SCSC SOLAR PV FACILITY AND ASSOCIATED INFRASTRUCTURE FOR THE BAGATLA MINE

Limpopo Province and North West Province

Social Assessment

August 2022

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REPORT DETAILS

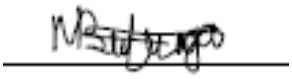
Title	:	Social Impact Assessment (SIA) Scoping Report: SCSC solar PV facility and associated Infrastructure
Authors	:	Savannah Environmental (Pty) Ltd Nondumiso Bulunga
External Peer Review	:	Tony Barbour
Client	:	Main Street 1886 Proprietary Limited
Report Revision	:	Revision 0
Date	:	August 2022

When used as a reference this report should be cited as: Savannah Environmental (2022) Social Impact Assessment (SIA) Report for the SCSC solar PV facility, Limpopo Province and North West Province.

SPECIALIST DECLARATION OF INTEREST

I, Nondumiso Bulunga, 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.



Nondumiso Bulunga
Name

Signature

10 August 2022
Date

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ACRONYMS

B-BBEE	Broad-Based Black Economic Empowerment
CLO	Community Liaison Officer
DFFE	Department of Forestry, Fisheries and the environment
DoE	Department of Energy
DM	District Municipality
EA	Environmental Authorisation
EAP	Economically Active Population
ECA	Environment Conservation Act (No. 73 of 1989)
ECO	Environmental Control Officer
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EPC	Engineering, Procurement and Construction
GDP	Gross Domestic Product
GDP-R	Gross Domestic Product per Region
GGP	Gross Geographic Product
GHG	Greenhouse Gas
GNP	Gross National Product
GNR	Government Notice
HDI	Historically Disadvantaged Individuals
I&AP	Interested and Affected Party
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IEP	Integrated Energy Plan
IFC	International Finance Corporation
IRP	Integrated Resource Plan
km	Kilometre
kV	Kilovolt
LED	Local Economic Development
LM	Local Municipality
NEMA	National Environmental Management Act (No. 107 of 1998)
NDP	National Development Plan
O&M	Operation and Maintenance
PGDS	Provincial Growth and Development Strategy
PICC	Presidential Infrastructure Coordinating Committee
PSDF	Provincial Spatial Development Framework
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SIP	Strategic Infrastructure Project
SKA	Square Kilometre Array
SWOT	Strengths, Weaknesses, Opportunities and Threats
UNESCO	United Nations Educational, Scientific and Cultural Organisation

1. INTRODUCTION AND PROJECT DESCRIPTION

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and associated infrastructure with a contracted capacity of up to 100MW.

The purpose of the proposed project is to generate electricity for exclusive use by the Siyanda Mine, following which any excess power produced will be distributed to the national grid, if applicable. The construction of the PV facility aims to reduce the Siyanda Mine's dependency on direct supply from Eskom's national grid for operation activities, while simultaneously decreasing the mine's carbon footprint.

A preferred project site with an extent of ~1138ha and a development area of 574 ha has been identified by **Main Street 1886 Proprietary Limited** as a technically suitable area for the development of the Solar PV Facility. The study area is located on Portion 4 of Farm Grootkuil 409. The project site falls within the Thabazimbi Local Municipality within the Waterberg District Municipality in the Limpopo Province. The site is located ~6.5km west of the town of Northam and is accessible via the Swartklip Road which branches off the R510 provincial route.

The grid connection for the facility will consist of a facility substation and transmission lines into the existing mine substations (Mortimer, Fridge and Ivan). The grid connection infrastructure is located within an assessment corridor of 200m wide located in a band along the south-west boundary of the project site and traverses Portion 3, Portion 4, Portion 5 of the Farm Grootkuil 409, Portion 1, Portion 2 of Farm Zwartklip 405, Portion 0 of Farm Spitskop 410 and Portion 0 of Farm Turfbult 404 within the North West Province.

Nondumiso Bulunga of Savannah Environmental (Pty) Ltd has been appointed as the independent social consultant responsible for undertaking a Social Impact Assessment (SIA) as part of the EIA process being conducted for the project.

1.1 Project Description

The SCSC solar PV Facility is located on the following properties:

PV Facility, including associated facility and grid connection infrastructure	**Portion 3 of Farm Grootkuil 409** **Portion 4 of Farm Grootkuil 409** **Portion 5 of Farm Grootkuil 409** **Portion 0 of Farm Spitskop 410** **Portion 0 of Farm Turfbult 404** **Portion 1 of Farm Zwartklip 405** **Portion 2 of Farm Zwartklip 405**

Infrastructure associated with the solar PV facility will include:

- 100MW Solar PV array comprising PV modules and mounting structures.
- Inverters and transformers.
- Cabling between the project components.
- Battery Energy Storage System (BESS).
- On-site facility substation and power lines between the solar PV facility and the Eskom substation.

» Site offices, Security office, operations and control, and maintenance and storage laydown areas.
» Access roads, internal distribution roads

Grid connection solution

The power generated by the solar PV facility will be transferred to the three step up transformers at the on-site/plant substation. Power will then be delivered from each step-up transformer as follows:

» two 6.6 km, 33 kV power lines to the Mortimer substation with four step down transformers (33/6.6 kV; 10 MVA),
» two 4.7 km, 33 kV power lines to the Fridge substation with two step down transformers (33/6.6 kV; 10 MVA),
» two 2.9 km, 33 kV power lines to the Ivan substation with three step down transformers (33/11 kV; 10 MVA),
» One 132kV transmission line to the south west area of the project site where a new substation (to be assessed through Environmental Impact Assessment (EIA) process) for the furnace is proposed to be built.

1.2 Details of the Independent Specialist

This SIA Report has been undertaken by Nondumiso Bulunga of Savannah Environmental.

» **Nondumiso Bulunga** – holds a Master's degree in advanced Geographical Information System and has eight years of experience in the environmental field. Her key focus is on environmental and social impact assessments, public participation, stakeholder engagement environmental management screening as well as mapping using ArcGIS for a variety of environmental projects.

» **Tony Barbour** is a social specialist who has undertaken in the region of 230 SIA's, including approximately 100 SIA's for a renewable energy projects, including wind and solar energy facilities. Al of the SIAs have included as assessment of socio-economic issues. In addition, he is the author of the Guidelines for undertaking SIA's as part of the EIA process commissioned by the Western Cape Provincial Environmental Authorities in 2007. These guidelines have been used throughout South Africa. Tony has also undertaken a number of SIAs for PV facilities within the North West Province and is therefore familiar with the local socio-economic conditions.

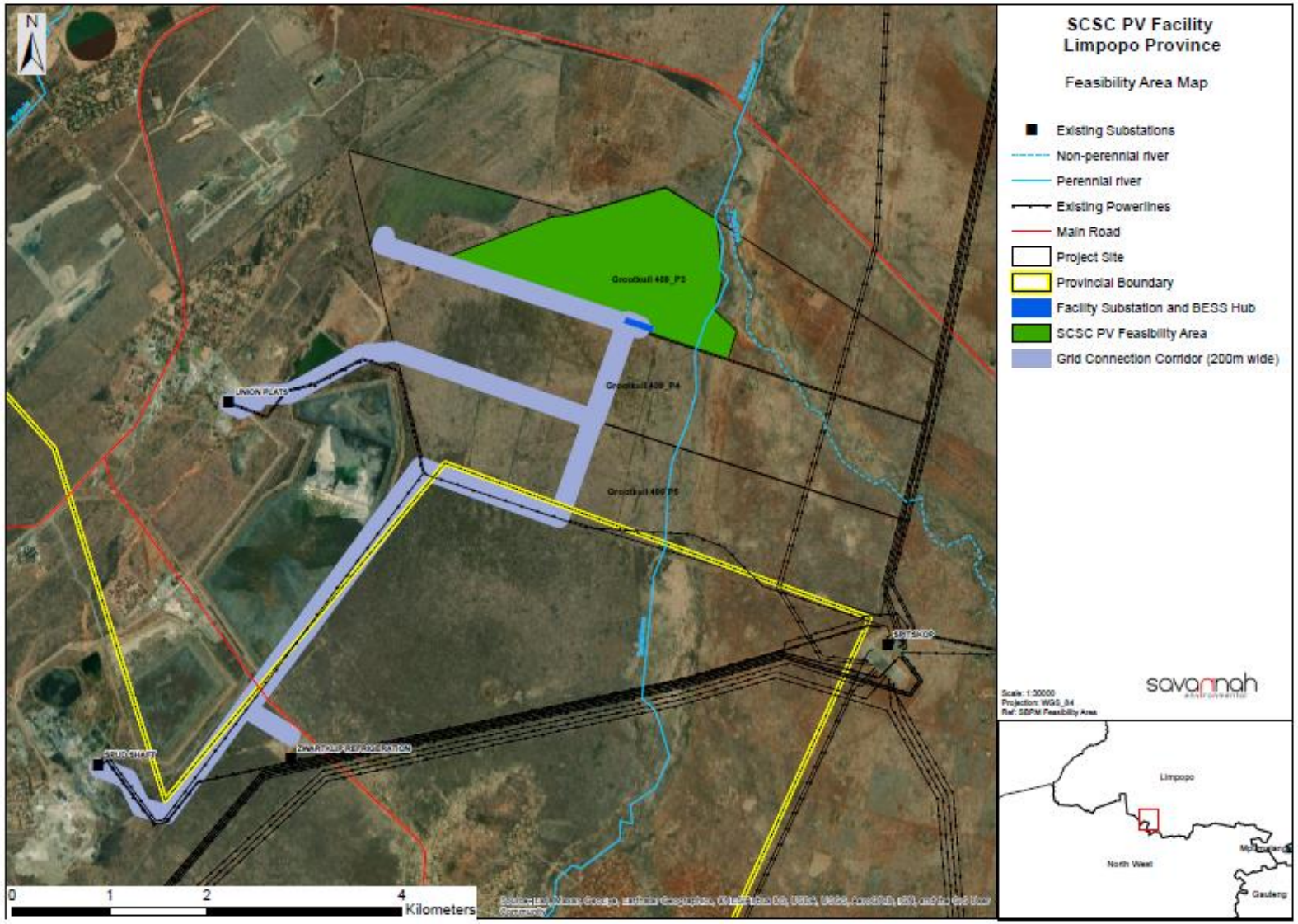


Figure 1.1: Locality map illustrating the location of the SCSC solar PV Facility, Limpopo Province.

1.3 Structure of the SIA Report

This SIA 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 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 **Table 1-1**.

Table 1-1: Summary of where the requirements of Appendix 6 of the 2014 NEMA EIA Regulations (GNR 326), as amended, are provided within this Specialist Report.

	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 2
(cA)	An indication of the quality and age of base data used for the specialist report.	Section 4
(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 2
(e)	A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used.	Section 2
(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 alternatives.	Section 4 Section **Error! Reference source not found.**
(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 2
(j)	A description of the findings and potential implications of such findings on the impact of the proposed activity or activities.	Section **Error! Reference source not found.**
(k)	Any mitigation measures for inclusion in the EMPr.	Appendix A
(l)	Any conditions for inclusion in the environmental authorisation.	Section 6
(m)	Any monitoring requirements for inclusion in the EMPr or environmental authorisation.	Appendix A
(n)	A reasoned opinion – (i) Whether the proposed activity, activities or portions thereof should be authorised. (iA) Regarding the acceptability of the proposed activity or activities. (ii) If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures.	Section 6
(o)	A description of any consultation process that was undertaken during the course of preparing the specialist report.	Section 2

	Requirement	Location in Report
(p)	A summary and copies of any comments received during any consultation process and where applicable all responses thereto.	N/A
(q)	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. METHODOLOGY AND APPROACH

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 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 Report provides a snapshot of the current social setting within which the SCSC solar PV Facility is proposed. It provides an overview of the manner and degree to which the current status quo is likely to change or be impacted 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.

An overview of the assessment methodology utilised as part of this SIA is provided below.

The SIA process comprised the following:

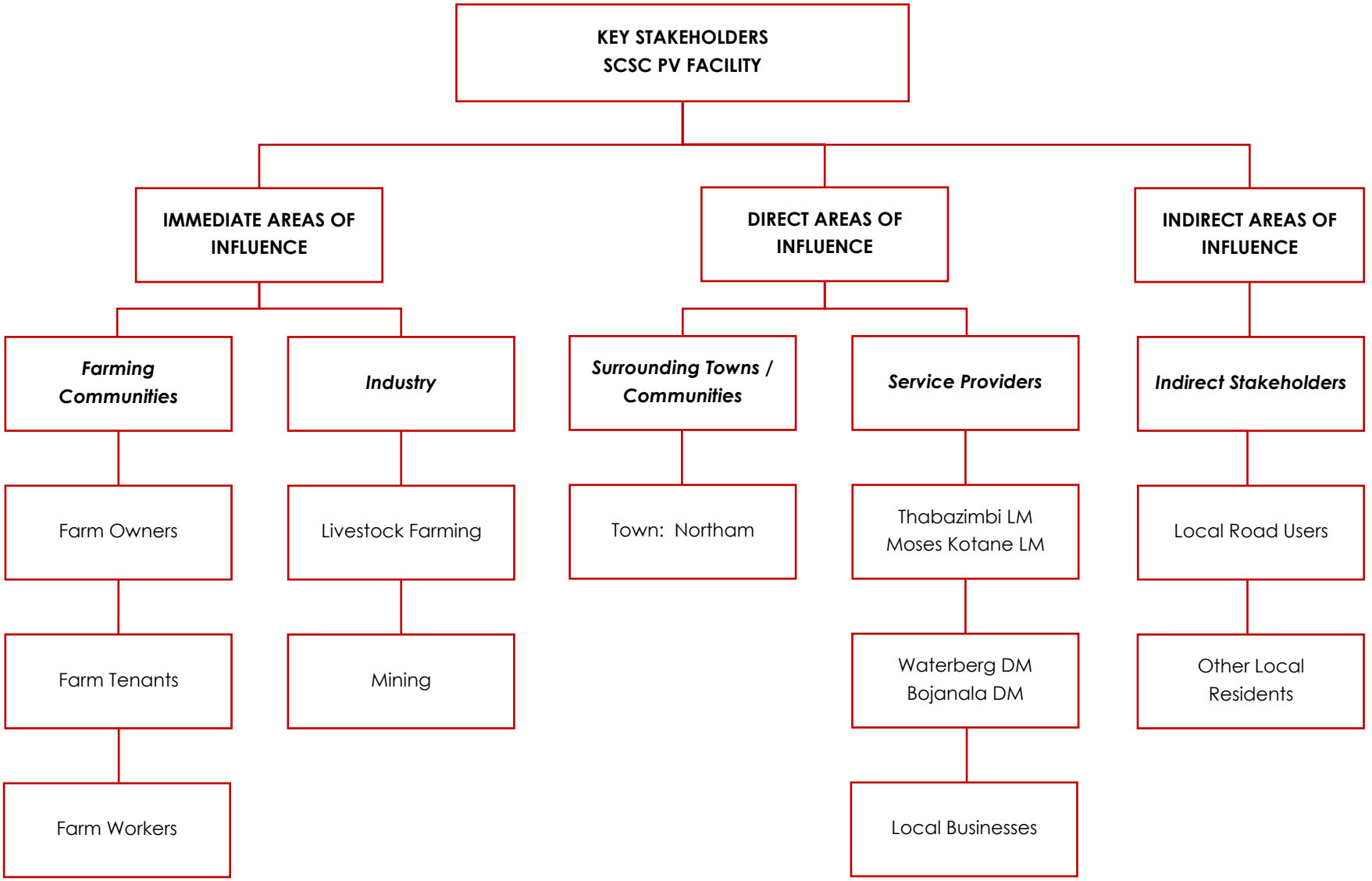
- Collection and review of existing information, including national, provincial, district, and local plans, policies, programmes, census data, and available literature from previous studies conducted within the area. Project specific information was obtained from the project proponent.
- Identification of potential direct, indirect and cumulative impacts likely to be associated with the construction, operation, and decommissioning of the proposed project. Impacts associated with construction can also be expected to be associated with the decommissioning phase (however, to a lesser extent as the project site would have previously undergone transformation and disturbance during construction)
- Preparation of a SIA Report for inclusion in the Scoping Report to be prepared for the project.

2.1.1. Stakeholder Identification and Analysis

Stakeholders are defined as: "A*ny group or organisation which may affect or be affected by the issue under consideration*" (UN, 2001: 26).

These may be directly or indirectly impacted and may include organisations, institutions, groups of people or individuals, and can be at any level or position in society, from the international to regional, national, or household level (Franke & Guidero, 2012).

Stakeholder analysis involves the identification of affected or impacted people and their key grouping and sub-groupings (IFC, 2007). Identifying stakeholders that are directly and indirectly affected by the project is important to determine who might be impacted by the development and in what way. The key stakeholders in the area proposed for development have been identified, grouped / sub-grouped and described (as per Ilse Aucamp SIA methodology and Aucamp et al, 2011). There are immediate, direct and indirect areas of influence to the proposed development. Affected stakeholders comprise sensitive social receptors that may potentially be affected by the proposed development based on their location.


KEY STAKEHOLDERS
SCSC PV FACILITY
IMMEDIATE AREAS OF INFLUENCE
DIRECT AREAS OF INFLUENCE
INDIRECT AREAS OF INFLUENCE
Farming Communities
Industry
Surrounding Towns / Communities
Service Providers
Indirect Stakeholders
Farm Owners
Livestock Farming
Town: Northam
Thabazimbi LM
Moses Kotane LM
Local Road Users
Farm Tenants
Mining
Waterberg DM
Bojanala DM
Other Local Residents
Farm Workers
Local Businesses

2.1.2. Collection and Review of Existing Information

Existing desktop information that 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 maps and layouts.
- Google Earth imagery.
- A description of the project (as provided by the project proponent).
- Responses to questions posed to the project proponent regarding employment and social upliftment and local economic development opportunities (as provided by the project proponent).
- Census Data (2011), and the Local Government Handbook (2019).
- 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.

2.2. Limitations and Assumptions

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

- It was assumed that information provided by Main Street 1886 Proprietary Limited and Savannah Environmental team was accurate and that the technical specifications of the Project and site selection are in accordance with the relevant requirements.
- This report and assessment are dependent on the accuracy of the publicly available secondary information such as Statistics South Africa (StatsSA,2011).
- This SIA Report was prepared based on information that 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. Additional information available from the public participation undertaken during the Scoping process will be included and considered within the final report, where relevant.
- Some of the project projections reflected in this SIA 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 and 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 Report.

2.3. Collection of Primary Data

Primary data was collected in the form in the form of meeting notes from Focus Group Meetings (FGMs) conducted with key stakeholders as part of the Public Participation process being conducted for the Scoping process (refer to **Error! Reference source not found.**), and from interviews conducted with identified stakeholders and affected landowners (refer **Error! Reference source not found.**).

Table 2-1 Overview of FGMs conducted as part of the Public Participation process being conducted for the Scoping process.

FGM Date & Time	Stakeholder Group	Summary of Matters Raised
Wednesday, 15 June 2022 at 09h00	Local and District Officials	No matters pertaining to social issues were raised.
Wednesday, 15 June 2022 at 11h00	Key Stakeholders	No matters pertaining to social issues were raised.
Wednesday, 15 June 2022 at 14h00	Representative Officials	Employment numbers were questioned especially relating to the number of people on site and the pressure on sewage.

The local municipality Bojanala & Waterberg were engaged, and their comments obtained as part of the EIA process being undertaken for the project. Should any comments or concerns be raised from a social perspective regarding the project during the public participation process of the project, these will be included and addressed as part of the final SIA to be submitted to DFFE for decision.

Methodology for Assessing Impact Significance.

The impact assessment was undertaken using a matrix selection process, the most used methodology, for determining the significance of potential environmental impacts/risks. This methodology considers two aspects for assessing the potential significance of impacts, namely occurrence and severity, which are further sub-divided into the following categories in Table 2-2.

Table 2-2: Impact assessment factors

Occurrence		Severity	
Probability of occurrence	Duration of occurrence	Scale/extent of impact	Magnitude of impact

The following definitions were used for the methodology outlined in Table 2.3

- **Magnitude** is a measure of the degree of change in a measurement of analysis and is classified as none/negligible, low, moderate or high;
- **Scale/ Geographic extent** refers to the area that could be affected by the impact and is classified as site, local, regional, national, or international;
- **Duration** refers to the length of the time over which an environmental impact may occur: i.e. immediate/ transient, short-term, medium-term, long-term or permanent; and
- **Probability** of occurrence is a description of the probability of the impact actually occurring as improbable (< 5% chance) low probability (5% - 40% chance), medium probability (40% - 60% chance), high probable (most likely, 60% - (0% chance) or definite (Impact will definitely occurs).

Table 2.3: Rating scales utilized to evaluate these criteria for each impact

Value	Description
Magnitude	
10	Very high/ unknown
8	High

6	Moderate
4	Low
2	Minor
Duration	
5	Permanent (impact continues post closure)
4	Long-Term (>15 years) (Impact ceases after decommissioning and closure)
3	Medium-term (5-15 years) (Impact ceases after the operational phase)
2	Short-term (2-5 years) (impact ceases after the construction phases)
1	Immediate (0-1 year)
Scale/ Geographic Extent	
5	International
4	National
3	Regional
2	Local
1	Site Only
0	None
Probability	
5	Definite/ Unknown (impact will definitely occur)
4	Highly Probable (most likely, 60% - 90% chance)
3	Medium Probability (40% - 60% chance)
2	Low Probability (5% - 40% chance)
1	Improbable (less than 5% chance)
0	None

Significance Points = (Magnitude + Duration + Scale/ Exten) x Probability.

Table 2-4: Significance of impact based on point allocation

Points	Significance	Description
SP>60	High environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30-60	Moderate environmental significance	An impact or benefit which is sufficiently important to require management, and which could have an influence on the decision unless it is mitigated.
SP<30	Low environmental significance	Impacts with little real effect and which will not have an influence on or require modification of the project design.

The summarizing of assessment impacts in a prescribed table format including the rating values as per above criteria. Measures for inclusion in the Environmental Management Programme

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. 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 pieces of documentation were reviewed as part of this legislation and policy review process:

3.1 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)
» National Energy Act (No. 34 of 2008)
» Integrated Energy Plan (IEP) (2015)
» National Development Plan (NDP) 2030 (2012)
» Strategic Infrastructu0s (SIPs)

3.2 Provincial Policy and Planning Context:

» Limpopo Spatial Development Framework (LSDF) 2015
» Limpopo Development Plan (2015-2019)
» North West Provincial Development Plan (PDP) 2030 (2013)
» North West Provincial Growth and Development Strategy (PGDS) 2004 – 2014
» Renewable Energy Strategy for the North West Province (2012)
» North West Provincial Spatial Development Framework (PSDF) (2017)

3.3 Local Policy and Planning Context:

» Integrated Development Plan (IDP) of the Waterberg District Municipality 2020-2021
» Integrated Development Plan (IDP) of the Thabazimbi Local Municipality 2019/2020
» Strategic Environmental Assessment (SEA) for Wind and Solar energy in South Africa (CSIR)
» Independent Power Producers Procurement Programme (IPPPP)
» Integrated Development Plan (IDP) of the Bojanala Platinum District Municipality 2022-2023
» Integrated Development Plan (IDP) of the Moses Kotane Local Municipality 2021 - 2022

3.4 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 PV facility is considered integral to contributing towards social upliftment and economic development, even if only limited in extent.

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

Table 3.1: Relevant national legislation and policies for the SCSC solar PV Facility

Relevant legislation or policy	Relevance to the proposed project
Constitution of the Republic of South Africa, 1996	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. 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.
National Environmental Management Act (No. 107 of 1998) (NEMA)	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. 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. The need for responsible and informed decision-making by government on the acceptability of environmental impacts is therefore enshrined within NEMA.
National Development Plan 2030 (2012)	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. 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: » 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. The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy. The development of the grid connection infrastructure is considered to be relevant to the plan due to the need of the infrastructure for economic growth within the Thabazimbi and Moses Kotane Local Municipality municipal area.
White Paper on the Energy Policy of the Republic of South Africa (1998)	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. South Africa has an attractive range

Relevant legislation or policy	Relevance to the proposed project
	of cost-effective renewable resources, taking into consideration social and environmental costs. Government policy RE is thus concerned with meeting the following challenges: » Ensuring that economically feasible technologies and applications are implemented. » Ensuring that an equitable level of national resources is invested in renewable technologies, given their potential and compared to investments in other energy supply options. » Addressing constraints on the development of the renewable industry. 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. The White Paper on Energy Policy therefore supports the advancement of RE sources and ensuring energy security through the diversification of supply.
National Energy Act (No.34 of 2008)	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: » 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. 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.
Integrated Energy Plan (IEP) (2016)	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. The IEP is a multi-faceted, long-term energy framework which has multiple aims, some of which include:

Relevant legislation or policy	Relevance to the proposed project
	» To guide the development of energy policies and, where relevant, set the framework for regulations in the energy sector. » To guide the selection of appropriate technologies to meet energy demand (i.e. the types and sizes of new power plants and refineries to be built and the prices that should be charged for fuels). » To guide investment in and the development of energy infrastructure in South Africa. To propose alternative energy strategies which are informed by testing the potential impacts of various factors such as proposed policies, introduction of new technologies, and effects of exogenous macro- economic factors.
National Development Plan 2030 (2012)	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. 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: » 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. The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy. The development of the grid connection infrastructure is considered to be relevant to the plan due to the need of the infrastructure for economic growth within the City of Matlosana Local Municipality municipal area.
Strategic Infrastructure Projects (SIPs)	The Presidential Infrastructure Coordinating Committee (PICC) are integrating and phasing investment plans across 18 Strategic Infrastructure Projects (SIPs) which have the following 5 core functions: » To unlock opportunity. » Transform the economic landscape. » Create new jobs. » Strengthen the delivery of basic services. » Support the integration of African economies. A balanced approach is being fostered through greening of the economy, boosting energy security, promoting integrated municipal infrastructure investment, facilitating integrated urban development, accelerating skills development, investing in rural development and enabling regional integration. SIP 8 of the energy SIPs supports the development of RE projects as follow: » SIP 8: Green energy in support of the South African economy:

Relevant legislation or policy	Relevance to the proposed project
	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 2010) and supports bio-fuel production facilities. The development of the proposed project is therefore also aligned with SIP 8 as it constitutes a green energy initiative which would contribute clean energy in accordance with the IRP 2010 – 2030.

3.5 Provincial Policies

This section provides a brief review of the most relevant provincial policies. The proposed SCSC solar PV facility 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 the SCSC solar PV Facility

Relevant policy	Relevance to the proposed project
Limpopo Spatial Development Framework (LSDF) 2015	The LSDF is used as a tool for forward planning to direct decisions within the domain of land development throughout the province. In broad terms, the LSDF: » Indicates the spatial implications of the core development objectives outlined in the PGDS; » Serves as a spatial plan that facilitates local economic development (LED); » Lays down strategies, proposals and guidelines as these relate to overall sustainable development; » Facilitates cross-boundary co-operation between municipalities and provinces; » Serves as a manual for integration and standardisation of the planning frameworks across all spheres of provincial government; and » Informs district municipalities within the province regarding the location and nature of the physical development.
Limpopo Development Plan (2015-2019)	The Limpopo Development Plan (2015-1019) is based on lessons learnt from previous Limpopo Strategies and Plans, on the National Development Plan (NDP), the MTSF Outcomes, the State of the Nation and Province Addresses. The National Planning Commission believes that the following capital investment are relevant to Limpopo, and should be prioritised: » The upgrading of informal settlements; » Public transport infrastructure and systems; » The construction of a new coal line to unlock coal deposits in the Waterberg; » Development of a number of key new water schemes to supply urban and industrial centres; and » Procuring about 20 000 MW of renewable electricity by 2030.
North West Provincial Development Plan (PDP) 2030 (2013)	The North West Provincial Development Plan (PDP), 2030, is largely based on, and intended to apply the objectives of, the National Development Plan (NDP) 2030. The overall targets of the PDP have been identified as follows: By 2030: » Eliminate income poverty: reduce the percentage of the population living in poverty from 46% to 0% in 2030. » Reduce inequality: the Gini coefficient should fall from 0.61 to 0.53. » The targets for poverty reduction and the GINI coefficient compliments the national targets set out for the elimination of poverty and reduction of inequality. » The unemployment rate should fall from 24% in 2010 to 14% by 2020 and to 6% by 2030. This requires an additional 815 000 jobs. Total employment should rise from 748 000 to 1 563 000. » The NDP projects that total employment should rise from 13 million to 24 million in South-Africa. 7% of additional jobs that has to be created will be located in the North West Province. By 2030 the North West will be responsible for 6.5% of employment in South-Africa. » The provincial Gross Value Added (GVA) should increase by 2.9 times in real terms. Such growth will require an average annual Gross Value Added (GVA) growth of 5.4%. The development of Roan PV has the potential to contribute towards a number of the targets set by the PDP, including: » Job creation and increased income, which would have a positive impact on the current unemployment rate, standard of living, levels of inequality, and poverty levels within the Province. » Contribute towards the capita income, and improve on labour force participation rates. Production of clean energy.

Relevant policy	Relevance to the proposed project
North West Provincial Growth and Development Strategy (PGDS) 2004 - 2014	The North West Provincial Growth and Development Strategy (PGDS) provides a framework for integrated and sustainable growth and economic development for the province and its people. Challenges facing the Province can be summarised as follows: the Province is mostly rural in nature; has a low population density, and relative inadequate infrastructure, especially in the remote rural areas; has inherited an enormous backlog in basic service delivery and maintenance that will take time to eradicate; the population is predominantly poor with high levels of illiteracy and dependency that seriously affect their productivity and ability to compete for jobs; is characterised by great inequalities between the rich and poor as well as disparities between urban and rural; is faced with HIV / AIDS as a social and economic challenge; available resources are unevenly distributed, and there is limited potential for improved delivery of services and growth. From the above, job creation and poverty eradication together with the low level of expertise and skills; stand out as the greatest challenges to be resolved within the Province. Goals and objectives of the PGDS are to fight poverty and unemployment, improve the low level of expertise and skills which are classified as both immediate and long term goals and require primary goals for sustained growth and economic development. The proposed solar farm will contribute to employment creation and skills development which is in line with the goals and objectives of the North West PGDS. The North West PGDS aims at building a sustainable economy to eradicate poverty and improve social development. The proposed solar farm will contribute to growth and development of the local area by expanding the economic base and creating employment opportunities.
North West Provincial Spatial Development Framework (2017)	As per the North West Provincial Spatial Development Framework (PSDF) (2017) electricity within the province is primarily provided by Eskom to re-distributors – mainly municipalities (10%), commercial (5%), agriculture (5%), mining (30%), industrial (30%) and Residential (20%). Electricity for supply to the North West Province is mostly generated by Eskom's Matimba coal-fired Power Station in Limpopo which will in future be augmented by Eskom's Medupi coal-fired Power Station. According to the North West PSDF the proposed project site is located within the Mahikeng Distribution Area, which is characterised by minor developments, including Commercial, Industrial, and Major Electrification; and has a projected growth of 125MW (Eskom, 2015). Eskom's Transmission Development Plan 2015 – 2024 represents the transmission network infrastructure investment requirements over the 10 year period between 2015 and 2024. Projects proposed for the North West Province for the next 10 years include the introduction of 400kV power lines and transformation to support or relieve the existing networks. Five transmission power corridors have been identified as critical to providing a flexible and robust network that could respond to meet the needs of future IPPs and IRP requirements.

3.6 District and Local Municipalities Policies

The strategic policies at a district and local level have similar objectives for the respective areas, namely, to accelerate economic growth, create jobs, and uplift communities. The proposed SCSC solar PV Facility 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 the SCSC solar PV Facility

Relevant policy	Relevance to the proposed project
Integrated Development Plan (IDP) of the Waterberg District Municipality 2020-2021	The Waterberg Municipality seeks to the best energy hub and ecotourism destination in Southern Africa. The key economic sectors with the Waterberg District Municipality are mining, electricity/water, services, trade/catering and agriculture, with mining making the biggest contribution to the GDP. The land use pattern is fairly natural within the district, with most of the mining operations concentrated on the periphery, whereas the central area is mostly characterised by the tourism and game industry. Waterberg District Municipality adopted a 2020/21 IDP Review Framework and Process Plan, which informed all 5 local municipality's process plans and it was adopted by the Municipal Council. The main purpose of the process plan is to integrate all the processes and activities, institutional arrangements and time frames of the various sector departments, NGOs, parastatal etc. The Framework/Process plan was adopted by Council in 2019. The process plan will guide the municipality in terms of Legislative requirements and the timeframes Process plans should: » Guide decision making in respect of service delivery and public sector investment » Inform budgets and service delivery programs of various government departments and service agencies » Coordinate the activities of various service delivery agencies within Waterberg District Municipality.
Integrated Development Plan (IDP) of the Thabazimbi Local Municipality 2019/2020	The IDP states the following as priority development issues for the municipal area: » Unemployment » Poverty alleviation » Services delivery » HIV/AIDS » Local Economic Development » Good governance » Institutional Development » Skills Development » Financial Viability Municipal has Local Economic Development project such as: » Support to small-scale mining » Poultry projects » Development of market stalls for informal traders at Northam and Thabazimbi » Establishment of a database of local SMMEs
Renewable Energy Strategy for the North West Province (2012)	In 2012 the North West Province's then Department of Economic Development, Environment, Conservation and Tourism (DEDECT) developed the Renewable Energy Strategy for the North West Province. The strategy was developed in response to the need of the North West Province to participate meaningfully within South Africa's RE sector. The RE strategy aims to improve the North West Province's environment, reduce its contribution to climate change, and alleviate energy poverty, whilst promoting economic development and job creation whilst developing its green economy. According to the strategy in the North West Province consumes approximately 12% of South Africa's available electricity, and is rated as the country's fourth largest electricity consuming province. This is mainly due to the high demand of the electrical energy-intensive mining and related industrial sector, with approximately 63% of the electricity supplied to the province being consumed in its mining sector.

Relevant policy	Relevance to the proposed project
	While the strategy recognises that South Africa has an abundance of RE resources available, it is cognisant of the fact that the applicability of these RE resources depend on a number of factors and as a result are not equally viable for the North West Province. The RE sources that were identified to hold the most potential and a competitive strength for the North West Province are Solar Energy (photovoltaic as well as solar water heaters), Municipal Solid Waste, hydrogen and fuel cell technologies, bio-mass, and energy efficiency. The advantages and benefits for the North West Province associated with the implementation and use of RE technologies include: » Provision of energy for rural communities, schools and clinics that are far from the national electricity grid. » Creation of an environment where access to electricity provides rural communities with the opportunity to create an economic base via agricultural and home-based industries and Small, Medium and Micro Enterprises (SMMEs) in order to grow their income-generating potential. » The supply of water within rural communities. » It would result in less time taken for the collection of wood and water, thus improving the quality of life within communities and specifically for women. » Improved health through the reduced use of fuelwood as energy source for cooking and heating that causes respiratory and other hazards. » Solar water heating for households in urban and rural settings, reducing the need for either electricity (in urban settings) and fuelwood (in rural settings) to heat water, thus lowering our National peak demand and conservation of woodlands in a sustainable manner. » Large-scale utilisation of renewable energy will also reduce the emissions of carbon dioxide, thus contributing to an improved environment. » The fact that RE go hand-in-hand with energy efficiency, it will result in additional financial benefit and the need for smaller RE systems. » The development of a strong localised RE industry within the NWP holds substantial potential for Black Economic Empowerment (BEE) and job creation within the Province. » The establishment of a strong RE base in the North West Province, especially in the manufacturing of fuel cells could stimulate the market for Platinum Group Metals (PGM), which would in turn help the local mining sector. This is due to RE sources having considerable potential for increasing security of supply by diversifying the energy supply portfolio and increasingly contributes towards a long-term sustainable energy future. In terms of environmental impacts, RE results in the emission of less GHGs than fossil fuels, as well as fewer airborne particulates, and other pollutants. Furthermore, RE generation technologies save on water consumption in comparison with coal-fired power plants.
Integrated Development Plan (IDP) of the Bojanala Platinum District Municipality 2022-2023	According to Bojanala DM IDP issues and challenges facing key agricultural sector in district include: » Limited agro-processing facilities and value adding to products » Limited production of specialized agricultural products such as spices, herbs, indigenous teas. » Increasing pressure for other forms of development on high potential agricultural land. » Large proportion of district population residing in rural areas with limited access to basic infrastructure. » Limited entrepreneurial skills and appropriate economic infrastructure in rural areas.

Relevant policy	Relevance to the proposed project
	» Insufficient information and telecommunication infrastructure in rural areas. » Extensive areas of land degradation in many parts of the district. » Limited access to water and support/advisory services for small scale farmers. » Limited harnessing of the agriculture & agro-processing value chain One of the single biggest challenges facing the economy of the district is economic diversification. The district economy is to a large extent centred on the production of the Platinum Group Metals (PGM), with tourism, manufacturing, and agriculture playing important but lesser roles in the economy. The district goal is to promote the development in key economic sectors such as agro processing, export orientated manufacturing, and tourism to position the area as a competitive regional and international producer of high quality and innovative products and services.
Integrated Development Plan (IDP) of the Moses Kotane Local Municipality 2021 - 2022	Moses Kotane is classified as Category B4 Local Municipality which is mainly rural in nature, depended on grant funding and with communal tenure. Such municipalities have one or two towns in their area. It is one of the five local municipalities constituting the Bojanala Platinum District Municipality (BPDM) classified as category C1. Moses Kotane Local Municipality is bordered by: 1. Thabazimbi Local Municipality in the North, which is situated in Waterberg District Municipality of the Limpopo Province, 2. Madibeng Local Municipality in the East (Bojanala Platinum District Municipality, NW) 3. Rustenburg Local Municipality in the East (Bojanala Platinum District Municipality, NW) 4. Kgetleng river Local Municipality in the East (Bojanala Platinum District Municipality, NW) and 5. Ramotshere Moiloa Local Municipality in the West (Ngaka Modiri Molema District Municipality, NW)

3.7 Conclusion

The review of relevant legislation, policies and documentation pertaining to the proposed development indicates that the establishment of the PV Facility and associated grid connection infrastructure 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.

4. SOCIAL PROFILE

The SCSC solar PV facility including associated facility infrastructure is proposed on Portion 4 of Farm Grootkuil 409 and comprise several arrays of PV panels and associated infrastructure with a contracted capacity of up to 100MW. The grid connection infrastructure is located within an assessment corridor of 200m wide located in a band along the south-west boundary of the project site and traverses Portion 3, Portion 4, Portion 5 of the Farm Grootkuil 409, Portion 1, Portion 2 of Farm Zwartklip 405, Portion 0 of Farm Spitskop 410 and Portion 0 of Farm Turfbult 404 within the North West Province.

A facility development footprint, which will include the PV facility, BESS will be identified within the development area considered in the Scoping phase (refer to **Table 4-1**) and assessed in detail in the EIA phase of the process.

Table 4-1: Spatial Context of the study area for the development of the SCSC solar PV Facility

Province	Limpopo Province and North West Province
District Municipality	Waterberg District Municipality and Bojanala Platinum District Municipality
Local Municipality	Thabazimbi Local Municipality (TLM) and Moses Kotane Local Municipality (MKLM)
Ward number(s)	5 (TLM) & 7 (MKLM)
Nearest town(s)	Northam
Preferred access	via the Swartklip Road which branches off the R510 provincial road on the south-eastern side of the SCSC development area

This Chapter provides an overview of the socio-economic environment of the province, DM, and LM within which the SCSC solar PV Facility is proposed and provides the socio-economic basis against which potential issues can be identified.

4.1 Limpopo Province and North West Province

Limpopo, South Africa's northernmost province, borders onto Mozambique, Zimbabwe and Botswana. It also borders the Mpumalanga, Gauteng and North West provinces. Named after the Limpopo River, which flows along its northern border, it is a region of contrasts, from true Bushveld country to majestic mountains, primeval indigenous forests, unspoiled wilderness and patchworks of farmland. In the eastern region lies the northern half of the magnificent Kruger National Park.

Limpopo ranks fifth in South Africa in both surface area and population, covering an area of 125 754km² and being home to a population of 5 779 090. The capital is Polokwane (previously Pietersburg). Other major cities and towns include Bela-Bela (Warmbad), Lephalale (Ellisras), Makhado (Louis Trichardt), Musina (Messina), Thabazimbi and Tzaneen.

Mining is the primary driver of economic activity. Limpopo is rich in mineral deposits, including platinum-group metals, iron ore, chromium, high and middle-grade coking coal, diamonds, antimony, phosphate and copper, as well as mineral reserves such as gold, emeralds, scheelite, magnetite, vermiculite, silicon and mica. The province is a typical developing area, exporting primary products and importing manufactured goods and services.

The climatic conditions in the province allow for double harvesting seasons, which results in it being the largest producer of various crops in the agricultural market. Sunflowers, cotton, maize and peanuts are cultivated in the Bela-Bela–Modimolle area. Bananas, litchis, pineapples, mangoes and pawpaws, as well as a variety of nuts, are grown in the Tzaneen and Makhado areas. Extensive tea and coffee plantations create many employment opportunities in the Tzaneen area. The Bushveld is cattle country, where controlled hunting is often combined with ranching.

Limpopo is divided into five district municipalities, which are further subdivided into 22 local municipalities (refer to **Figure 4.1**).

The North West Province is situated in the central-northern extent of South Africa. The Province is bordered by Northern Cape Province to the west, and south-west; Free State Province to the south; Gauteng Province to the east; Limpopo Province to the north-east; and Botswana to the north. It occupies an area of land approximately 104 882km² in extent, making it South Africa's 6th largest in terms of area; and has a population of 3 509 953 (2011) and population density of 33/km² (2011), making it South Africa's 7th most densely populated Province.

The North West Province is characterised by altitudes ranging from 920 - 1782m amsl, which makes it one of the provinces with the most uniform terrain. The central and western extents of the Province are characterised by gently undulating plains, while the eastern extent is characterised as mountainous, and includes the Magaliesberg mountain range. Ancient igneous rock formations dominate the north-eastern and north-central extent of the Province; and the Gatsrand between Potchefstroom and Carletonville is considered to be one of the most ancient preserved landscapes in the world. The geology of the Province is significant given its mineral resources which are rich in platinum, gold, uranium, iron, chrome, manganese and diamonds.

In terms of land use patterns, approximately 69% of the North West Province is in a natural, or near-natural state; while 31% of the province is irreversibly modified as a result of croplands (25.6%), urban (3.5%), and mining (0.7%) activities. The Province is predominantly rural with the main economic activities comprising mining and agriculture. The North West Province comprises 4 Districts, namely Bojanala Platinum, Ngaka Modiri Molema, Dr Ruth Segomotsi Mompati, and Dr Kenneth Kaunda (refer to **Figure 4.2**)

4.2 Waterberg DM

The Waterberg District Municipality is a Category C municipality located in the western part of the Limpopo Province. It is strategically located in sharing its borders with Capricorn District Municipality in the north and Sekhukhune District Municipality in the east. The south-western boundary abuts the North West, while the Gauteng Province lies on the south-eastern side.

The municipality is the biggest district in the province, making up just more than a third of its geographical area. It shares its five-border control points with Botswana, namely Groblersbrug, Stockpoort, Derdepoort, Zanzibar and Platjan. It is comprised of five local municipalities: Bela-Bela, Lephalale, Modimolle-Mookgophong, Mogalakwena and Thabazimbi.

The region, as we know it today, is more than three million years old. With its great variety of wildlife, birds and scenic splendour. It is one of South Africa's prime ecotourism destinations.

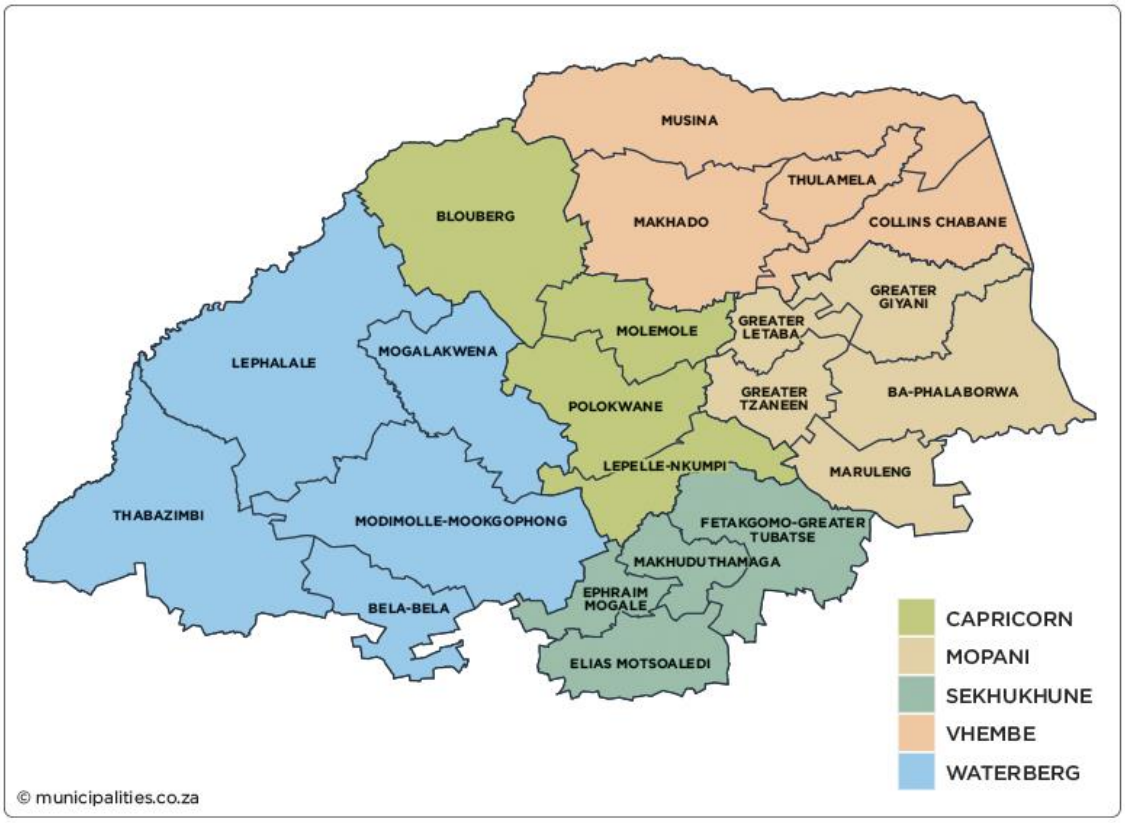


Figure 4.1: Map showing the municipalities of the Limpopo (Source: www.municipalities.co.za).

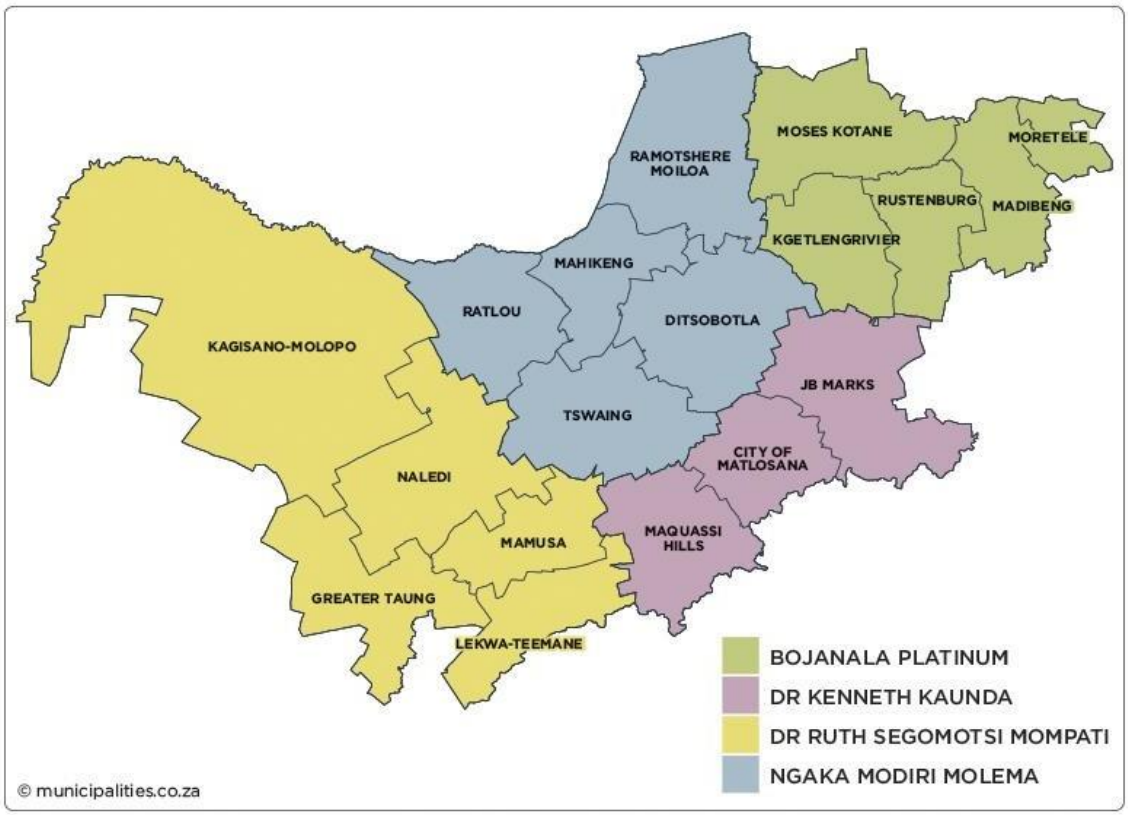


Figure 4.2: Map showing the municipalities of the North West (Source: www.municipalities.co.za).

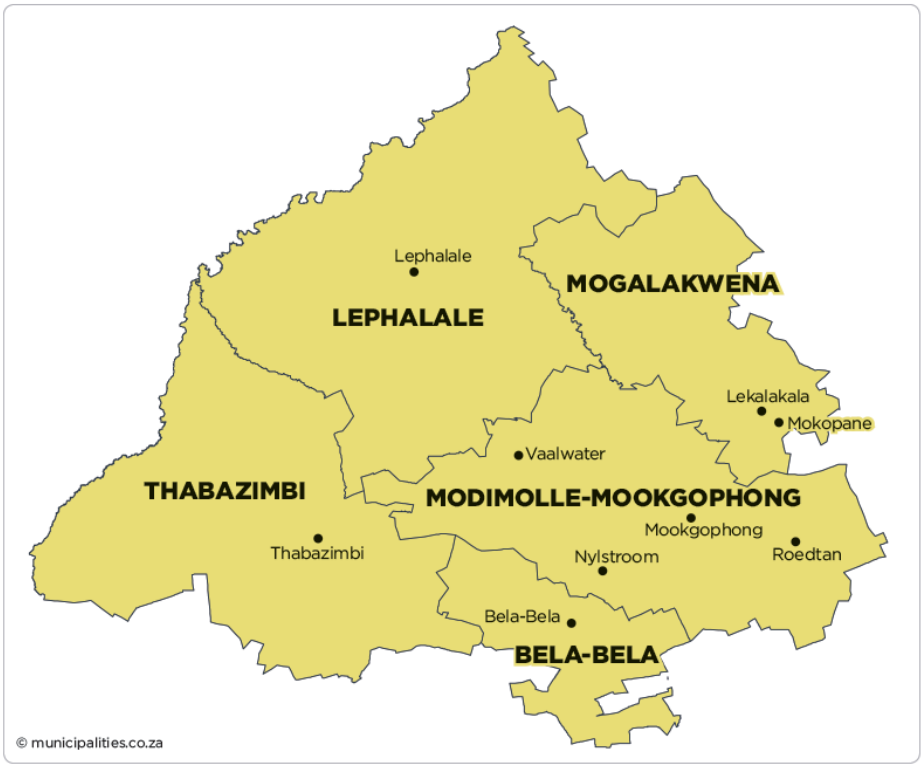


Figure 4.3: Map showing the municipalities of the Waterberg DM (Source: www.municipalities.co.za).

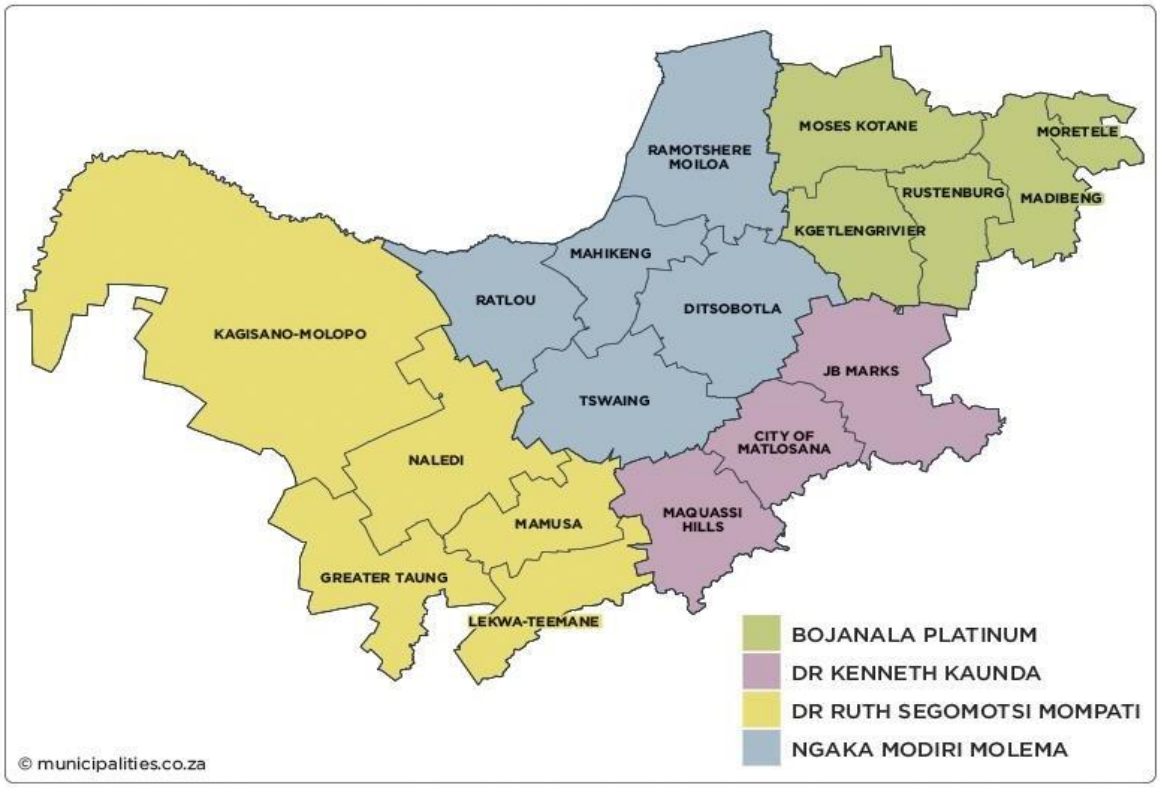


Figure 4.4: Map showing the districts of the North West (Source: www.municipalities.co.za).

4.3 Bojanala DM

Bojanala Platinum District Municipality is situated in the North West province. It is one of the four district municipalities in the province and comprises the five local municipalities of (1) Kgetlengrivier, (2) Madibeng, (3) Moses Kotane, (4) Moretele and (5) Rustenburg. It is bordered by Waterberg District Municipality to the north, City of Tshwane to the east, West Rand District Municipality to the south-east, Dr Kenneth Kaunda District Municipality to the south and Ngaka Modiri Molema District Municipality to the west. Main centres are Brits, Derby, Hartbeesfontein, Hartbeespoort, Koster, Madikwe, Marikana, Mooinooi, Phatsima, Rustenburg, Swartruggens, Tlhabane.

4.4 Thabazimbi LM

The Thabazimbi Local Municipality is a Category B municipality located within the Waterberg District in the south-western part of the Limpopo Province. It has Botswana as its international neighbour, and is a mere two-hour drive from Pretoria. It is one of five municipalities in the district.

Thabazimbi is known as 'mountain of iron', which is a Setswana name referring to the highly lucrative iron ore reef first discovered in the municipality in 1919. The Marakele National Park, which is a subsidiary of the National Parks Board, and in the same standard as the Kruger National Park and Mapungube is located within the municipality. Mining in the area has been undertaken since the 1930s, when iron and steel production started. Apart from iron ore, the Thabazimbi Municipality is surrounded by platinum-producing areas. Other minerals produced in the area include andalusite.

Agriculture has also proven to be a strong economic sector in the municipality. Agricultural commodities produced are wheat, beans and maize. The municipality's goals are aligned with those of the Provincial Growth and Development Strategy in Limpopo. This will ensure that the growth trajectory also addresses the objective of poverty eradication through job creation and business opportunity stimulation.

4.5 Moses Kotane LM

The Moses Kotane Local Municipality (MKLM) is a category B4 local municipality, which refers to a municipality that is mainly rural with communal tenure. The municipality covers an area of approximately 5,738 km²(31.3% of The Municipality is an EXCO-type with 31 Wards. It is led by Council, made up of 75 Councillors comprising Dikgosi, Ward and PR Councillors. The joint senior political leadership, commonly referred to as TROIKA, consists of the Speaker, Mayor and the Single Whip. The Mayor is the head of a 10-member Executive Committee (EXCO), who head various Portfolio Committees. The Municipality consists of 107 villages and 2 formal towns (Mogwase and Madikwe). The N4 Corridor which is the east-west bound road connecting Rustenburg and Pretoria runs to the south of Moses Kotane Local Municipality. The R510 north south bound road connect the Municipality to the north.

4.6 Baseline Description of the Social Environment

Table 4.2 provides a baseline summary of the socio-economic profile of the Thabazimbi LM within which the SCSC solar PV facility is located. In order to provide context against which the LM's socio-economic profile can be compared, the socio-economic profiles of the Waterberg DM, Limpopo Province, and South Africa as a whole have also been considered. The data presented in this section have been derived from the 2011

Census, the Local Government Handbook South Africa 2019, Limpopo Spatial Development Framework (LSDF) 2015, Limpopo Development Plan (2015-2019), and the Waterberg DM and Thabazimbi LM IDPs.[1]

Table 4.2: Baseline description of the socio-economic characteristics of the area within which the SCSC solar PV facility is proposed

Location characteristics
» The project is proposed within the Limpopo Province, which covers the area that lies Northern most in South Africa, just South of Zimbabwe. » The project is proposed within the Thabazimbi LM of the Waterberg DM. » The Thabazimbi LM is approximately 11214.4km² in extent, whilst Waterberg is 45315.6km² in extent. » The grid connection is proposed within the North West Province, the province located to the west of the major population centre of Gauteng Province. » The grid connection is proposed within Moses Kotane LM (MKLM) of the Bojanala Platinum DM (BPLM).
Population characteristics
» According to the Statistics SA Thabazimbi had a population intercensal growth rate of 0.028% for the period 2011-2016. » Thabazimbi population for the year 2016 (Community Survey) was 96 232. » The Waterberg District Municipality (WDM) population constitutes 12.6% of the total provincial population with an average household size of 3.5. » The Thabazimbi Local Municipality (TLM) constitutes approximately 12.5% of the total population of the WDM with an average household size that is lower than he above-mentioned at 2.8. » Between 2001 and 2011, the population growth rate was 0.8% at the Provincial level followed by 1,2% at the District level and the TLM has the highest rate of 2,6% » The majority of the population in Limpopo, WDM and TLM (59,8%, 64,3% and 63%, respectively) is within the working age group (15 to 64 years). » There is a notably higher percentage at the District and Local Municipality levels, probably linked with in-migration in search of employment opportunities » Dependency ratios in Limpopo, WDM and TLM are estimated to be 67,35, 55,5% and 30,8% respectively; the significant difference in dependency is likely to reflect high number o migrants in the TLM. » The Bojanala covers an area of 18 333km² and is seated in Rustenburg. » The district contributed 52.14% f the North West Province's GDP in 2016. » The local municipality of Moses Kotane is owed to its location within the major tourism and mining belt of the North West Province, Pilanesberg and Sun City.
Economic, education and household characteristics
» Over 17% of the working age population (15 to 64 years) in LP has no formal education and only 22,4% has obtained a grade 12/matric education (Census, 2011). » The WDM closely follows the Province with 12,5% of the working age population having no formal education and 23,3% having obtained a grade 12/matric education. » Both the Province and District have 9% of the working age population with tertiary level education. » Although TLM cannot be considered to have high levels of education, its population has higher education levels as compared to the Province and District, this is most likely due to the number of qualified employees working at the various mining operations. » Nearly 9% of the working age population has no formal education, 56,4% has obtained a grade 12/matric education and 8% have higher educational training. » According to Waterberg District IDP Report (2012/13), there are 333 schools in the WDM and 67 of them are based within the TLM.

1 While information was derived from the Local Government Handbook South Africa 2019, Limpopo SDF, Waterberg DM and Thabazimbi LM IDPs, these sources largely make 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).

- » According to WDM IDP Report (2013), mining plays an important role in LP's economy, it is currently the most dominant contributor to the Province's Gross Geographic Product (GGP) at 29,4%.
- » The sectors with the smallest contribution to the GGP are manufacturing, agriculture, forestry and fishing and the construction industry at 2.5% each.
- » WDM's main GDP contribution comes from mining (47,4%) and agriculture (21%); another significant contributor is tourism (WDM IDP, 2011/12).
- » Mining activities in WDM include minerals such as platinum, iron ore, coal and diamonds.
- » WDM is home to a world-renowned biosphere and as a result, tourism plays a major role in the economy.
- » The WDM's agricultural activities comprise 30% of the Province's agricultural activities, contributing over 4% to the Districts GGP.
- » These activities include crop, cattle and game farming.
- » Similar to the Province and District, TLM's economy is driven by three pillars; mining, agriculture and tourism (Thabazimbi Local Municipality Agriculture Strategy Report, 2012).
- » Although mining constitutes the lowest land use in the TLM, statistics indicate that it contributes significantly to the Gross Domestic Product (GDP) and employment rates.
- » TLM contributes 36% to the District's GDP.
- » According to TLM IDP Report (2015), mining has been instrumental through its recruitment practices in driving significantly in migration into the municipal area, thereby contributing significantly to the current population profile.
- » Agriculture and eco-tourism also contribute fairly significantly to the economy; agricultural activities constitute 40% of the District's agricultural activities. According to WDM IDP Report (2013) maize, sorghum, sunflowers, wheat, soya beans, groundnuts, paprika, potatoes, tomatoes, onions, cabbage and citrus fruits are commonly grow in TLM.
- » Cattle farming including cattle ranches and poultry and pig production are also common in TLM.
- » Game farming activities within TLM include auctioning of animals, hunting and processing food items.
- » The main economic sectors are mining, community services, finance, trade, transport and manufacturing with the BPDM.
- » The MKLM main economic sectors are tourism, manufacturing, agriculture and mining. The majority of persons and households in the LM live in areas under traditional authority.

Services

- » The majority of the WDM and TLM population (87,6% and 77,9%) live in formal dwellings and a greater percentage than the Province lives in informal dwellings (11,2% and 20,6)
- » Approximately 2% of the population reside in traditional dwellings and 1,2% in WDM.
- » Cattle farming including cattle ranches and poultry and pig production are also common in TLM. Game farming activities within TLM include auctioning of animals, hunting and processing food items.
- » The most dominant source of energy for lighting in Limpopo is electricity at ~ 88%.
- » Considerably few people in the WDM and TLM make use of electricity compared to the Province
- » In TLM, only 35% of the population use electricity for lighting, 33,5% for cooking and 31% for heating purposes, respectively.
- » WDM and TLM have the highest percentage of households with access to piped water at ~94% and ~95%, respectively.
- » At the ward level in TLM, fewer people have access to piped water as compared to the Local Municipality
- » Approximately 68% of households in Limpopo use pit toilets, ~45% in WDM and 21% in the TLM.
- » In terms of flush toilets, 68% of households in TLM have flush toilets, ~48% in WDM, followed by the Province with ~22%.
- » Refuse collection in the broad Project area is poor. Limpopo Province has particularly low levels of formal weekly refuse removal at 21% as compared to ~46% in TLM and 63% in WDM.

5. SOCIAL IMPACT ASSESSMENT

This Chapter provides an overview of the potential social impacts that have been identified, which may be associated with the development of SCSC Solar PV Facility. Potential impacts have been identified based on the current understanding of the project and the socio-economic environment within which it is proposed. The potential social impacts identified for the project will be investigated further during the EIA phase.

Social impacts are expected to occur during both the construction and operation phases of the associated infrastructure. The status of the impacts will either be positive or negative and either mitigation or enhancement measures are recommended for the management of the impacts depending on the status of the impacts.

5.1 Social Impacts during the Construction Phase

The majority of social impacts associated with the project are anticipated to occur during the construction phase of the development, and are typical of the type of social impacts generally associated with construction activities. These impacts will be temporary and short-term (~14 months), but could have long-term effects on the surrounding social environment if not planned or managed appropriately. It is therefore necessary that the detailed design phase be conducted in such a manner so as not to result in permanent social impacts associated with the ill-placement of project components or associated infrastructure or result in the mis-management of the construction phase activities.

The positive and negative social impacts identified and assessed for the **construction phase** includes:

- Direct and indirect employment opportunities
- Economic multiplier effects
- Influx of jobseekers and change in population
- Safety and security impacts
- Impacts on daily living and movement patterns
- Nuisance impacts, including noise and dust

Table 5-1: Impact assessment on direct and indirect employment opportunities

Nature: **Employment opportunities and skills development**			
Impact description: The creation of employment opportunities and skills development opportunities during the construction phase for the country and local economy			
	Rating	**Motivation**	**Significance**
Prior to Enhancement			
Duration	Short-term (2)	The construction period will last for one year and two months	**Low Positive (30)**
Extent	Local – Regional (3)	The impact will occur at a local and regional level	
Magnitude	Low (4)	The creation of employment opportunities will assist to an extent in alleviating unemployment levels within the area	
Probability	Medium Probability (3)	Construction of the project will result in the creation of a number of direct and indirect employment opportunities, which will assist in addressing unemployment levels within the area and aid in skills development of communities in the area	
Enhancement measures: To enhance the local employment, skills development and business opportunities associated with the construction phase, the following measures should be implemented: » It is recommended that a local employment policy be adopted to maximise the opportunities made available to the local labour force. Main Street 1886 Proprietary Limited should make it a requirement for contractors to implement a 'locals first' policy, especially for semi and low skilled job categories. » Enhance employment opportunities for the immediate local area, i.e., Moses Kotane and Thabazimbi Local Municipality. If this is not possible, then the broader focus areas should be considered for sourcing workers. » Consideration must be given to women during the recruitment process. » It is recommended that realistic local recruitment targets be set for the construction phase. » Training and skills development programmes should be initiated prior to the commencement of the construction phase.			
Post Enhancement			
Duration	Short-term (2)	The construction period will last for less than one year	**Low Positive (55)**
Extent	Regional (3)	The impact will occur at a regional level	
Magnitude	Moderate(6)	The creation of employment opportunities will assist to an extent in alleviating unemployment levels within the area	
Probability	Definite (5)	Construction of the project will result in the creation of a number of direct and indirect employment opportunities, which will assist in addressing unemployment levels within the area and aid in the skills development of communities in the area	
Residual Risks: Improved pool of skills and experience in the local area			

Table 5-2: Economic multiplier effects

Nature: **Multiplier effects on the local economy**			
Impact description: Significance of the impact from the economic multiplier effects from the use of local goods and services			
	Rating	**Motivation**	**Significance**
Prior to Enhancement			
Duration	Long-term (4)	Will continue for the duration of the project due to legal obligation to pay taxes.	**Medium Positive (36)**
Extent	Local – Regional (3)	Will include mostly local and some regional impacts	
Magnitude	Low (4)	Will derive from increased cash flow from wages, local procurement, economic growth, taxes and LED and HRD initiatives.	
Probability	Medium Probability(3)	Will depend on; proportion of local spending by employees, capacity of local enterprises to supply; effectiveness of LED and HRD initiatives, contributions to local government.	
Enhancement measures: » It is recommended that a local procurement policy be adopted by the developer to maximise the benefit to the local economy, where feasible (Moses Kotane and Thabazimbi Local Municipality). » Main Street 1886 Proprietary Limited should develop a database of local companies, specifically Historically Disadvantaged (HD) companies, which qualify as potential service providers (e.g., construction companies, catering companies, waste collection companies, security companies etc.) prior to the commencement of the tender process for construction contractors. These companies should be notified of the tender process and invited to bid for project-related work where applicable. » It is a requirement to source as much good and services as possible from the local area. » Engage with local authorities and business organisations to investigate the possibility of procurement of construction materials, goods and products from local suppliers, where feasible.			
Post Enhancement			
Duration	Long-term (4)	As for pre-enhancement	**Medium Positive (60)**
Extent	Local – Regional (3)	SMME capacity building will limit procurement from outside the local municipality	
Magnitude	Low (4)	Mitigation will likely increase intensity of multiplier effects as it will concentrate impact to local area, sustainability of initiatives will also be increased if aligned with other those of other institutions	
Probability	Highly Probability (4)	Increased local employment and procurement as well as skilled SMME's skill enhance likelihood of benefits to local economy	
Residual Risks: Improved local service sector, growth in local business.			

Table 5-3: Influx of jobseekers and change in population

Nature: **Migration from jobseekers and population changes**			
Impact description: Added pressure on economic and social infrastructure during construction as a result of in-migration of people			
	Rating	**Motivation**	**Significance**
Prior to Mitigation			
Duration	Short-term (2)	Influx related pressure on services will start during construction and continue during the operational phase	**Medium Negative (30)**
Extent	Local (2)	May affect resource management on local district municipal level	
Magnitude	Low (4)	Intensify existing service delivery and resource problems and backlogs, especially sewerage and road networks	
Probability	Medium Probability (3)	Population influx will affect the ability of the local municipality to meet increased demand	
Mitigation: » A Community Liaison Officer should be appointed. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process. » Main Street 1886 Proprietary Limited) Ltd should liaise with the Moses Kotane and Thabazimbi Local Municipality to address potential impacts on local services.			
Post Mitigation			
Duration	Short-term (2)	As for pre-mitigation	**Low Negative (16)**
Extent	Local (2)	Safety measures will likely restrict impacts on road users	
Magnitude	Low (4)	Appropriate mitigation will reduce the risk of this project	
Probability	Improbable (1)	As for pre-mitigation	
Residual Risks: Possibility of outside workers remaining in the area after construction is completed and subsequent pressures on local infrastructure.			

Table 5-4: Assessment of safety and security impacts

Nature: **Safety and security**			
Impact description: Temporary increase in safety and security concerns associated with the influx of people during the construction phase			
	Rating	**Motivation**	**Significance**
Prior to Mitigation			
Duration	Short-term (2)	Will be limited to the construction phase which is less than one year.	**Low Negative (27)**
Extent	Local – Regional (3)	Safety concerns will affect nearby communities.	
Magnitude	Low (4)	Could place the lives of neighbouring community members at risk.	
Probability	Medium Probability (3)	Traffic would need to be considered in the area	

Mitigation:

- Access in and out of the construction area should be strictly controlled by a security company.
- The appointed EPC contractor must appoint a security company and appropriate security procedures are to be implemented to limit access to the site and surrounding areas.
- The contractor must ensure that open fires on the site for heating, smoking or cooking are not allowed except in designated areas.
- The contractor must provide adequate firefighting equipment on site and provide firefighting training to selected construction staff.
- Have clear rules and regulations for access to the proposed site to control loitering.
- A comprehensive employee induction programme would cover land access protocols, fire management and road safety must be prepared. A Community Liaison Officer should be appointed. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process

Post Mitigation			
Duration	Short-term (2)	As for pre-mitigation	**Low Negative (16)**
Extent	Local (2)	Safety measures will likely restrict impacts on nearby communities	
Magnitude	Low (4)	Appropriate mitigation will reduce the risk of this project	
Probability	Improbable (1)	As for pre-mitigation	

Residual Risks:
None anticipated.

Table 5-5: Assessment of impacts on daily living and movement patterns.

Nature:
Disruption of daily living and movement patterns

Impact description: Temporary increase in traffic disruptions and movement patterns during the construction phase

	Rating	**Motivation**	**Significance**
Prior to Mitigation			
Duration	Short-term (2)	Will be limited to the construction phase which is less than one year	**Medium Negative (40)**
Extent	Local (2)	Will affect road users from nearby communities	
Magnitude	Moderate (6)	Will affect the quality of life of neighbouring communities	
Probability	Highly probable (4)	Traffic would need to be considered in the area	

Mitigation:

- All vehicles must be road worthy, and drivers must be qualified, obey traffic rules, follow speed limits and be made aware of the potential road safety issues.
- Heavy vehicles should be inspected regularly to ensure their road safety worthiness.
- Implement penalties for reckless driving for the drivers of heavy vehicles as a way to enforce compliance to traffic rules.
- Avoid heavy vehicle activity during 'peak' hours (when people are driving to and from work).
- The developer and engineering, procurement and construction (EPC) contractors must ensure that any damage / wear and tear caused by construction related traffic to the roads is repaired.
- A comprehensive employee induction programme which covers land access protocols and road safety must be prepared.

» A Community Liaison Officer should be appointed. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.			
Post Mitigation			
Duration	Short-term (2)	As for pre-mitigation	**Low Negative (16)**
Extent	Local (2)	Safety measures will likely restrict impacts on road users	
Magnitude	Low (4)	Appropriate mitigation will reduce the risk of this project	
Probability	Improbable (1)	As for pre-mitigation	
Residual Risks: None anticipated.			

Table 5-6: Assessment of nuisance impacts (noise and dust)

Nature: **Nuisance impacts (noise& dust)**			
Impact description: Nuisance impacts in terms of temporary increase in noise and dust, and the wear and tear on private farm roads for access to the site			
	Rating	**Motivation**	**Significance**
Prior to Mitigation			
Duration	Short-term (2)	Nuisance impacts will only be limited to the construction phase.	**Medium Negative (44)**
Extent	Local (2)	This will remain within the project extent from construction activities.	
Magnitude	Moderate (6)	Dust impacts and noise nuisance from construction activities.	
Probability	Highly Probability (4)	Movement of heavy construction vehicles during the construction phase has a potential to create noise, damage to roads and dust.	
Mitigation: » The movement of construction vehicles on the site should be confined to agreed access road/s. » The movement of heavy vehicles associated with the construction phase should be timed (where possible) to avoid times days of the week, such as weekends, when the volume of traffic travelling along the access roads may be higher. » Dust suppression measures should be implemented, such as wetting on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers. » All vehicles must be roadworthy, and drivers must be qualified and made aware of the potential road safety issues and need for strict speed limits. » A Community Liaison Officer should be appointed. A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process			
Post Mitigation			
Duration	Short-term (2)	As for pre-mitigation	**Low Negative (21)**
Extent	Local (2)	Mitigation measures will assist with increasing the impact.	
Magnitude	Low (4)	Appropriate mitigation will reduce the risk of this project	

Probability	Medium Probability (3)	As for pre-mitigation	
Residual Risks: None anticipated			

5.2 Potential Social impacts during the Operation Phase

It is anticipated that the SCSC solar facility will operate for approximately 25 years, or as long as required by the mine.

The potential positive and negative social impacts that could arise because of the operation of the proposed project include the following:

- Direct and indirect employment opportunities
- Development of renewable energy infrastructure
- Socio-economic benefits
- Visual impact and sense of place impacts

Table 5-7: Employment opportunities and skills development

Nature: **Job creation during operation**			
Impact description: The creation of employment opportunities and skills development opportunities during the operation phase for the country and local economy			
	Rating	**Motivation**	**Significance**
Prior to Enhancement			
Duration	Long term (4)	Project will be operational up to 30years	**Medium Positive (33)**
Extent	Regional (3)	Any new positions are likely to be filled by persons living in the local municipal area	
Magnitude	Low (4)	It is anticipated that ~10 jobs will be generated during the operation phase. A number of highly skilled personnel may need to be recruited from outside the local municipal area	
Probability	Medium Probability (3)	Employment opportunities will be created during the operation phase	
Enhancement measures: » It is recommended that a local employment policy is adopted by the developer to maximise the project opportunities being made available to the local community. Enhance employment opportunities for the immediate local area, Moses Kotane & Thabazimbi Local Municipality, if this is not possible, then the broader focus areas should be considered for sourcing employees. » The recruitment selection process should seek to promote gender equality and the employment of women wherever possible » The developer should establish vocational training programs for the local employees to promote the development of skills			
Post Enhancement			
Duration	Long-term (4)	As for pre-enhancement	**Medium Positive (44)**
Extent	Local - regional (3)	As for pre-enhancement	
Magnitude	Low (4)	Mitigation will maximise local job creation	

Probability	High Probability (4)	Mitigation will maximise probability that any local recruitment targets are achieved and local benefits optimised	
Residual Risks: Improved pool of skills and experience in the local area			

Table 5-8: Development of clean, renewable energy infrastructure

Nature: **Development of clean, renewable energy infrastructure**			
Impact description: Development of clean, renewable energy infrastructure			
	Rating	**Motivation**	**Significance**
Prior to Enhancement			
Duration	Long term (4)	Adding a renewable energy sector to the Northam economy may contribute to the diversification of the local economy and provide greater economic stability.	**Medium Positive (48)**
Extent	Local – Regional - National (4)	The generation of renewable energy will contribute to South Africa's electricity market. Since the off-taker of the power generated by the facility will be Sasol limited (which is currently dependent on Eskom for electricity supply), the proposed development will indirectly relieve the national grid	
Magnitude	Low (4)	The proposed facility will only generate up to 100MW	
Probability	Highly Probability(4)	Facility will help contribute to the total carbon emissions associated with non-renewable energy generation	
Enhancement measures: None anticipated			
Post Enhancement			
Duration	Long term (4)	As for pre-enhancement	**Medium Positive (48)**
Extent	National (4)	As for pre-enhancement	
Magnitude	Low (4)	As for pre-enhancement	
Probability	Highly Probability (4)	As for pre-enhancement	
Residual Risks: Reduce carbon emissions through the use of renewable energy and contribute to reducing global warming			

Table 5-9: Socio-economic benefits

Nature: **Socio-economic benefits associated with community trust and SED investments**			
Impact description: Development of clean, renewable energy infrastructure			
	Rating	**Motivation**	**Significance**
Prior to Enhancement			
Duration	Long term (4)	Adding a renewable energy sector to the Moses Kotane & Thabazimbi economy	**Medium Positive (50)**

		may contribute to the diversification of the local economy and provide greater economic stability.	
Extent	Local – Regional - National (4)	The generation of renewable energy will contribute to South Africa's electricity market, and the proposed development will indirectly relieve the national grid	
Magnitude	Moderate (6)	The proposed facility will only generate up to 100MW – 120MW	
Probability	Highly Probability (4)	Facility will help contribute to the total carbon emissions associated with non-renewable energy generation	
Enhancement measures: None anticipated			
Post Enhancement			
Duration	Long term (4)	As for pre-enhancement	**Medium Positive (64)**
Extent	National (4)	As for pre-enhancement	
Magnitude	High (8)	As for pre-enhancement	
Probability	Highly Probability(4)	As for pre-enhancement	
Residual Risks: Social upliftment of the local communities through the development and operation of the project.			

Table 5-10: Assessment of the visual and impacts on sense of place

Nature: **Visual impacts and impacts on sense of place**			
Impact description: Visual impacts and sense of place impacts associated with the operation phase of the project			
	Rating	**Motivation**	**Significance**
Prior to Mitigation			
Duration	Long term (4)	Impact on sense of place relates to the change in the landscape character and visual impact of the proposed solar energy facility	**Low Negative (18)**
Extent	Local (1)	Dependent on the demographics of the population that resides in the area and their perceptions	
Magnitude	Low (4)	There are industrial/mining operations and formal residential areas located in proximity to the site	
Probability	Improbable (1)	There are no tourist attractions located adjacent to the property and therefore the anticipated impact on the areas visual quality and sense of place is low.	
Mitigation: None anticipated			
Post Mitigation			
Duration	N.A. – Mitigation not possible.		**N.A. – Mitigation not possible.**
Extent	N.A. – Mitigation not possible.		
Magnitude	N.A. – Mitigation not possible.		
Probability	N.A. – Mitigation not possible.		

Residual Risks: None anticipated if the visual impact will be removed after decommissioning, provided the solar energy facility infrastructure is removed and the site is rehabilitated to its original (current) status

5.3 Assessment of Cumulative Impacts

The EIA Regulations, 2014 (GNR 326) define a cumulative impact as follows:

"Cumulative impact in relation to an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity that in itself may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities."

The potential for cumulative impacts to occur as a result of the projects is therefore likely. Potential cumulative impacts identified for the project include positive impacts on the economy, business development, and employment, as well as negative impacts such as on pressure on local services and change in visual impacts

Potential cumulative social impacts identified for the project include positive impacts on the economy, business development, and employment, as well as such as on pressure on local services and change in visual impacts.

Nature: **An increase in employment opportunities, skills development and business opportunities with the establishment of more than one solar energy facility**		
	Overall impact of the proposed project considered in isolation	**Cumulative impact of the project and other projects in the area**
Extent	Local -regional (3)	Local-regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Moderate (6)
Probability	Medium Probability (3)	High Probability (4)
Significance	**Medium (33)**	**Medium (52)**
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A
Irreplaceable loss of resources?	N/A	N/A
Can impacts be mitigated?	Yes	Yes
Confidence in findings: High.		
Mitigation: The establishment of a number of solar energy facilities in the area does have the potential to have a positive cumulative impact on the area in the form of employment opportunities, skills development and business opportunities. The positive benefits will be enhanced if local employment policies are adopted and local services providers are utilised by the developers to maximise the project opportunities available to the local community.		

Nature: **Negative impacts and change to the local economy with an in-migration of labourers, businesses and jobseekers to the area**

	Overall impact of the proposed project considered in isolation	**Cumulative impact of the project and other projects in the area**
Extent	Local (2)	Local-regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Minor (2)	Low (4)
Probability	None (0)	Improbable (1)
Significance	**Low (7)**	**Low (22)**
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Confidence in findings: High.		
Mitigation: » Develop a recruitment policy / process (to be implemented by contractors), which will ensure the sourcing of labour locally, where available. » Work together with government agencies to ensure that service provision is in line with the development needs of the local area. » Form joint ventures with community organisations, through Trusts, which can provide local communities with benefits, such as employment opportunities and services. » Develop and implement a recruitment protocol in consultation with the municipality and local community leaders. Ensure that the procedures for applications for employment are clearly communicated.		

Nature: **Visual impact on sense of place and landscape character**		
	Overall impact of the proposed project considered in isolation	**Cumulative impact of the project and other projects in the area**
Extent	Local (2)	Local-regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Moderate (6)
Probability	Medium Probability (3)	Medium Probability (3)
Significance	**Low (27)**	**Medium (39)**
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	No, only best practice measures can be implemented	
Confidence in findings: High.		
Mitigation: » Maintain and manage the facilities to be in a good and neat condition to ensure that no degradation of the area and sites takes place and impacts the visual quality of the area. » Implement the relevant mitigation measures as recommended in the Visual Impact Assessment		

5.4 Assessment of Decommissioning

Typically, major social impacts associated with the decommissioning phase are linked to the loss of jobs and associated income and will be similar to the impacts during the construction phase associated with construction activities. This has implications for the households who are directly affected, the communities within which they live, and the relevant local authorities. The impact of the decommissioning phase is expected to be negligible due to the small number of permanent employees affected. The potential impacts associated with decommissioning phase can also be effectively managed with the implementation

of a retrenchment and downscaling programme. With mitigation, the impacts are assessed to be Low (negative).

Recommended mitigation measures:

» The project developer/team to ensure there are retrenchment packages provided for all staff retrenched when plant is decommissioned.

» All structures and infrastructure associated with the proposed facility should be dismantled and transported off-site on decommissioning; and

» Revenue generated from the sale of scrap metal during decommissioning should be allocated to funding closure and rehabilitation of distributed areas.

5.5 Assessment of No-Development Option

The "no-go" alternative is the option of not constructing the SCSC Solar PV Facility. The implementation of the proposed project is expected to result in a number of positive and negative social impacts. The majority of negative impacts identified for the project are associated with the construction phase of the project, while the positive impacts are associated with both the construction and operation phases of the project.

Potential negative social impacts associated with the construction and operation of the project include the following:

» Potential influx of job seekers and an associated change in population and increase in pressure on basic services.
» Potential safety and security impacts.
» Potential impacts on daily living and movement patterns.
» Potential nuisance impacts (noise and dust).
» Potential visual impact and impact on the sense of place.
» Potential loss of agricultural land.

Potential positive social impacts associated with the construction and operation of the project include the following:

» Potential direct and indirect employment opportunities.
» Potential economic multiplier effect.
» Socio-economic benefits associated with community trust and SED investments

The impacts of pursuing the "no-go" alternative can therefore be summarised as follows:

» The benefits would be that there is no disruption from nuisance impacts (noise and dust during construction), visual impacts and safety and security impacts. The impact is therefore neutral.
» There would also be an opportunity loss in terms of limited job creation, skills development, community upliftment and associated economic business opportunities for the local economy. This impact is considered to be negative.
» The opportunity to strengthen the grid connection within the municipal area would be lost which will have a negative impact on economic growth and development and therefore result in negative social impacts.

Recommended mitigation measures:

- The proposed facility should be developed, however the implementation of the mitigation and enhancement measures identified in the SIA and other specialist studies is required. The location, design and layout of the planned solar plant must consider the potential impacts on the local environment and sense of place.

6. CONCLUSION AND RECOMMENDATIONS

This SIA has focused on the collection of primary data to identify and assess social issues and potential social impacts. Secondary data was collected and presented in a literature review and primary data was collected through the public participation process and telephonic consultation with key stakeholders. The environmental assessment framework for assessment of impacts and the relevant criteria were applied to evaluate the significance of the potential impacts.

A summary of the potential positive and negative impacts identified for the construction and operation phases of the project are presented in Error! Reference source not found. and Error! Reference source not found.. A summary of the potential positive and negative cumulative social impacts identified for the project is provided in Error! Reference source not found..

Table 6.6-1: Summary of potential social impacts identified for the construction phase of the SCSC Solar PV facility

Impact	Status	Significance
Positive Impacts		
Creation of direct and indirect employment and skills development opportunities.	Positive	Medium
Economic multiplier effects	Positive	Medium
Negative Impacts		
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

Table 6.6-2: Summary of potential social impacts identified for the operation phase of the SCSC Solar PV facility

Impact	Status	Significance
Positive Impacts		
Direct and indirect employment and skills development opportunities	Positive	Medium
Negative Impacts		
Visual and sense of place impacts	Negative	Low

Table 6-3: Summary of potential cumulative social impacts identified for the project

Cumulative Impact	Overall impact of the proposed project considered in isolation	Cumulative impact of the project and other projects in

		the area
Positive Cumulative Impacts		
Cumulative impact from employment, skills and business opportunities and skills development	Medium	Medium
Cumulative Impact	**Overall impact of the proposed project considered in isolation**	**Cumulative impact of the project and other projects in the area**
Negative Cumulative Impacts		
Cumulative impact with large scale in-migration of people	Low	Medium
Visual and sense of place impacts	Low	Medium
Cumulative impact on the sense of place and landscape character	Low	Medium

6.1 Key findings and Recommendations

Key Findings

From a social perspective, it is concluded that the project is supported, but that mitigation measures should be implemented and adhered to. Positive and negative social impacts have been identified. The assessment of the key issues indicated that there are no negative impacts that can be classified as fatal flaws, and which are of such significance that they cannot be successfully mitigated. Positive impacts could be enhanced by implementing appropriate enhancement measures and through careful planning. Based on the social assessment, the following general conclusions and findings can be made:

- The potential negative social impacts associated with the construction phase are typical of construction related projects and not just focused on the construction of PV facilities and pivot infrastructure (these relate to intrusion and disturbance impacts, safety and security) and could be reduced with the implementation of the mitigation measures proposed.
- Employment opportunities will be created in the construction and operation phases and the impact is rated as positive even if only a small number of individuals will benefit in this regard.
- The proposed project could assist the local economy in creating entrepreneurial development, especially if local businesses could be involved in the provision of general material and services during the construction and operational phases.
- Capacity building and skills training amongst employees are critical and would be highly beneficial to those involved, especially if they receive portable skills to enable them to also find work elsewhere and in other sectors.
- The proposed development also represents an investment in infrastructure for the generation of clean, renewable energy, which, given the challenges created by climate change, represents a positive social benefit for society.

Recommendations

The following recommendations are made based on the Social Impact Assessment during the stakeholder engagement process. The proposed mitigation measures should be implemented to limit the negative impacts and enhance the positive impacts. Based on the social assessment, the following recommendations are made:

- In terms of employment related impacts, it is important to consider that job opportunities for the unskilled and semi-skilled are scarce commodities in the study area and could create competition among the local unemployed. Introducing an outside workforce will therefore most likely worsen local endeavors to obtain jobs and provoke discontent as well as put pressure on the local services available. Local labour should be utilised to enhance the positive impact of employment creation in the area. Local businesses should be involved with the construction activities where possible. It is imperative that local labour be sourced to ensure that benefits accrue to the local communities. Preference should thus be given to the use of local labour during the construction and operational phases of the project as far as possible.
- Locals should also be allowed an opportunity to be included in a list of possible local suppliers and service providers, enhancing the multiplier effect. This aspect would serve to mitigate other subsequent negative impacts such as those associated with the inflow of outsiders to the area, the increased pressure on the infrastructure and services in the area, as well as the safety and security concerns.
- Impacts associated with the construction period should be carefully mitigated to minimise any dust and noise pollution.
- Safety and security concerns should be considered during the planning and construction phases of the proposed project.

6.2 Conclusion

The proposed project and associated infrastructure will create a number of potential socio-economic opportunities and benefits and is unlikely to result in permanent damaging social impacts. From a social perspective it is concluded that the project is acceptable subject to the implementation of the recommended mitigation and enhancement measures and management actions identified for the project. Considering the findings of the report and potential for mitigation it is the reasoned opinion of the specialist that the project can be authorised from a social perspective.

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