

LIMESTONE PV1 SOLAR ENERGY FACILITY

Northern Cape Province

Social Scoping Study

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savannah
environmental

t +27 (0)11 656 3237

f +27 (0)86 684 0547

e info@savannahsa.com

w www.savannahsa.com

Prepared for:

AVG Projects (Pty) Ltd
512 Riverside Lofts, 112 Tyger Falls Blvd
Bellville
Cape Town
7530



REPORT DETAILS

Title	:	Social Impact Assessment (SIA) Scoping Report: Limestone PV1 Solar Energy Facility
Authors	:	Savannah Environmental (Pty) Ltd Molatela Ledwaba
Client	:	AVG Projects (Pty) Ltd
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ACRONYMS

DM	District Municipality
DME	Department of Mineral and Energy
DoE	Department of Energy
DoJ	Department of Justice
DM	District Municipality
EEDSM	Energy efficiency demand-side management
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GNR	Government Notice
IDP	Integrated Development Plan
IFC	International Finance co
IRP	Integrated Resource Plan
km	Kilometre
kV	Kilovolt
LED	Local Economic Development
KLM	Kgatelopele Local Municipality
NEMA	National Environmental Management Act (No. 107 of 1998)
NDP	National Development Plan
PSDF	Provincial Spatial Development Framework
RBS	Revised Balanced Scenarios
REIPPP	Renewable Independent Power Producer Programme
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SP	Significance Points
ZFMDM	ZF Mgcawu District Municipality

1. INTRODUCTION

Savannah Environmental (Pty) Ltd has been appointed by AGV projects (Pty) Ltd as the lead consultants to undertake and manage the Environmental Impact Assessment (EIA) process for the development of the proposed Limestone PV1 Solar Energy facility and associated infrastructure (hereafter referred to as “the Project”) proposed on Farm 300 Engeland Portion 4 (refer to Figure 1-1). The proposed development is located near Danielskuil in the Northern Cape Province.

Molatela Ledwaba of Savannah Environmental (Pty) Ltd is the independent social consultant responsible for undertaking a Social Impact Assessment (SIA) and compiling the report as part of the EIA process being conducted for the project.

1.1 Study Objective

The purpose of this Scoping Study is to examine all relevant factors in order to provide unbiased assessment of the potential social impact of the proposed construction and operation of the Project. The report presents the potential prospects and constraints identified through the scoping study that would potentially arise as a result of the implementation of the project.

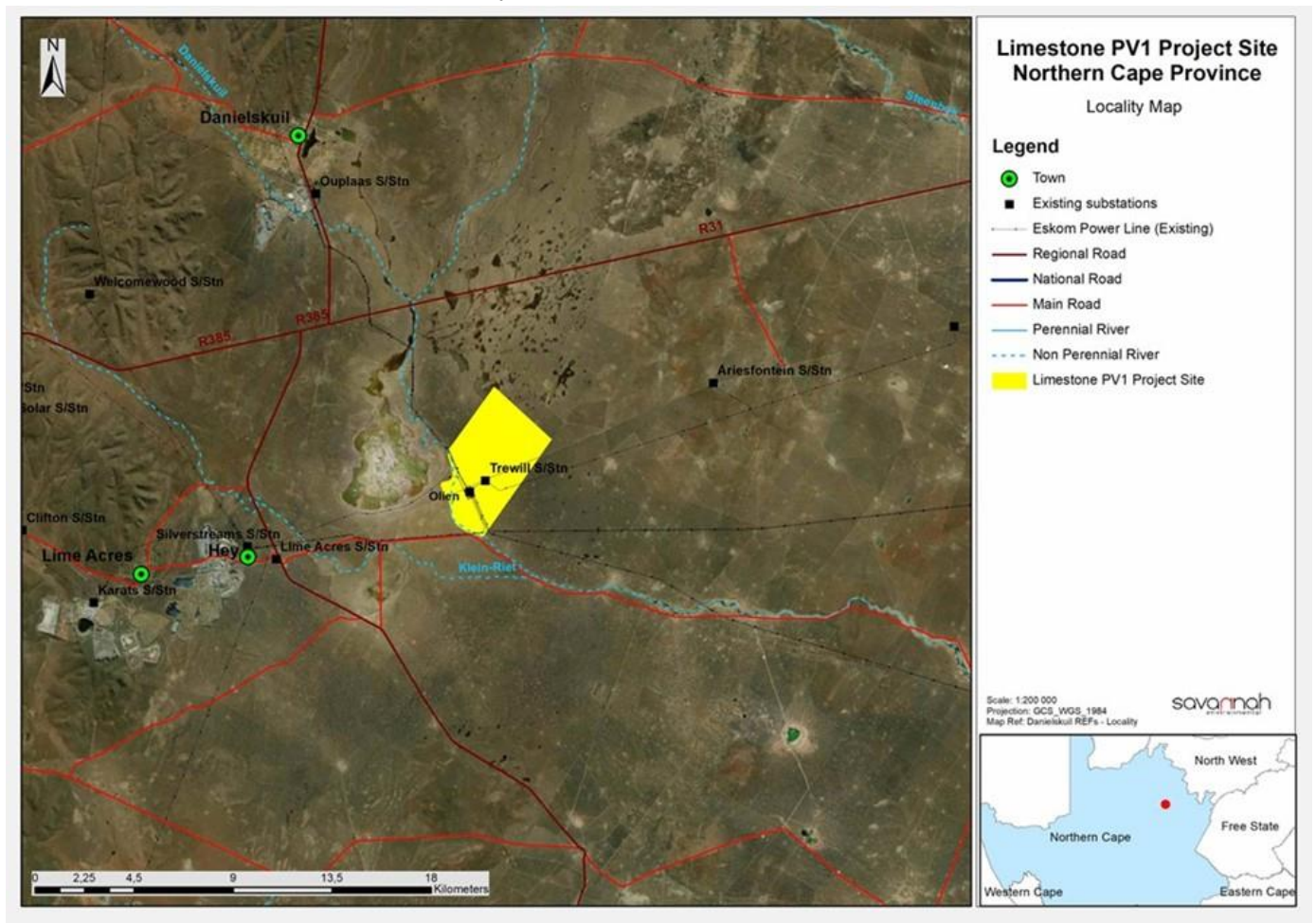


Figure 1-1 Locality map illustrating the location of the Limestone PV 1 Solar Energy Facility, Northern Cape Province

1.2 Project Description

The Project is located on Portion 4 of Farm Engeland 300.

The Project will occupy a development area of 300-400ha and will have a capacity between 75MWp and 150MWp. The proposed project will include the following infrastructure:

- » PV modules mounted on either a single axis tracking & fixed structure, dependent on optimisation, technology available and cost.
- » Inverters and transformers.
- » Low voltage cabling between the PV modules to the inverters.
- » Fence around the project development area with security and access control.
- » Camera surveillance.
- » Internet connection.
- » 33kV cabling between the project components and the facility substation.
- » 33/132kV onsite facility substation.
- » Battery Energy Storage System (BESS) with a footprint of 3-5ha.
- » Site offices and maintenance buildings, including workshop areas for maintenance and storage as well as parking for staff and visitors.
- » Laydown/staging area on-site in front of mounting structures during installation. Temporary store area close to site entrance (Less than 2ha).
- » Access roads (up to 6m wide) and internal distribution roads (up to 5m wide).
- » Temporary concrete batching facility.
- » Stormwater management infrastructure as required.

A Development area and footprint will be defined in the EIA Phase of the process considering environmental sensitivities and technical constraints.



Photograph 1-1 Typical Photovoltaic Solar Energy Facility

1.3 Details of the Independent Specialist

This SIA Report has been undertaken by Molatela Ledwaba of Savannah Environmental. Tony Barbour has undertaken an external review of this SIA and has provided an external reviewer's letter. This letter is attached as **Appendix C**.

- » **Molatela Ledwaba** – holds a BA Environmental Management and has 13 years of experience. Her key focus is on Socio-Economic Baselines, Social Impact Assessment, public participation, stakeholder engagement, project coordination and production of maps using QGIS and ArcGIS.

1.4 Structure of the SIA Scoping Report

This SIA scoping report is divided into five (5) main sections:

- » Section 1: Introduction and Project Description
- » Section 2: Approach to Study and Methodology
- » Section 3: Related Policy and Planning Documents
- » Section 4: Overview of Study area
- » Section 5: Identification of key issues and
- » Section 6: Summary of Key findings

This SIA Scoping Report has been prepared in accordance with the requirements of Appendix 6 of the 2014 EIA Regulations, as amended. An overview of the contents of this SIA Scoping Report, as prescribed by Appendix 6 of the 2014 EIA Regulations (GNR 326), and where the corresponding information can be found within the report is provided in Error! Reference source not found..

Table 1-1: Specialist report requirements

Requirement	Location in Report
(a) Details of – (i) The specialist who prepared the report. (ii) The expertise of that specialist to compile a specialist report including a curriculum vitae.	Section 1
(b) A declaration that the specialist is independent in a form as may be specified by the competent authority.	Specialist Declaration of Interest
(c) An indication of the scope of, and the purpose for which, the report was prepared.	Section 1
(cA) An indication of the quality and age of base data used for the specialist report.	Section Error! Reference source not found.
(cB) A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change.	Section Error! Reference source not found.
(d) The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment.	Section Error! Reference source not found.
(e) A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used.	Section Error! Reference source not found.
(f) Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternative.	To be provided during EIA Phase
(g) An identification of any areas to be avoided, including buffers.	N/A
(h) A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	N/A
(i) A description of any assumptions made and any uncertainties or gaps in knowledge.	Section Error! Reference source not found.
(j) A description of the findings and potential implications of such findings on the impact of the proposed activity or activities.	Section 6
(k) Any mitigation measures for inclusion in the EMPr.	To be provided during EIA Phase
(l) A description of any consultation process that was undertaken during the course of preparing the specialist report.	Section Error! Reference source not found.
(m) A summary and copies of any comments received during any consultation process and where applicable all responses thereto.	To be undertaken during EIA Phase
(n) Any other information requested by the competent authority.	N/A
2. Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	N/A

2. APPROACH TO STUDY AND METHODOLOGY

2.1 Approach

The research methodology used for the development of an SIA study is based on the Guidelines for Involving Social Impact Assessment Specialists in the EIA Process, which were prepared in February 2007 for the Western Cape Province of South Africa by the Department of Environmental Affairs and Development Planning. These best practice guidelines for Social Impact Assessment (SIA) development and planning are based on International Standards. These guidelines incorporate the following important SIA process Components:

- » The review of demographic data from the 2011 Census Survey and relevant data as received from the identified municipalities
- » The review of relevant planning and policy framework for the proposed area of intervention.
- » A review of information from similar projects.
- » Identification and description of social impacts, which can be associated with the proposed project.
- » The formulation of key findings and recommendations based on the collected data for the proposed project

Based on the review of relevant documentation, knowledge gained from prior projects and observations made during site visits, potential social concerns related to the proposed project were identified. Table 2-1 lists all the landowners who were interviewed.

2.1.1 Collection of Primary Data

Primary data was collected in the form of interviews from Wednesday, 09 November 2022 until Friday, 11 November 2022 with adjacent and affected landowners as part of the Public Participation and Social Impact Assessment process being conducted for the Scoping process. (Refer to Error! Reference source not found.). The purpose of the consultation was:

- » to generate a good understanding of the project by all stakeholders.
- » to understand the day-to-day activities that a project such as that proposed might impact
- » to obtain an understanding of measures which would be required to enhance local benefits that may accrue from the project
- » to provide stakeholders a chance to voice their opinions, hence participating in the proposed project EIA process.

The views and comments of the landowners have been incorporated into this SIA Scoping Study, to the extent possible and are likely to influence the development of the proposed project and its associated infrastructure.

Table 2-1: A Summary of landowner's meetings conducted as part of the Public Participation process for the Scoping phase.

Date & Time	Stakeholder Group	Summary of Matters Raised
Wednesday, 09 November 2022 at 14h:00	Mrs Kokie C. York (Olienspruit Farm)	<ul style="list-style-type: none"> » In migration into the area will result from the proposed project. » She indicated that they have bad gravel road, and the project will bring in more traffic and worsen the road. » She welcomes the project since it will allow her to continue running her catering business and accommodate the construction workers. » She indicated that we must also include the Papkuil Agricultural Association and the Fire Association – Danline FPA in the whole EIA process. » She indicated that she is not opposed to the project.
Thursday, 10 November 2022 at 08h:00	Mr Arie Fourie (farm 301)	<ul style="list-style-type: none"> » Requested to be included in the whole EIA process. » No matters pertaining to social issues were raised. » No objection to the project.
Thursday, 10 November 2022 at 08h:10	Mr Janneman Jordaan (Farm 300 Ptn 4)	<ul style="list-style-type: none"> » Requested to be included in the whole EIA process. » No matters pertaining to social issues were raised. » No objection to the project.
Thursday, 10 November 2022 at 08h:40	Mr Hendre Engela (Rooipan Farm)	<ul style="list-style-type: none"> » Requested to be included in the whole EIA process. » No matters pertaining to social issues were raised. » No objection to the project.
Thursday, 10 November 2022 at 09h:20	Mr Arno Opperman (farm 299)	<ul style="list-style-type: none"> » Requested to be included in the whole EIA process. » No matters pertaining to social issues were raised. » No objection to the project.
Thursday, 10 November 2022 at 09h:20	Mr Wilfred Goliath (Silver Stream)	<ul style="list-style-type: none"> » Requested to be included in the whole EIA process. » No matters pertaining to social issues were raised. » No objection to the project.

2.1.2 Limitations and Assumption

This section of the report briefly describes the assumption and limitations for this SIA Scoping Study.

Limitations

The one limitation identified for this SIA is the use and availability of demographic data. Data derived from the 2011 Census, documents from ZF Mgcawu District Municipality and Kgatelopele Local municipality were used to generate most of the information in the baseline profile of the study area. Dated data was treated with care and have been updated with 2016 community survey data where needed. The other limitation in

this study was that due to network issues in the project area, the owner of the farm 300 England Portion 4 could not be reached for a face-to-face interview for the purpose of this SIA. This, however, does not affect the outcome of this SIA because the information gathered during the interview with the adjacent farm owner Mrs C. York was adequate and representative for the purpose of this report. If necessary, additional interviews will be conducted during EIA phase.

Assumption

The first assumption is that it is strategically important to promote renewable energy sources like solar energy. This is supported by the National and Provincial policies discussed in Section 3 of this report. Additionally, a crucial part of the SIA process is determining how well the development fits with key planning and policy documents to detect and evaluate any potential social impacts. The planned development cannot be supported if the findings of this review show that it does not adhere to the relevant policy documents. The proposed study does, however, acknowledge the strategic value of supporting solar energy, as was already mentioned.

3. RELATED POLICY AND PLANNING DOCUMENTS

This Section of the report provides an overview of the related policy and planning documents affecting the proposed Limestone PV1 Solar Facility. The overview of these documents includes policy and planning documents on National, Provisional, District and Local level. The following policy and planning documents were reviewed to meet the objectives on this SIA report.

3.1 National Level

- » Constitution of the Republic of South Africa, 1996
- » White Paper on the Energy Policy of the Republic of South Africa (1998)
- » White Paper on Renewable energy of 2003
- » National Development Plan (NDP) 2030
- » National Energy Act (No. 34 of 2008)
- » Integrated Resource Planning for South Africa of 2010-2030

3.2 Provincial Level

- » Northern Cape Provincial Development and Resource Management Plan/ Provincial Spatial Development Framework (PSDF) of 2012

3.3 District Level

- » ZF MGCAWU DISTRICT MUNICIPALITY. ZF Mgcawu District Municipality Final Integrated Development Plan - Framework for 2021 – 2022.

3.4 Local Level

- » Kgatelopele Local Municipality Integrated Development Plan Review for 2018 – 2019.
- » Kgatelopele Local Municipality Spatial Development Framework Review Document- Section A for 2019

Table 3-1 Relevant legislation and policies for the proposed Limestone PV1 Solar Energy Facility

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>
White Paper on the Energy Policy of the	The White Paper on the Energy Policy of the Republic of South Africa of 1998 (further referred to as the White Paper) provides an overview of the South African energy sector's contribution

Relevant legislation or policy	Relevance to the proposed project
<p>Republic of South Africa of 1998</p>	<p>to the country's economic sector. The White paper states that the South African Energy systems can greatly contribute to a successful development strategy and a more sustainable national growth. Therefore, this White Paper supports investment initiatives in renewable energy. Globally there has been rapid development in renewable energy technologies, due to its many advantages, including cost-effectiveness. However, in South Africa the development and the implementation hereof have been neglected. According to the White Paper approximately 10% of South Africa's primary energy resources are provided through renewable energy resources. The advantages of renewable energy applications include: the impact on the environment is kept to the minimum, more cost-effective than traditional supply technologies and higher labour intensities</p> <p>The disadvantages of the renewable energy applications include: higher capital costs, lower densities and level of availability (depending on specific environmental systems like the sun and wind). Despite these disadvantages, renewable energy resources still operate from an unlimited resource base, meaning that another major advantage is that renewable energy is a more sustainable energy resource on the long-term.</p> <p>South Africa consists of very attractive renewable energy resources, including solar. This statement according to the White Paper guides the development of South Africa's renewable energy policy. The Government policy according to the White Paper (1998:79) is still concerned with meeting the following challenges:</p> <ul style="list-style-type: none"> » To ensure that the technologies and applications which are being implemented are economically feasible. » To ensure that an equitable level of national resources is invested in these renewable energy technologies; and » To address the constraints experienced on the development of the renewable energy industry. <p>Despite the Government policy's concerns, the policy still recognise renewable energy sources as unlimited resource bases with potential sustainability for the long-term. The Government stated also its support by stating in the White Paper on the Energy Policy of the Republic of South Africa of 1998 (1998:80) that the "Government will provide focused support for the development, demonstration and implementation of renewable energy sources for both small and large-scale applications".</p>
<p>White Paper on Renewable Energy of 2003</p>	<p>The White Paper on Renewable Energy of 2003 (further referred to as the White Paper) sets out the Government's vision, goals, objectives, policies and principles with regards to promoting and implementing renewable energy in South Africa. This Paper can be considered as a supplement paper to the White Paper on Energy Policy of 1998, which recognised the significant potential of renewable energy over medium- and long-term periods. The White paper has two overarching goals, namely to inform the public and Government agencies, including the Organs of the State, and the international community, of the Government's goals and the manner in which the Government plan to achieve these goals.</p> <p>The Paper states that the Government recognised the emission of greenhouse gasses and the effect of climate change globally. For this reason, the Government committed in reducing the greenhouse gas footprint of South Africa. According to the White Paper the Government's vision for renewable energy is "an energy economy in which modern renewable energy increases its share of energy consumed and provides affordable access to energy throughout South Africa, thus contributing to sustainable development and environmental conservation."</p>

Relevant legislation or policy	Relevance to the proposed project
	<p>Besides referring to other technologies of renewable energy, this paper specifically refers to the potential of solar resources for solar water heating applications, solar photovoltaic and solar thermal power generation in South Africa, directly relating to the proposed Limestone PV1 Solar Energy Facility.</p>
<p>National Development Plan 2030</p>	<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"> » 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. » Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households. » Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. <p>The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy.</p>
<p>National Energy Act (No.34 of 2008)</p>	<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). The objectives of the Act, are to amongst other things, to:</p> <ul style="list-style-type: none"> » Ensure uninterrupted supply of energy to the Republic. » Promote diversity of supply of energy and its sources. » Facilitate energy access for improvement of the quality of life of the people of the Republic. » Contribute to the sustainable development of South Africa's economy. <p>The National Energy Act therefore recognises the significant role which electricity plays growing the economy while improving citizens' quality of life. 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>
<p>Integrated Resource Planning for Electricity - South Africa of 2010-2030</p>	<p>The Integrated Resource Plan for Electricity for South Africa of 2010-2030 (further referred to as the IRP) is a "living plan" which is expected to be revised and updated continuously as necessary due to changing circumstances. According to the Summary of the plan the current IRP for South Africa, which was originally initiated by the Department of Energy (DoE) in June 2010, led to the Revised Balanced Scenarios (RBS) for the period 2010- 2030.</p>

Relevant legislation or policy	Relevance to the proposed project
	<p>“This scenario was derived based on the cost-optimal solution for new build options (considering the direct costs of new build power plants), which was then “balanced” in accordance with qualitative measures such as local job creation.” In addition to all existing and committed power plants, the RBS included 11,4 GW of renewables, which relates to the proposed Limestone PV 1. In 2010 several changes were made to the IRP model. The main changes in the IRP were the disaggregation of renewable energy technologies to explicitly display solar photovoltaic (PV), concentrated solar power (CSP) and wind option</p> <p>The summary of the IRP further explains that traditional cost-optimal scenarios were developed based on the previously mentioned changes in the IRP. This resulted in the Policy-Adjusted IRP, which stated that:</p> <ul style="list-style-type: none"> » “The installation of renewables (solar PV, CSP and wind) have been brought forward in order to accelerate a local industry; » To account for the uncertainties associated with the costs of renewables and fuels, a nuclear fleet of 9,6 GW is included in the IRP; » The emission constraint of the RBS (275 million tons of carbon dioxide per year after 2024) is maintained; and » Energy efficiency demand-side management (EEDSM) measures are maintained at the level of the RBS” (IRP, 2011:6). <p>“The Policy-Adjusted IRP includes the same amount of coal and nuclear new builds as the RBS, while reflecting recent developments with respect to prices for renewables. In addition to all existing and committed power plants (including 10 GW committed coal), the plan includes 9,6 GW of nuclear; 6,3 GW of coal; 17,8 GW of renewables; and 8,9 GW of other generation sources” (IRP, 2011:6).</p> <p>The IRP highlights the commitments before the next IRP. The commitments pertaining to the purpose of the proposed Limestone PV 1 in renewable energy is:</p> <ul style="list-style-type: none"> » “Solar PV programme 2012-2015: In order to facilitate the connection of the first solar PV units to the grid in 2012 a firm commitment to this capacity is necessary. Furthermore, to provide the security of investment to ramp up a sustainable local industry cluster, the first four years from 2012 to 2015 require firm commitment.” » “Solar PV 2016 to 2019: As with wind, grid upgrades might become necessary for the second round of solar PV installations from 2016 to 2019, depending on their location. To trigger the associated tasks in a timely manner, a firm commitment to these capacities is necessary in the next round of the IRP at the latest. By then, the assumed cost decreases for solar PV will be confirmed” (IRP, 2011:17). <p>In conclusion the IRP as envisaged in the Policy-Adjusted IRP should pursue solar PV programmes and an accelerated roll-out renewable energy options should be allowed with regards to the benefits of the localization in renewable energy technologies.</p>
<p>Northern Cape Provincial Development and Resource Management Plan/ Provincial Spatial Development</p>	<p>The Northern Cape Provincial Spatial Development Framework (further referred to as the PSDF) of 2012 in compliance with the Northern Cape Planning and Development Act no 7 of 1998 (Chapter IV, Section 14), aims to “ensure that the use and allocation of the province’s resources, both renewable and non-renewable, are informed by a set of integrated and coordinated policies, objectives, implementation strategies, programmes and, where appropriate, projects aimed at:</p>

Relevant legislation or policy	Relevance to the proposed project
<p>Framework (PSDF) of 2012</p>	<ul style="list-style-type: none"> (i) setting and monitoring, where appropriate, measurable standards with regard to, amongst other, public access to health, safety, amenities, education and economic opportunity; (ii) ensuring that the supply of public infrastructure is directed towards meeting the required standards in a prioritised, coordinated, sustainable and cost-effective way, in terms of capital and maintenance expenditure; (iii) (iii) ensuring the protection and sustainable utilisation of land, water and air where these are important for the maintenance of ecologically-sensitive systems or processes, areas of biological diversity, public health or public amenities; (iv) (iv) providing an investment and expenditure programme coordinated with budgetary cycles and capable of securing financial and other resources from National Government and any other funding agencies as well as public/private sector partnerships; and (v) (v) informing and guiding the preparation and implementation of district and local municipal 46 infrastructure management plans and land development plans" (PSDF, 2012:4). <p>The PSDF mainly aims to build a prosperous, sustainable growing provincial economy to firstly improve social development and to eradicate poverty. The PSDF adopted the International Union for Conservation of Nature (IUCN) mission as their main goal. This goal states that essential ecological processes are being maintained, that natural resources are being preserved and utilised in a sustainable manner, that the use of the biosphere are managed while also maintaining its potential for future generations.</p> <p>The PSDF of 2012 highlights that renewable energy sources such as solar thermal and wind, comprise 25% of the Northern Cape's energy generation capacity by the year 2020, and should be progressively phased in as appropriate into the province. The PSDF further sets out energy objectives, which include the following:</p> <ul style="list-style-type: none"> » To promote the development of renewable energy supply schemes; - To enhance the efficiency of Eskom's power station at the Vanderkloof power station; » Reinforce additional electricity supply especially renewable energy projects; and » Develop and implement innovative energy technologies to improve access to reliable, sustainable and affordable energy services. Also recognize that the objective should be to obtain sustainable economic growth. » Lastly, the PSDF notes that the Northern Cape need to develop large-scale renewable energy supply schemes in order to address the growing demand in energy and to promote a green economy in the province.
<p>ZF Mgcawu District Municipality Final Integrated Development Plan - Framework for 2021 – 2022.</p>	<p>It is the mission of the ZF Mgcawu District Municipality Final Integrated Development Plan for 2021–2022 (further referred to as the Plan) to be a centre of excellence in providing quality basic services to support local municipalities in the district. The core values according to the plan are outlined below:</p> <ul style="list-style-type: none"> » The commitment to the development of people; » The integrity in the performance of the municipality's duty; » Respecting their natural resources; » The transparency in accounting for their actions; » Consultation on a regular basis to ensure the quality of service delivery; » Ensuring professionalism in the work environment; and » The efficient spending and responsible utilisation of the assets of the municipality.

Relevant legislation or policy	Relevance to the proposed project
	<p>The strategic objectives above guided the priority issues identified for each area given in the Plan. It is however noteworthy that the same strategic objectives are reflected in the previous IDP. The issues that were highlighted that relates to the proposed project is firstly the development of infrastructure, and secondly the possibility of renewable energy for the development of new buildings.</p>
<p>Kgatelopele Local Municipality Integrated Development Plan Review for 2018 – 2019.</p>	<p>The Kgatelopele Local Municipality Integrated Development Plan for 2018 – 2019 (further referred to as the Plan) is a strategic document that outlines the community's development objectives. It also includes a policy framework which guides management in the decision-making process of the financial planning for the municipal area. This Local Municipality according to the Plan is committed to strengthening and extending the public participation in its work.</p> <p>The Plan identifies six performance areas, which have to be aligned to the strategic objectives of the municipal area. The first key performance area identified below, is the area, which relates to the proposed Life SPP. The six (6) key performance areas (KPA) are:</p> <ul style="list-style-type: none"> » KPA 1: Basic Services This KPA refers to the physical infrastructure and energy efficiency to ensure efficient infrastructure and energy supply that will contribute to the improvement of quality of life for all citizens of the Kgatelopele local municipality. » KPA 2: Spatial consideration/ Environment KPA 2 refers to Special planning and land use management and has been proposed as a tool to effect spatial transformation » KPA 3: Economic Growth and development KPA 3 refers to Economic Growth and Development to facilitate sustainable economic empowerments for all communities within the Kgatelopele local municipality and enabling a viable and conducive economic environment through the development of related initiatives including job creation and skills development. » KPA 4: Financial Sustainability This KPA refers to financial sustainability to ensure the financial sustainability of the municipality to adhere to statutory requirements. » KPA 5: Institutional transformation. This KPA refers to institutional transformation to provide an effective and efficient workforce by aligning our institutional arrangements to our overall strategy in order to deliver quality services. » KPA 6: Good Governance and Public Participation KPA 5 refers to governance and stakeholder participation to promote proper governance and public participation. » KPA 6: Spatial Development This KPA gives direction for the municipality in terms of its land use and its potential and direction for growth.

4. OVERVIEW OF THE STUDY AREA

4.1 INTRODUCTION

This section of the report provides an overview of the baseline socio-economic conditions in the area that are relevant to the social and economic assessment of the proposed Limestone PV1 Solar Energy Facility. The baseline was obtained through secondary data sources such as Statistics South Africa, 2020 National census, Integrated Development Plan, Kgatelopele Municipality Data and Specialist studies.

4.2 ADMINISTRATIVE CONTEXT

The Project is proposed to be located on portion 4 of the farm Engeland 300, which ~1842ha in extent. The project site is located in the Northern Cape Province of South Africa and is situated approximately ~16km south-east of the town of Danielskuil. The Northern Cape Province is divided into Five (5) District municipalities, namely Francis Baard, John Taolo Gaetsewe, Namakwa, Pixley ka Seme and the ZF Mgcawu District Municipality. The Limestone PV1 Solar Energy Facility site is located within the ZF Mgcawu District Municipality and Kgatelopele Local municipality. (Refer to Figure 4-1)

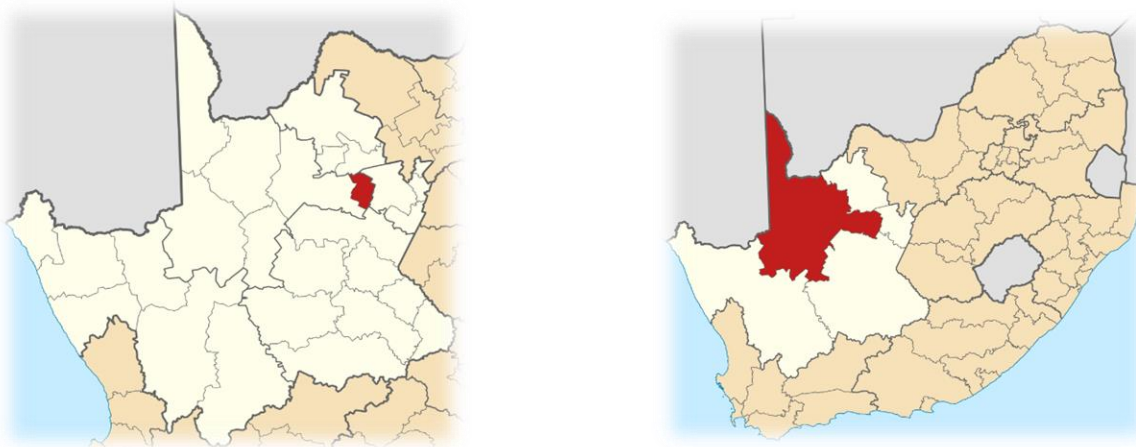


Figure 4-1 Maps indicating the location of the ZF Mgcawu District Municipality and the Kgatelopele Local Municipality (<https://municipalities.co.za/>)

The ZF Mgcawu District Municipality covers an area of approximately 102 524km². The Kgatelopele Local Municipality (KM) covers a geographical area of 2 478 km². The KM is the smallest of the five local municipalities that make up the ZF Mgcawu District Municipality. The administrative seat of the Kgatelopele Local municipality is located within the town of Danielskuil.

4.3 DEMOGRAPHIC CONTEXT

In this section the demographic context of the Province, District and Local municipality is discussed. The information was obtained from Final 2019 Kgatelopele Spatial Development Framework - Review Document-Section A.

4.3.1 Northern Cape Province

The Northern Cape Province is located in the North Western corner of South Africa. South Africa has nine (9) provinces of which the Northern Cape is the largest. The province covers approximately 372 889km², which is ~30.5% of the total land surface of the country. In terms of population, the province has the smallest population in the country, despite the size of the province. According to census 2011 data, the Northern Cape experienced out migration of 69,527 and in migration of 62,792 people. Most people moved to the provinces of the Western Cape, Gauteng, and Limpopo in quest of employment prospects. Comparatively, between 2006 and 2011, migration to the Eastern Cape Province increased significantly.

4.3.2 ZF Mgcawu District Municipality

The ZF Mgcawu District Municipality forms the mid-northern region of the province, which borders Botswana. This district has 102,524km² and over 27% of the Northern Cape Province area. With a land size of 102,524km² ZF Mgcawu is the largest district in South Africa, after Pixley ka Seme and Namakwa, both also in the Northern Cape Province. This district is bordered by four (4) District municipalities, namely John Taolo Gaetsewe, Francis Baard, Pixley ka Seme and Namakwa District Municipality. It also shares borders with the Republic on Namibia and Botswana. The district municipality comprises of five (5) Local Municipalities namely, the Dawid Kruiper, Kai! Garb, Kheis and Kgatelopele Local Municipality.

The ZF Mgcawu District Municipality has a total population of 266 001. The population size of ZF Mgcawu increased by 37 555 between 2008 and 2018. The population growth in the local municipalities varied significantly. The !Kheis Local Municipality had the lowest average annual growth rate of -0.10% relative to the other within the ZF Mgcawu District Municipality.

Table 4-1 Population figures of the ZF Mgcawu District Municipality

Municipality	2008	2013	2018	Average annual growth
Kai!Garib	64,600	67,400	70,500	0.87%
Dawid Kruiper	97,600	107,000	115,000	1.69%
!Kheis	17,800	17,300	17,600	-0.10%
Tsantsabane	31,600	36,600	40,900	2.61%
Kgatelopele	16,800	19,400	21,600	2.53%
Total	228,446	247,820	266,001	1.53%

Source: IHS Markit Regional eXplorer version 1750

The population of the ZF Mgcawu District Municipality in 2018 was made up of 29.64% Africans (78 800), 8.35% Whites (22 200), 61.06% Colored (162 000), and 0.96% Asians (2 540). In 2019, there were 51% males and 49% females living in ZF Mgcawu District Municipality. Males make up much more of the population (51%) in the ZF Mgcawu District Municipality than they do in South Africa (49%). This may be due to physically demanding industries like mining. There were 144 902 men and 139 473 women overall (49.3% each). In contrast, the

Northern Cape Province as a whole had 680 568 female residents, or 50.6% of the province's total population of 1.34 million people.

The young working age (25–44 years) age group makes up the biggest percentage of the population, accounting for 86 700 people or 32.6% of the total. The age group of infants and children (0–14 years) has the second-highest population with a total share of 25.2%, followed by the age group of teenagers and young adults (15–24 years) with 49 300 persons.

4.3.3 Kgatelopele Local Municipality

The Kgatelopele Local Municipality is situated in the Mgcawu District Municipality of the Northern Cape Province. The main towns include Lime Acres and Danielskuil, which both fall into a medium category for development potential on an individual basis. Danielskuil serves as the major town of significance for the entire Kgatelopele Local Municipality area, the basis for economic activity, social and Institutional services and development opportunities within the municipality, whereas Lime Acres is very prominent as the mining town.

According to the Information Handling Services (IHS) Markit Regional eXplorer version 1750 the population of this Kgatelopele municipality was 21 600 in 2018. Compared to the 2008 the population of the municipal has increased mainly due to natural population growth and other factors. The population growth between 2008 (16 800) and 2018 (21 600) has increased by 2.53%, with male population at 52.5% and female at 47.5%. The 2011 census indicates that the majority of the population is relatively young. According the 2011 Census the majority of the population within the municipality speaks Afrikaans (58%) and Setswana (33%).

. 4.4 ECONOMIC CONTEXT

In order to determine potential socio-economic implications of the proposed Project, it is crucial to first have a very high-level understanding of the socio-economic context in which the proposed Project is to be developed. This prospective area of influence - also referred as to as either the Provincial, District and Local will be discussed in the next section. The information was obtained from the Northern Cape Provincial, The ZF Mgcawu District Municipality Final Integrated Development Plan _ framework 2021-2022 (IDP) and the Final 2019 Kgatelopele Local Municipality Spatial Development Framework Review Document – Section A (SDF).

4.4.1 Northern Cape Province

The Northern Cape is primarily dependent on two industries namely mining and agriculture. These two industries employ approximately 57% of all workers in the province. There has been little no change in the overall standard of living of communities in the Northern Cape Province.

4.4.2 ZF Mgcawu District Municipality

The IDP identifies agriculture, agriculture enterprises, livestock farming, irrigation farming, tourism and heritage, and minerals and mining as the key economic activities. The municipal accounts for 30% of the provincial economy in terms of the minerals and mining in the district. Aside from mining, tourism is regarded as the most important sector in the district, and it is the fastest growing industry that contributes to the district

economy. The mining and agricultural sectors thus largely dominates the economy of the ZF Mgcawu District Municipality.

4.4.3 Kgatelopele Local Municipality

The Kgatelopele Local Municipality IDP of 2018/2019 indicates that most people within the municipality have at least some secondary educations and have finished secondary school. Some have only completed elementary school, while others have no formal education. This indicates that their prospects of finding a good job or other employment options are reduced because they did not obtain their senior certificate. Due to the high percentage of people who completed secondary school and obtained a higher education, the municipality has large, capacitated workforce to contribute to the economy of the municipality.

Furthermore, the number of economically active people is slightly higher than the number of non-economically active people, resulting in a very high dependency ration of 50.6%. According to Stats 2011, the unemployment rate is 22.3% and 29.1% of all unemployment people are young adults. There is a need to address the difficulties faced by those who are unemployed, especially young people.

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5. IDENTIFICATION AND EVALUATION OF KEY ISSUES

5.1 INTRODUCTION

This section focuses on the identification of the key social issues associated with the construction, operation and decommissioning of the proposed Limestone PV1 Solar Energy Facility. The identification of these key issues was identified based on the following:

- » The review of project baseline information and other specialist studies.
- » Interviews with interested and affected parties; and
- » Experience with similar projects

5.2 Social Impacts during the Construction Phase

The positive and negative social impacts identified and evaluated for the **construction phase** include:

- » Creation of employment opportunities
- » Potential risks to livestock and farming infrastructure and the presence of workers on site
- » In- migration or potential influx of job seekers
- » Potential impacts of heavy and construction related activities
- » Increase Traffic

5.2.1 Potential Positive Impact: Creation of local employment and business opportunities, skill development and training

According to the information provided, the construction phase of the proposed Limestone PV1 Solar Energy Facility will extend over a period of 12 months. A total of 6,754 people are expected to be employed during construction phase. This will provide a social benefit to the community. The construction phase will also be beneficial for the local service industry. The possible employment prospects would be related to transportation, security, cleaning, catering, and accommodation needs for the construction workers. The availability of lodging will also help the region's hospitality economy.

Table 5-1 Scoping evaluation of creation of local employment and business opportunities, skills development and training

Impact			
Creation of local employment and business opportunities, skill development and training			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Creation of local employment and business opportunities, skill development and training associated with construction phase	<u>Direct impacts:</u> <ul style="list-style-type: none"> » Creation of temporary employment opportunities » Creation of business procurement opportunities <u>Indirect impacts:</u> <ul style="list-style-type: none"> » Creation of skill and development opportunities » Support the local economy 	Local - Regional	N/A
Description of expected significance of impact			

The Limestone PV1 Solar Energy Facility construction phase will extend over a period of 12 months. A total of 6,754 people are expected to be employed during construction phase. This will include 34% (2,296) skilled labour, of which 3% is highly skilled (70) and 22% semi-skilled (505) and non-skilled 66% (4,457) people. 67-72% of labour will be sourced from the local communities, but this is dependent to a skill survey conducted by the Economic Development Consultant that will be appointed closer to the construction or bidding process. Danielskuil and surrounding areas, would be in a position to qualify for most of the low skilled and semi-skilled opportunities. The business-related opportunities will be linked to hospitality (accommodation) and services sector (catering, security, transport etc.). This will result in a benefit to the local communities, the significance of which is expected to be medium in the short-term.

Gaps in knowledge & recommendations for further study

- » Collection of information on local skills, educational levels and service sectors

Recommendations with regards to general field surveys

- » Site visit and further interviews with Landowners and other relevant stakeholders

5.2.2 Potential Negative Impact: The Potential risks to livestock and farming infrastructure and the presence of workers on site

During the construction phase of the Limestone PV1 Solar Energy Facility the presence of construction workers on the project site poses potential risks to the local farmers. These possible risks could include stock theft, loss of livestock as a result of broken fences and open farm gates, damage to farming infrastructure including gates and fences, and so on. The owner of the farm who was interviewed for this SIA said that having staff on the property is a concern. Her worries are about potential theft, security issues, and unauthorized trespassing on sites other than the project site.

Table 5-2 Scoping evaluation of potential risk to livestock and farming infrastructure and the presence of construction workers on site

Impact			
The potential risks to livestock and farming infrastructure and the presence of workers on site			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
The potential risks to safety of local communities associated with the presence of construction workers on site	<u>Direct impacts:</u> » <u>Break -ins and theft of livestock</u> » <u>Harm to local community or potential attacks</u> <u>Indirect impacts:</u> » <u>Resentment of outsiders and tension with local communities</u> » <u>Increase in risk of theft</u>	Local	N/A
Description of expected significance of impact			
According to data from the previous energy projects, movements and activities of construction workers can have an impact on the host communities. This is typically related to projects in rural areas and the risks are to the local farmers. Impacts are potentially of moderate significance but could be effectively reduced to low with the implementation of mitigation measures.			
Gaps in knowledge & recommendations for further study			
» Collection of data on the existing farming operations and activities			
Recommendations with regards to general field surveys			
» Site visit and further interviews with the local farmers			

5.2.3 Potential Negative Impact- In-migration or potential influx of job seekers

In the case of large construction projects, job seekers tend to migrate to the development area in search of work. In some cases, the job seekers' families accompany them. Whether or not the job seekers find work, they and their families may become economically stranded in the surrounding area. The influx of job seekers has no direct social impact, but their presence and behaviours can have an impact on community structures and social networks, competition for housing and jobs, which can lead to xenophobia and crime.

Table 5-3- Scoping evaluation of potential in migration or potential of job seekers

Impact			
Potential impacts on family structures, social networks and community services associated with the influx of job seekers			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
The potential risks to livestock and farming infrastructure and the presence of workers on site	<u>Direct impacts:</u> » Anti -Social behaviour of construction workers » Disruption of social networks <u>Indirect impacts:</u> » Resentment of outsiders and tension with local communities	Local	N/A
Description of expected significance of impact			
Evidence from other renewable energy projects indicates that the construction phase can result in the influx of jobseekers to the area and that this has the potential to impact negatively on local communities. Impacts can be of Moderate significance but can be reduced with the implementation of mitigation measures.			
Gaps in knowledge & recommendations for further study			
» Gathering of data on the existing community and needs			
Recommendations with regards to general field surveys			
» Site visit and interviews with representatives from the local municipality, community representatives and landowners.			

5.2.4 Potential Negative Impact: Potential impacts of heavy construction vehicles and increase in traffic

The main entrance to the site is on a gravel road entrance. The gravel road (main entrance) provides access to the farms in the area. The movement of heavy construction vehicles during the construction phase might potentially damage the current farm roads and in the process also increase traffic, create dust and safety impacts in the associated area. The road surface of the gravel road may deteriorate and will have to be maintained. The contractor should thus repair all the damages to the gravel road before the end of construction phase. The landowner that was interviewed for the purpose of this SIA expressed her concern regarding the possible damage to the existing road.

Table 5-4- Scoping evaluation of potential impacts of heavy vehicles associated with construction activities

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Potential, traffic, noise, dust and safety impacts associated with construction related activities	<u>Direct impacts:</u> » Dust impacts, and impact on the local communities living closer to the construction site » Noise impacts caused by moving construction vehicles » Damage on the gravel road that is leading to the project site <u>Indirect impacts:</u> » Limited indirect impacts	Local	N/A
Description of expected significance of impact Evidence from other renewable energy projects suggests that the construction-related activities do have an impact on the local communities in terms of dust, noise, and safety. Impacts could be of moderate significance in the short-term but can be effectively reduced through the implementation of appropriate management measures. Traffic impacts are expected during the construction phase. This can result in impacts on local roads and daily movement patterns. Impacts could be of moderate significance in the short term but could be effectively reduced through appropriate management measures.			
Gaps in knowledge & recommendations for further study » Gathering of information on existing farming activities and operations Recommendations with regards to general field surveys » Site visit and interviews with community representatives and farmers			

5.3 Social Impacts during the Operation Phase

The positive and negative social impacts identified and evaluated for the **operational phase** include:

- » Creation of local employment and business opportunities, skills development, and training
- » The development of infrastructure for the generation of renewable energy
- » Visual impacts and associated impacts on the sense of place

5.3.1 Potential Positive Impact: Creation of local employment and business opportunities, skill development and training.

Low educational levels in the Kgatelopele Municipality make it beneficial for the community in the long run to execute a capacity building and skills development training program. As people receive training, their

income will rise, and their material and economic well-being will advance. The majority of individuals in the area work in mining, agriculture, and then community services. Since the energy industry is new to the area, the available talent pool is small. Members of the community will be able to work at other similar projects in the region with the help of their acquired skills.

Table 5-5- Scoping evaluation of potential impacts of Creation of local employment and business opportunities, skill development and training.

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Creation of local employment and business opportunities, skill development and training associated with construction phase	<u>Direct impacts:</u> » Creation of employment opportunities. » Creation of business and procurement opportunities. <u>Indirect impacts:</u> » Creation of training and skills development opportunities. » Support for local economy.	Local- Regional	N/A
Description of expected significance of impact			
The operational phase of renewable energy projects offers a comparatively small number of direct employment possibilities. Reviewing the REIPPPP, however, reveals that there are other advantages to operating renewable energy plants that go beyond just creating employment opportunities. Although limited in number, the job opportunities provided will have a high positive impact for those individuals affected.			
Gaps in knowledge & recommendations for further study			
» Collection of information on local skills, educational levels and service sectors			
Recommendations with regards to general field surveys			
» Site visit and interviews with community representatives and other relevant stakeholders			

5.3.2 Potential Positive Impact: The development of infrastructure for the generation of renewable energy

Most South Africa's energy requirements are now satisfied by coal, according to an analysis of prior projects. Although the projected Limestone PV1 will only make a relatively small contribution to South Africa's overall electricity grid, it will help offset the country's overall carbon emissions from the energy generation sector. The projected Limestone PV 1 will benefit the energy sector in this regard as an Independent Power Provider (IPP) for renewable energy.

Table 5-6- Scoping evaluation of potential impacts of development of infrastructure for the generation of renewable energy

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Enhance the security of SA's energy supply and decrease coal dependence	<u>Direct impacts:</u> » Improve energy security » Support renewable energy » Reduce reliance on coal <u>Indirect impacts:</u> » Limited indirect impacts	Local - International	N/A
Description of expected significance of impact			

Due to supply shortages, South Africa's prolonged energy crisis, which began in 2007, has led to widespread rolling blackouts (also known as load shedding). The load shedding has significantly affected investor confidence as well as other economic sectors. In addition to addressing environmental problems related to climate change and the consumption of finite water resources, renewable energy facilities also create significant socio-economic opportunities and benefits, particularly for historically underprivileged rural communities. Although the project will only contribute up to 100MW to the electricity grid, this will aid in achieving government's planned shift in the energy mix to include renewable energy.

Gaps in knowledge & recommendations for further study

- » collection and reviewing of information from previous similar projects

Recommendations with regards to general field surveys

- » Desktop review on previous similar projects

5.3.3 Potential Negative Impact: Visual impact and impact on sense of place.

The proposed development is located near Danielskuil, a densely populated industrial area which will absorb the visual change that the proposed project brings about. Eskom's Olien Substation and high voltage power lines is a prominent feature when approaching town from the south R31 connecting Danielskuil with Kuruman and runs north-south through the town. The visual exposure for the Limestone PV1 Solar energy facility would largely be concentrated on the site itself and extend to the west, south and southeast.

Table 5-7- Scoping evaluation of potential visual impact and impact on sense of place

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Impact on rural sense of place	<u>Direct impacts:</u> » Change in rural sense of place <u>Indirect impacts:</u> » Limited indirect impacts	Local	N/A
Description of expected significance of impact Renewable energy projects do have the potential to impact on an area's sense of place in some instances, this can impact on the landscape of the surroundings. The findings of Visual Impact Assessment scoping report indicates that the impacts will be on primarily observers situated within a 3km radius of the facility and are expected to be moderate to high significance and can be mitigated.			
Gaps in knowledge & recommendations for further study » Collection of data on potential sensitive land uses and activities. » Review of Visual Impact Assessment Recommendations with regards to general field surveys » Site visit and interviews with local farmers, officials from the municipality and landowners in the area.			

5.4 Social Impacts during the Decommissioning Phase

The key potential negative impact which is associated with the decommissioning phase of the proposed Limestone PV1 Solar Energy Facility relates to the loss of employment and income for those people employed at the facility.

5.4.1 Potential Negative Impact: Loss of local employment and income

The most likely negative impact of the decommissioning phase is the loss of employment and income, which has a direct impact on the employees' households and the communities in which they live. The identified

impacts associated with the decommissioning phase can be managed through the implementation of downscaling programs and retrenchment packages.

Table 5-8-Impact assessment of Loss of income and employment

Impact: Decommissioning may result in the layoff of the people who worked during the operational phase.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Impact of loss of employment and income	<u>Direct impacts:</u> » Loss of employment and income <u>Indirect impacts:</u> » impact on the local economy and other business	Local - Regional	N/A
Description of expected significance of impact			
Given the relatively small number of people expected to be employed during the operation phase, the social impacts associated with decommissioning are likely to be limited/minimal. Impacts on individuals are however expected to be of high significance but can be managed through the implementation of downscaling programs and retrenchment packages.			
Gaps in knowledge & recommendations for further study			
» N/A			
Recommendations			
» N/A			

5.5 Cumulative Impacts

There are a number of proposed and authorised projects in the broader area, which result in the potential for cumulative impacts on the social environment.

5.5.2 Cumulative Impact on Local Economy

The development of renewable energy facilities and associated infrastructure, such as the proposed solar energy facility, will also create a number of socioeconomic opportunities for the Kgatelopele Local municipality. Positive cumulative opportunities include job creation, skill development and training, and downstream business opportunities. The potential cumulative benefits for the local and regional economies are thus associated with both the construction and operational phases of renewable energy projects and associated infrastructure and span a 20-25-year period. However, steps must be taken to increase employment opportunities for members of the surrounding communities and to support skill development and training programs.

Table 5-9- Cumulative impacts on Local economy

Impact: The establishment of renewable energy facilities and associated projects, such as the solar energy facility, in the the Kgatelopele Local Municipality will generate jobs, opportunities for skill development and training, and the creation of downstream business opportunities.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Cumulative benefits in terms of creating employment, business, and skill development opportunities for the local municipality	<u>Direct impacts:</u> » opportunities for employment, business and skill development for the local municipality <u>Indirect impacts:</u>	Local	N/A

	» Promote local economic development		
Description of expected significance of impact			
The establishment of the proposed Limestone PV1 solar energy facility has the potential to create a number of socio economic opportunities for the Kgatelopele Local Municipality which in turn will result in a positive social benefit. The cumulative impact includes the creation of employment, skills development, training opportunities and creation of downstream business opportunities.			
Gaps in knowledge & recommendations for further study			
» Collection of data on the number of solar energy facilities proposed and the timing of construction phase and likely job opportunities.			
Recommendations with regards to general field surveys			
» interviews with local municipality and site visit			

5.5.1 Potential Negative Impact: Cumulative Impact on Sense of Place

The potential cumulative impacts on the area's sense of place will be largely linked to potential visual impacts. The proposed Solar Energy Facility and associated infrastructure is unlikely to have a significant impact on the area's sense of place. The cumulative effects are also likely to be minimal. This will be confirmed during the assessment phase.

Table 5-10- Cumulative impacts on sense of place and the landscape

Impact: Visual impacts associated with the establishment of more than one solar energy facility and the potential impact on the area's rural sense of place and character of the landscape			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Cumulative impact on rural sense of place	<u>Direct impacts:</u> » Change in rural sense of place <u>Indirect impacts:</u> » Limited indirect impacts	Local	N/A
Description of expected significance of impact			
Renewable energy projects have the potential to have a cumulative impact on a community's sense of place. The potential sensitive visual receptors include the observers travelling along the secondary road traversing near the proposed development and residents of homesteads and farm dwellings within the 3km radius.			
Gaps in knowledge & recommendations for further study			
» Collection of data on location of sensitive visual receptors			
» Visual impact assessment to inform impact of sense of place			
Recommendations with regards to general field surveys			
» Site visit and interviews with local farmers, officials from the municipality and landowners in the area.			

5.7 “No Development” Alternative

The option of no-development poses a lost opportunity for South Africa to provide its consumers with renewable energy. This has a negative social cost for the nation. At a local level, this alternative would result in a lost opportunity in terms of job creation and socio-economic upliftment. However, it should be emphasized that the development of the suggested Limestone Solar PV 1 Solar Energy Facility is not a unique development. A significant number of renewable energy facilities are proposed in the Northern Cape Province and already established renewable energy facilities are already operational in certain parts of South Africa. Therefore, adopting the no development alternative would not comprise the renewable energy development across the Northern Cape Province and South Africa, but the socio-economic benefits

to the Kgatelopele Local Municipality and the communities will be lost. The impacts associated with this alternative will be assessed in the EIA Phase of the process.

Table 5-11- Scoping evaluation of potential impacts of the do nothing alternative

Impact: The no-development option would result in the lost opportunity for South Africa to improve energy security and assist to support with the development of clean, renewable energy.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Lost opportunity to produce clean, renewable energy and enhance energy security	<u>Direct impacts:</u> » No creation of employment business and skill development for the local municipality. » Potential impact on energy security <u>Indirect impacts:</u> » Limited indirect impacts	Local - National	N/A
Description of expected significance of impact			
The development of renewable energy project will increase energy security and have positive effects on the economy, employment, and chances for skill development. If Limestone PV1 Solar Energy facility is not developed these benefits will be lost.			
Gaps in knowledge & recommendations for further study			
» Assessment of impacts associated with the proposed development of the project in order to inform the significance of the do nothing alternative.			
Recommendations with regards to general field surveys			
» None			

5.6 Plan of study for SIA

In the absence of a protocol for social impact assessment at a national level, the proposed approach for the detailed SIA is based on the Guidelines for SIA, which the Western Cape Provincial Environmental Authorities (DEA&DP) approved in 2007. The Guidelines are based on acknowledged international best practices, such as IAIA Guidance for Assessing and Managing Social Impacts and the Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment's (1994) Guidelines and Principles for Social Impact Assessment (2015). The study approach will involve:

- » Gathering information and reviewing of reports and baseline socio-economic data on the area.
- » Identification of the elements involved in the construction and operational phase of the project, such as an estimate of total capital expenditure, number of employments created and breakdown of the employment opportunities in terms in skill levels.
- » Review from key findings of specialist studies that have an impact on SIA, such as the Visual Impact Assessment (VIA), Soils and Agricultural Potential Impact Assessment and Heritage Impact Assessment. The engagement with the impacted landowners that was initiated on the 09 November 2022 will be used as part of data gathering.
- » The project's construction, operational, and decommissioning phases all have potential implications, both positive and negative, which should be identified and evaluated.
- » Identification and assessment of key issues, as well as assessment of potential impacts (both positive and negative) associated with the project's construction, operational and decommissioning phases.
- » Identifying and assessing cumulative impacts (positive and negative).
- » Identifying appropriate measures to avoid, mitigate, enhance and compensate for potential social impacts.
- » Compilation of Social Impact Assessment (SIA) Report.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Key findings and Recommendations

This section presents the final key findings and recommendations of the SIA. The key findings and recommendations are based on a review of the basic information identified during the EIA Scoping process, as well as a review of the policy and planning documents relating to the proposed Limestone PV1 Solar Energy Facility. A review of selected specialist studies, as well as similar projects and literature, was conducted, and face to face interviews with adjacent and affected landowners. This section was compiled based on the results of the tasks that were completed during this study.

6.2 Key Findings

The main findings of the review of policy documents at all levels of government indicated that renewable energy, specifically solar energy, received strong support. The Republic of South Africa's White Paper on Energy Policy of 1998 stated that because renewable energy resources operate from an infinite resource base, such as the sun, renewable energy can increasingly contribute to long-term sustainable energy for future generations. This policy also emphasizes that, due to South Africa's unlimited renewable energy resource base, renewable energy applications such as solar and wind energy are more sustainable in terms of social and environmental costs.

Renewable energy applications are supported by policy documents at the provincial, district, and local levels. The use of renewable energies is not explicitly addressed in policy documents at the provincial, district, and local levels; however, the transition to low-carbon economies and the reduction of municipal areas' carbon footprint, as well as their support for alternative energies as an LED program, are mentioned. More employment opportunities are being created to reduce community vulnerabilities in order to ensure more resilient communities and a more sustainable economy.

According to a review of relevant policies and documents related to the energy sector, renewables such as solar energy and the establishment of these facilities are supported at all levels of government. The author of this SIA report believes that the establishment of the Limestone PV1 solar Energy Facility is supported by the policies and planning documents reviewed in this section at all levels of government.

6.3 Recommendations

The Social Impact Assessment conducted as part of the Scoping phase of the EIA process led to the following recommendations. To minimize the negative effects and maximize the beneficial effects, the suggested mitigation actions should be put into practice. The recommendations below are provided in light of the social assessment:

- » In terms of the impacts on employment, it is important to consider that there are not many chances for unskilled and semi-skilled workers in the project area, which could lead to rivalry among the local unemployed. Therefore, bringing in outside labour is likely to make it harder for locals to find work, cause unrest, and put demand on the services that are already provided. To maximize the beneficial effects of job development in the area, local labour should be used. Wherever possible, local firms should be involved in the construction process. To make sure that the local communities benefit, it is essential to

use local workers as far as possible. Thus, it is preferable to engage local labour whenever possible during the project's construction and operation phases.

- » The environmental authorities should take into account the potential visual consequences of the project, which were covered in the Visual Impact Assessment (VIA).
- » Identified impacts should be assessed in detail in the EIA Phase of the process and appropriate mitigation and enhancement measures recommended.

6.3 Conclusion

This SIA Scoping level study was focused on gathering information to help understand the current social environment related to the proposed Limestone PV1 solar energy facility, as well as identifying and evaluating social issues and potential social impacts related to the development of such a nature. The environmental assessment methodology for impacts evaluation at the scoping phase and pertinent criteria were utilized to assess the importance of the potential impacts and identify suitable mitigation and enhancement strategies for the detected impacts. In the EIA phase of the process, it is also recommended that further research be done in order to fill in knowledge gaps.

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