonyana and Gamagara Local Municipalities. This migration is due to mining related activities.</li> <li>» The Joe Morolong LM is female dominated, with females comprising approximately 54.6% of the LM population.</li> <li>» Black Africans comprise the predominant population group within the Joe Morolong LM, John Taolo Gaetsewe DM, and Northern Cape Province.</li> <li>» The Joe Morolong LM, John Taolo Gaetsewe DM, and Northern Cape Provincial population age structures are youth dominated. A considerable proportion of the respective populations therefore comprise individuals of the economically active population between the ages of 15 – 64.</li> </ul>
Economic, education and household characteristics
<ul style="list-style-type: none"> <li>» The following mining houses are located within the Joe Morolong LM: UMK, South 32, Assmang Blackrock Mine, Tshipi-e-Ntle, Kalagadi, Kudumane Mining Resources, Baga Phadima Sand Mining, Sebilo Mine and Aquila mine (Sebilo and Aquila not yet in operation).</li> <li>» The Joe Morolong LM has a dependency ratio per 100 of 82.4, which is considerably higher than the John Taolo Gaetsewe DM (57.9), and Northern Cape Province (35.8).</li> <li>» Education levels within the Joe Morolong LM are very low with ~15.3% of the population having received matric and only 3.9% having received a higher education. This means that the majority of the population can be expected to have a relatively low-skill level and would either require employment in low-skill sectors, or skills development opportunities in order to improve the skills level of the area.</li> <li>» The unemployment rate of the Joe Morolong LM is 38.7% , with the John Taolo Gaetsewe DM unemployment rate at 30.1%. Joe Morolong LM has the highest unemployment rate in the district.</li> </ul>

<sup>1</sup> While information was derived from the Local Government Handbook South Africa 2018, Northern Cape PSDF, and John Taolo Gaetsewe DM and Joe Morolong LM IDPs, this sources largely made use of statistical information derived from the Census 2011. The information presented in this Chapter may therefore be somewhat outdated, but is considered sufficient for the purposes of this assessment (i.e. to provide an overview of the socio-economic characteristics against which impacts can be identified and their significance assessed).

- » Household income levels are low within the area, with almost two thirds falling within the poverty level. The area can therefore be expected to have a high poverty level with associated social consequences such as not being able to pay for basic needs and services and poor living conditions.
- » The primary economic activities within the Joe Morolong LM comprise mining, and agriculture; while the highest employers comprise Community Services, Agriculture, and Mining, and Quarrying.
- » There are 23919 households in the Joe Morolong LM, of which 80.1% comprise of formal dwellings.

#### Services

- » The Joe Morolong LM and John Taolo Gaetsewe DM are poorly serviced in terms of public sector health facilities. There are no hospitals within the Joe Morolong LM; and only 3 public sector dentists within the John Taolo Gaetsewe DM, and no public sector optometrists.
- » The Joe Morolong LM has 168 schools, 4 police stations, 24 clinics, and 3 community health centres.
- » Only 5.4% of households have access to a flush toilet connected to sewage within the Joe Morolong LM.
- » Only 4% of households have access to weekly refuse removal within the LM.
- » Only 4.8% of households have access to piped water within the LM.
- » Households that have access to electricity for lighting is 84.2%.

## 5. IDENTIFICATION OF POTENTIAL SOCIAL IMPACTS

This Chapter provides an overview of the potential social impacts that have been identified, which may be associated with the development of Hotazel 2 and its associated infrastructure. Potential impacts have been identified based on the current understanding of the project and the social environment within which the project is proposed. The potential social impacts identified for the project will be investigated further and ground-truthed during the EIA phase.

### 5.1. Detailed Design and Construction Phase

Potential impacts associated with the detailed design and construction phase of a project are usually of a short duration (i.e. 12 to 18 months, equivalent to the length of the construction phase) and temporary in nature, but could have long-term effects on the social environment if not planned or managed appropriately. It is necessary, for example, that the detailed design phase be conducted in such a manner so as not to result in permanent impacts associated with the ill-placement of project components or associated infrastructure.

#### 5.1.1. Construction Phase Impacts

<p><b>Impact</b> Creation of direct and indirect employment opportunities and skills development during the construction phase for the local and surrounding communities.</p>			
<p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Construction of the project will result in the creation of a number of direct and indirect employment opportunities, which will contribute towards the lessening the unemployment levels within the area and aid in skills development of communities in the area.	The creation of employment opportunities will assist, albeit to a limited extent, in alleviating unemployment levels within the area. The impact will be of a positive nature.	The impact will occur mainly at a local and regional level.	None identified.
<p><b>Description of expected significance of impact</b> The construction phase of the facility will create employment opportunities for various levels of skill including low-skilled, semi-skilled and highly-skilled. Skills developed through experience and training in the construction of the facility will be retained by the community members involved, possibly providing them with future opportunities. The impact is likely to be positive, local to regional in extent, short-term, and of medium significance</p>			
<p><b>Gaps in knowledge and recommendations for further study</b></p> <ul style="list-style-type: none"> <li>» Information on the exact direct and indirect employment opportunities and skills development opportunities likely to be created during construction.</li> <li>» Information on skills development opportunities associated with the construction phase.</li> </ul>			

<p><b>Impact</b> Economic multiplier effects.</p> <p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Economic multiplier effects from the use of local goods and services during the construction phase.	There are likely to be opportunities for local businesses to provide goods and services during the construction phase of development which will lead to positive economic contributions to the area. The impact will be of a positive nature.	The impact will occur at a local, and regional level.	None identified.
<p><b>Description of expected significance of impact</b> Economic multiplier effects from the use of local goods and services include, but are not limited to, the provision of construction materials and equipment, provision of workforce essentials such as services, safety equipment, ablution, accommodation, transportation and other goods. The increase in demand for goods and services may stimulate local business and local economic development (however locally sourced materials and services may be limited due to availability). There is likely to be a direct increase in industry and indirect increase in secondary business and trade. The impact is likely to be positive, local to regional in extent, short-term, and of medium significance.</p>			
<p><b>Gaps in knowledge and recommendations for further study</b> » Information on capital expenditure to be spent on local goods and services.</p>			

<p><b>Impact</b> In-migration of people (non-local workforce and jobseekers) to the area.</p> <p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Increased pressure on existing municipal infrastructure and basic services, and social conflicts during construction as a result of in-migration of people.	The in-migration of job seekers to the area could result in increased pressure being placed on infrastructure and basic services, and a rise in social conflicts. The impact will be negative.	The impact will occur at a local level.	None identified.
<p><b>Description of expected significance of impact</b> The in-migration of people to the area as either non-local workforce and / or jobseekers could result in increased pressure being placed on infrastructure and basic services on the local population (rise in social conflicts). An influx of people into the area, could lead to a temporary increase in crime levels, cause social disruption, and put pressure on basic services. An influx of people looking for economic opportunities could result in pressure on the local population such as a rise in social conflicts and change in social dynamics, increase in HIV, pregnancies and drug abuse. Adverse impacts could occur if a large in-migrant workforce, which is culturally different from the local</p>			

population, is brought in during construction. The impact is likely to be negative, local in extent, short-term<sup>2</sup>, and of medium significance due to the number of jobs expected to be created, and the proportion of which would accrue to the non-local workforce.

**Gaps in knowledge and recommendations for further study**

- » Information on the exact number of employment opportunities likely to accrue to the local labour force, versus the number of employment opportunities likely to accrue to the non-local workforce and jobseekers.
- » Mechanisms for employment of local labour and minimisation of in-migration.

**Impact**

Safety and security impacts.

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Temporary increase in safety and security concerns associated with the influx of people during the construction phase.	The in-migration of job seekers to the area could be perceived to result in increased criminal activity. The impact will be negative	The impact will occur at a local level.	None identified.

**Description of expected significance of impact**

The perception exists that an influx of jobseekers, and / or construction workers to an area is a contributor to increased criminal activities in an area, such as increased safety and security risk for neighbouring properties and damage to property, increased risk of veld fire, stock theft, and crime etc. The impact is likely to be negative, local in extent, short-term, and of medium significance due to the number of jobs expected to accrue to the non-local workforce.

**Gaps in knowledge and recommendations for further study**

- » Information on existing crime levels within the area.
- » Mechanisms for employment of local labour and minimisation of in-migration.

**Impact**

Impacts on daily living and movement patterns.

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Temporary increase in traffic disruptions and movement patterns during construction.	An increase in traffic due to construction vehicles and heavy vehicles could create short-term disruptions and safety hazards for current road users. The impact will be negative.	The impact will occur at a local level.	None identified.

**Description of expected significance of impact**

Increased traffic due to construction vehicles and heavy vehicles could cause disruptions to road users, the road network and increase safety hazards. The use of local roads and transport systems during the construction phase

<sup>2</sup> While the extent of the impact may be short-term (i.e. people are only likely to move into the area in search of employment prior to and possibly during the construction period), the implications thereof may be long-term, as people are likely to have settled in the area, and are unlikely to leave immediately after the completion of construction.

may cause road deterioration and congestion. The impact is likely to be negative, local in extent, short-term, and of low significance given the proximity of the project to existing mining operations within the area.

**Gaps in knowledge and recommendations for further study**

- » Number of vehicle trips anticipated during construction.

**Impact**

Nuisance impacts (noise and dust).

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Nuisance impacts in terms of temporary increase in noise and dust, and wear and tear on access roads to the site.	The impact will negatively impact sensitive receptors, and could cause disruptions for neighbouring properties. The impact will be negative.	The impact will occur at a local level.	None identified.

**Description of expected significance of impact**

Impacts associated with construction related activities include noise, dust and disruption or damage to adjacent properties. Site clearing activities and the use of construction equipment can increase the risk of dust and noise being generated, which can in turn negatively impact on adjacent properties. The impact is likely to be negative, local in extent, short-term, and of low significance given the proximity of the project to surrounding landowners and to existing mining operations within the area, which are also likely to be associated with nuisance impacts.

**Gaps in knowledge and recommendations for further study**

- » Confirmation of the duration of the construction phase.
- » Impacts of construction activities from the solar energy facility on adjacent landowners.

**Impact**

Visual and sense of place impacts.

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Intrusion impacts from construction activities will have an impact on the area's "sense of place" as well as the visual landscape within which the construction activities will be undertaken.	The project could alter the area's sense of place and increase the already disturbed landscape which could negatively impact on sensitive receptors. The impact will be negative.	The impact will occur at a local level.	None identified.

**Description of expected significance of impact**

Intrusion impacts such as aesthetic pollution (i.e. building materials, construction vehicles, etc.), noise and light pollution, and other impacts could impact the "sense of place" for the local community. The impact is likely to be negative, local in extent, short-term, and of low significance; given the proximity of the project to existing mining operations and waste rock dumps.

**Gaps in knowledge and recommendations for further study**

- » Potential sensitive visual receptors need to be identified.

» Visual impact assessment to inform impact on sense of place.

### 5.1.2. Operation Phase Impacts

Potential impacts associated with the operation phase are anticipated to be of a long-term duration (i.e. 20 years equivalent to the operational lifespan of the project).

<p><b>Impact</b> Direct and indirect employment opportunities and skills development.</p> <p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Creation of direct and indirect employment and skills development opportunities as a result of the operation of the project.	The creation of employment opportunities and skills development will assist, albeit to a limited extent, in alleviating unemployment levels within the area. The impact will be positive.	The impact will occur mainly at a local and regional level.	None identified.
<p><b>Description of expected significance of impact</b> The operation phase of the facility will create a limited number of employment opportunities for various levels of skill including low-skilled, semi-skilled and highly-skilled. Employment opportunities include safety and security staff, operation and monitoring; and maintenance crew. Maintenance activities will be carried out throughout the lifespan of the project, and include washing of solar panels, vegetation control, and general maintenance around the solar energy facility. The impact is likely to be positive, local-to-regional in extent, long-term, and of low significance.</p>			
<p><b>Gaps in knowledge and recommendations for further study</b> » Information on exact direct and indirect employment opportunities and skills development programmes likely to be created during operation.</p>			

<p><b>Impact</b> Development of non-polluting, renewable energy infrastructure.</p> <p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Development of non-polluting, renewable energy infrastructure.	Increasing the contribution of the RE sector to the local economy would contribute to the diversification of the local economy and provide greater economic stability. The impact will be positive.	The impact will occur at local, regional, and national levels.	None identified.
<p><b>Description of expected significance of impact</b> The generation of renewable energy will contribute to South Africa's electricity market, and may contribute to the diversification of the local economy. The growth in the RE sector as a whole could introduce new skills and development into the area. The impact is likely to be positive, local-to-national in extent, long-term, and of medium significance.</p>			

**Gaps in knowledge and recommendations for further study**

- » Information on the proposed project's contribution towards diversifying the local economy.

**Impact**

Contribution to local economic development and social upliftment.

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Benefits to the local area from Socio-Economic Development (SED) / Enterprise Development (ED) programmes and community trusts from REIPPPP social responsibilities.	The creation of employment opportunities, skills development, and the proposed project contributions to local economic development will assist, albeit to a limited extent, in both alleviating unemployment levels within the area, and improving the quality of life.	The impact will occur at local and regional levels.	None identified.

**Description of expected significance of impact**

Under the REIPPPP programme renewable energy projects are required to contribute to local economic development in the area. Awarded projects are required to spend a certain amount of their generated revenue (as defined in the agreement with DMRE) on Socio-Economic Development (SED) and Enterprise Development (ED) and share ownership in the project company with local communities. The impact is likely to be positive, local-to-regional in extent, long-term, and of medium significance.

**Gaps in knowledge and recommendations for further study**

- » Information on the project's proposed contributions.

**Impact**

Visual and sense of place impacts.

**Desktop Sensitivity Analysis of the Site:**

No sensitivity identified.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Sense of place impacts from a social perspective associated with the operation phase of the solar energy facility and associated infrastructure.	The project could alter the areas sense of place which could negatively impact on sensitive receptors. The impact will be negative.	The impact will occur at a local level.	None identified.

**Description of expected significance of impact**

The presence of the solar energy facility could impact the "sense of place" for the local community. The impact is likely to be negative, local in extent, long-term, and of low significance based on the already altered landscape through various mining operations.

**Gaps in knowledge and recommendations for further study**

- » Potential sensitive visual receptors need to be identified.
- » Visual impact assessment to inform impact on sense of place.



<p><b>Impact</b> Impacts associated with the loss of agricultural land.</p> <p><b>Desktop Sensitivity Analysis of the Site:</b> No sensitivity identified.</p>			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
The development footprint on which the solar energy facility will be developed will be removed from agricultural production.	Impacts associated with loss of agricultural land due to occupation of land by the solar energy facility. The impact will be negative	The impact will occur at a local level.	None identified.
<p><b>Description of expected significance of impact</b> The development of the proposed project on an agricultural property would result in the an area of land required to support the solar energy facility development footprint being removed from potential agricultural production. In the event that the land on which the project is proposed is being productively utilised for agricultural purposes, like grazing and cultivation, this could have a negative impact on agricultural jobs, and implications in terms of food production and security. The impact is likely to be negative, local in extent, long-term, and of low significance. This impact would be informed following the completion of a soils, land use, land capability, and agricultural potential impact assessment.</p>			
<p><b>Gaps in knowledge and recommendations for further study</b></p> <ul style="list-style-type: none"> <li>» The agricultural potential of the area likely to be removed from agricultural production needs to be determined.</li> <li>» Undertaking of a Soils and Agricultural Potential Impact Assessment.</li> </ul>			

## 6. CONCLUSION AND RECOMMENDATIONS

This SIA Scoping Report focused on the collection of available secondary information in order to provide a social baseline against which potential social impacts associated with the development of Hotazel 2 could be identified. A summary of the potential positive and negative impacts identified for the detailed design and construction, and operation phases are presented in **Table 6.1** and **Table 6.2**.

**Table 6.1: Summary of potential social impacts identified for the detailed design and construction phase.**

Impact	Status	Significance
Creation of direct and indirect employment and skills development opportunities.	Positive	Medium
Economic multiplier effects	Positive	Medium
In-migration of people (non-local workforce and jobseekers).	Negative	Medium
Safety and security impacts	Negative	Medium
Impacts on daily living and movement patterns	Negative	Low
Nuisance impact (noise and dust)	Negative	Low
Visual and sense of place impacts	Negative	Low

**Table 6.2: Summary of potential social impacts identified for the operation phase.**

Impact	Status	Significance
Direct and indirect employment and skills development opportunities	Positive	Low
Development of non-polluting, renewable energy infrastructure	Positive	Medium
Contribution to Local Economic Development and Social Upliftment	Positive	Medium
Visual and sense of place impacts	Negative	Low
Impacts associated with the loss of agricultural land.	Negative	Low

The potential social impacts listed within **Table 6.1** and **Table 6.2** have been identified based on a desk-top evaluation of available information and the current understanding of the proposed project; and are not exhaustive. The possibility therefore exists that additional impacts may be identified as part of the public review period, or during the collection of primary data as part of the EIA level SIA. All potential social impacts identified as part of the SIA process will be assessed in detail during the EIA Phase.

### 6.1. Conclusion

A number of potential positive and negative social impacts have been identified for the project, which require further investigation as part of the EIA phase. Based on the findings of this SIA Scoping Report, no red flags or fatal flaws have been identified from a social perspective which could preclude the development of Hotazel 2 pending the successful completion of the EIA and the receipt of Environmental Authorisation (EA) from the Department of Environmental Affairs (DEA).

### **6.1.1. Recommendations for Further Study (Plan of Study for the EIA)**

It is recommended that a full EIA level Social Impact Assessment (SIA) be conducted as part of the EIA phase. The following activities should be undertaken as part of this process:

- » Review comments pertaining to social impacts received from members of the public, key stakeholders, and any Organ of State during the review period of the Scoping Report. Where applicable, comments received from the Department of Environmental Affairs (DEA) on the Final Scoping Report (FSR), which may pertain to social impacts or have relevance to the SIA, will also be reviewed.
- » Collect primary data through telephonic interviews. Interview directly affected and adjacent landowners, and key stakeholders to obtain primary information related to the project site, social environment, and to gain their inputs on the proposed project and its perceived social impact (positive and /or negative). A site visit for the Social Impact Assessment will not be undertaken as an SIA was previously undertaken by Savannah Environmental within the project site for the development of a solar energy facility and the social environment has not changed since.
- » Update the baseline information with information received during the primary data collection, as well as any additional information received from the client, or updates to the project description.
- » Assess impacts identified for the project in terms of their nature, extent, duration, magnitude, probability, status, and significance; as well as the degree to which the impact can be reversed, may cause irreplaceable loss of resources, and can be mitigated.
- » Identify mitigation measures with which to reduce negative impacts, and enhance positive impacts for inclusion in the Environmental Management Programme (EMPr). As far as possible the mitigation hierarchy of "avoid, minimise, and reduce" will be followed in the mitigation of potential negative impacts.
- » Identify any conditions for inclusion in the Environmental Authorisation (EA).
- » Identify any monitoring requirements for inclusion in the EMPr or EA.
- » Provide a reasoned opinion regarding the acceptability of the project, and whether the proposed project should be authorised.
- » Prepare an SIA Report for inclusion in the EIA Report to be prepared for the project.

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