

SAN SOLAR PV FACILITY AND ASSOCIATED INFRASTRUCTURE

Northern Cape Province

Social Assessment – Baseline Report

January 2022

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REPORT DETAILS

| | | |
|-----------------------------|---|--|
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| Client | : | San Solar Energy (Pty) Ltd |
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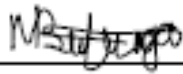
SPECIALIST DECLARATION OF INTEREST

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

January 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 |
| DENC | Department of Environment and Nature Conservation (Northern Cape Provincial) |
| 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

San Solar Energy (Pty) Ltd proposes the development of the San Solar PV facility, a photovoltaic (PV) solar energy facility and associated infrastructure, on a site located approximately 16km north west of Kathu in the Northern Cape Province. The solar PV facility will be developed on the Remaining extent of the Farm Wincanton 472 and comprise several arrays of PV panels and associated infrastructure with a contracted capacity of up to 100MW. The study area¹ falls within the Gamagara Local Municipality within the John Taolo Gaetsewe District Municipality. The site is located east of Deben and is accessible via the R380 provincial route which branches off the N14 National Road, approximately 3km south of Kathu.

The development of the PV Facility and associated infrastructure requires Environmental Authorisation (EA) from the national Department of Forestry, Fisheries and the Environment (DFFE) in accordance with the National Environmental Management Act (No. 107 of 1998) (NEMA), and the Environmental Impact Assessment (EIA) Regulations, 2014 (GNR 326), as amended, subject to the completion of an Environmental Impact Assessment (EIA) process.

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 San Solar Energy PV Facility is located on the following properties:

| | |
|---|-------------------------------------|
| PV Facility, including associated facility and proposed grid connection infrastructure | Remainder of the Farm Wincanton 472 |
|---|-------------------------------------|

A facility development area², which will include the PV facility, BESS and a 132kV facility substation to be connected via a Loop-in-Loop out (LILO) connection to the Umtu 132kV overhead power line will be identified within the study area considered in the Scoping phase. The infrastructure associated with this 100MW PV facility includes:

- » PV modules and mounting structures
- » Inverters and transformers
- » Cabling between the panels, to be laid underground where practical.
- » Battery Energy Storage System (BESS)
- » Site and internal access roads (up to 8m wide)
- » Laydown area.
- » Operation and Maintenance buildings including a gate and security building, control centre, offices, warehouse, and workshop areas for maintenance and storage.
- » Grid connection solution including a 132kV facility substation to be connected via a Loop-in-Loop out (LILO) connection to the Umtu 132kV overhead power line (located ~5km east of the site).

The development area will be larger than the area needed for the construction of a 100MW PV facility and will provide the opportunity for the optimal placement of the infrastructure, ensuring avoidance of major

¹ The study area is defined as the Remaining extent of the Farm Wincanton 472, which has the extent of ~ 1000ha.

² The development area is that identified area (located within the study area) where the San Solar PV facility would be located.

identified environmental sensitivities by the development footprint³. To avoid areas of potential sensitivity and to ensure that potential detrimental environmental impacts are minimised as far as possible, the development footprint within which the infrastructure of San Solar PV facility and its associated infrastructure will be located will be fully assessed during the EIA Phase.

Three (3) solar facilities have been constructed in the broader area. These include the Sishen Solar PV and Kathu Solar PV facilities located immediately west of the farm Remaining extent of the Farm Wincanton 472. The Kathu Solar facility is a CSP facility located to the east of the study area.

1.2. Objective of the Scoping Process

This SIA Report has been prepared as part of the Scoping Process being undertaken for San Solar PV Facility and associated infrastructure. The purpose of this SIA Report is to provide details on the nature and extent of San Solar PV Facility and associated infrastructure, and the potential social impacts associated with the construction, operation, and decommissioning of the project. The inputs contained within this SIA Scoping Report are intended to provide a high-level overview of the social environment within which the project is proposed and set the scene for issues which will be addressed in detail as part of the EIA Phase specialist investigations.

The objective of this SIA Report is therefore to:

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

1.3. Details of the Independent Specialist

This SIA 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.

³ The development footprint is the defined area (located within the development area) where the PV panel array and other associated infrastructure for San Solar PV will be planned to be constructed. This will be the actual footprint of the facility, and the area which would be disturbed. The extent of the development footprint will be determined in the EIA Phase.

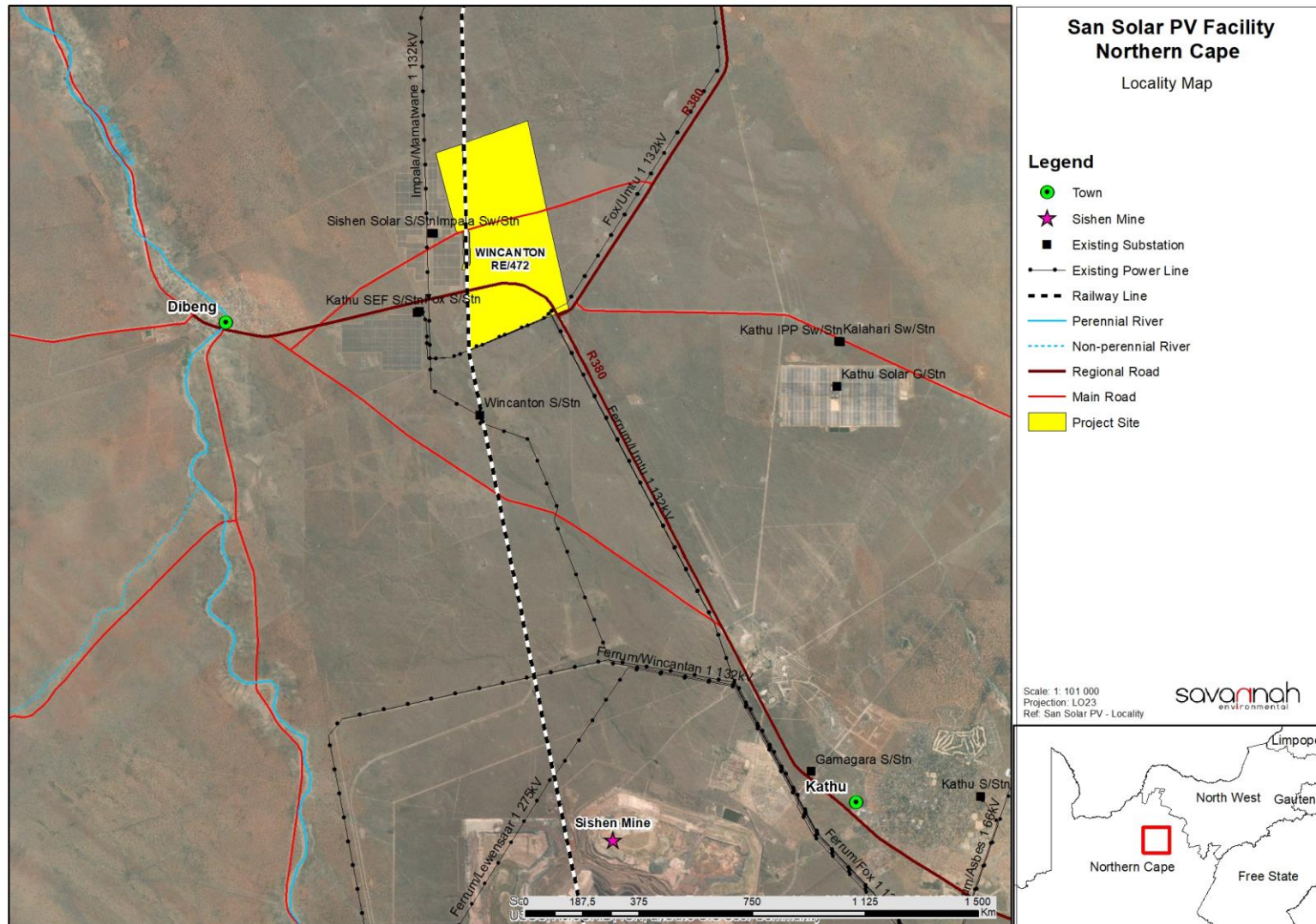


Figure 1.1: Locality map illustrating the location of the San Solar PV facility, Northern Cape Province.

1.4. 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 5 |
| (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 5 |
| (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 5 |
| (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 |
| (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 |

| Requirement | Location in Report |
|---|---------------------------|
| 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 San 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.

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.

2.2.1. 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.

2.3. Limitations and Assumptions

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

- » Data derived from the 2011 Census, Northern Cape Provincial Spatial Development Framework (PSDF) 2012, Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review – Executive Summary, Final Second Review of the Integrated Development Plan (IDP) Gamagara Local Municipality 2019 – 2022 and the Integrated Development Plan (IDP) of the John Taolo Gaetsewe District Municipality 2019-2020 review was used to generate the majority of information provided in the baseline profile of the broader study area and the grid connection corridor. The possibility exists that some of the data utilised may be out of date, and may not provide an accurate reflection of the current status quo.
- » This SIA 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.

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:

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 Infrastructure Projects (SIPs)

Provincial Policy and Planning Context:

- » Northern Cape Provincial Spatial Development Framework (PSDF) 2012
- » Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review – Executive Summary (full documentation not publicly available)

Local Policy and Planning Context:

- » Integrated Development Plan (IDP) of the John Taolo Gaetsewe District Municipality 2019-2020 review
- » Final Second Review of the Integrated Development Plan (IDP) Gamagara Local Municipality 2017 – 2022

3.1. National Policy and Planning Context

Any project which contributes positively towards the objectives mentioned within national policies could be considered strategically important for the country. A review of the national policy environment suggests that the connection infrastructure 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 San 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, |

| Relevant legislation or policy | Relevance to the proposed project |
|---|---|
| | <p>promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p> <p>The Constitution outlines the need to promote social and economic development. Section 24 of the Constitution therefore requires that development be conducted in such a manner that it does not infringe on an individual's environmental rights, health, or well-being. This is especially significant for previously disadvantaged individuals who are most at risk to environmental impacts.</p> |
| <p>National Environmental Management Act (No. 107 of 1998) (NEMA)</p> | <p>This piece of legislation is South Africa's key piece of environmental legislation, and sets the framework for environmental management in South Africa. NEMA is founded on the principle that everyone has the right to an environment that is not harmful to their health or well-being as contained within the Bill of Rights.</p> <p>The national environmental management principles state that the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.</p> <p>The need for responsible and informed decision-making by government on the acceptability of environmental impacts is therefore enshrined within NEMA.</p> |
| <p>National Development Plan 2030 (2012)</p> | <p>The National Development Plan (NDP) 2030 is a plan prepared by the National Planning Commission in consultation with the South African public which is aimed at eliminating poverty and reducing inequality by 2030.</p> <p>In terms of the Energy Sector's role in empowering South Africa, the NDP envisages that, by 2030, South Africa will have an energy sector that promotes:</p> <ul style="list-style-type: none"> » Economic growth and development through adequate investment in energy infrastructure. The sector should provide reliable and efficient energy service at competitive rates, while supporting economic growth through job creation. » Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households. » Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. <p>The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy.</p> <p>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 Gamagara Local Municipality municipal area.</p> |

3.2. Provincial Policies

This section provides a brief review of the most relevant provincial policies. The proposed San Solar PV Facility 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 San Solar PV Facility

| Relevant policy | Relevance to the proposed project |
|---|--|
| Northern Cape Provincial Spatial Development Framework (PSDF) 2012 | <p>The Northern Cape Provincial Spatial Development Framework (PSDF) 2012 states that the overarching goal for the province is to enable sustainability through sustainable development. The province considers social and economic development as imperative in order to address the most significant challenge facing the Northern Cape, which is poverty.</p> <p>The development of the grid connection infrastructure is required in order to enable and strengthen the supply of electricity to the municipal area. The development of the grid connection infrastructure is considered to be relevant to the framework due to the opportunity provided in terms of economic development and growth in the area.</p> |
| Northern Cape Provincial Spatial Development Framework (PSDF) 2018 Review – Executive Summary | <p>The review of the Northern Cape PSDF (2018) refers to infrastructure investment and that a balance must be maintained between investments aimed at meeting the social needs of communities and investment aimed at promoting economic development and job creation.</p> <p>The Spatial Development Strategy identified in the PSDF for basic infrastructure includes the following points to be achieved:</p> <ul style="list-style-type: none"> » Ensure efficient supply of water, electricity and waste management services to sustain additional industry growth. » Eradicate backlogs in water and sanitation, electricity, housing » Improve basic services. » Provide green infrastructure e.g. water tanks, renewable energy. » Eradicate backlogs and maintain basic services. <p>The development of the San Solar PV Facility will contribute to achieving, albeit only to a limited extent, the basic infrastructure requirements for the Province and contribute to the social needs and economic development.</p> |

3.3. 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 San 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 San Solar PV Facility

| Relevant policy | Relevance to the proposed project |
|---|--|
| Integrated Development Plan (IDP) of the John Taolo Gaetsewe District Municipality 2019-2020 review | <p>The IDP identifies that there is a 10% gap in terms of access to electricity within the district municipal area. The IDP also states that the inadequate supply of electricity experienced in the municipal area is restraining economic growth.</p> <p>The development of the grid connection infrastructure is required in order to enable and strengthen the supply of electricity to the municipal area as is identified as a gap by the DM. The development of the PV Facility and proposed grid connection infrastructure is considered to be relevant to the development plan due to the opportunity provided in terms of economic development and growth in the area.</p> |

| Relevant policy | Relevance to the proposed project |
|---|--|
| Final Review of the Integrated Development Plan (IDP) Gamagara Local Municipality 2019 – 2022 | <p>The IDP states that the municipality has a current backlog of 3015 households that are not electrified due to capacity constraints. Priority community issues have been identified through engagement with communities. Basic service delivery and infrastructure development has been identified as a key community issue which includes the provision of electricity and the upgrading of infrastructure.</p> <p>The development of the PV Facility and proposed grid connection infrastructure is required in order to enable and strengthen the supply of electricity to the municipal area and thereby contributing to the provision of electricity.</p> |

3.4. 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

San Solar PV Facility including associated facility and grid connection infrastructure is proposed on Remaining extent of the Farm Wincanton 472 and comprise several arrays of PV panels and associated infrastructure with a contracted capacity of up to 100MW.

A facility development area , which will include the PV facility, BESS and a 132kV facility substation to be connected via a Loop-in-Loop out (LILO) connection to the Umtu 132kV overhead power line will be identified within the study area considered in the Scoping phase (refer to **Table 4.1**).

Table 4.1: Spatial Context of the study area for the development of the San Solar PV Facility

| | |
|------------------------------|--|
| Province | Northern Cape Province |
| District Municipality | John Taolo Gaetsewe District Municipality |
| Local Municipality | Gamagara Local Municipality |
| Ward number(s) | 7 |
| Nearest town(s) | Deben, Kathu |
| Preferred access | The site is located east of Deben and is accessible via the R380 provincial route which branches off the N14 National Road, approximately 3km south of Kathu |

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

4.1. Northern Cape Province

The Northern Cape Province is located in the north-western extent of South Africa and constitutes South Africa's largest province, occupying an area 372 889km² in extent, equivalent to nearly a third (30.5%) of the country's total land mass. It is also South Africa's most sparsely populated province with a population of 1 145 861, and a population density of 3.1/km². It is bordered by the provinces of the Western Cape, and Eastern Cape to the south, and south-east, the provinces of Free State, and North West to the east, Botswana and Namibia, to the north, and the Atlantic Ocean to the west. The Northern Cape is South Africa's only province which borders Namibia, and therefore plays an important role in terms of providing linkages between Namibia and the rest of South Africa. The Orange River is a significant feature within the province, and the main source of water, and also constitutes the international border between South Africa and Namibia.

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

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

The Northern Cape makes the smallest contribution to South Africa's economy (contributing only 2% to South Africa's Gross Domestic Product per region (GDP-R) in 2007). The mining sector is the largest contributor to the provincial GDP, contributing 26%. The Northern Cape's mining industry is of national and international importance, as it produces approximately 37% of South Africa's diamond output, 44% of its zinc, 70% of its silver, 84% of its iron-ore, 93% of its lead and 99% of its manganese.

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

The Northern Cape comprises five Districts, namely Frances Baard, John Taolo Gaetsewe, Namakwa, Pixley ka Seme, and ZF Mgcawu (refer to **Figure 4.1**).

4.2. John Taolo Gaetsewe DM

The John Taolo Gaetsewe DM is bordered by the ZF Mgcawu and Frances Baard DMs to the west and south and the North West Province to the east and north-east and Botswana to the north-west. The John Taolo Gaetsewe DM is the second smallest district in the Northern Cape, occupying only 7% of the Province. The John Taolo Gaetsewe DM comprises only three local municipalities which include the Gamagara Local Municipality, the Ga-Segonyana Local Municipality and the Joe Morolong Local Municipality (refer to **Figure 4.2**). The Joe Morolong Local Municipality is the largest local municipality in terms of size, with the Ga-Segonyana Local Municipality and Gamagara Local Municipality covering 16% and 10% respectively.

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

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

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

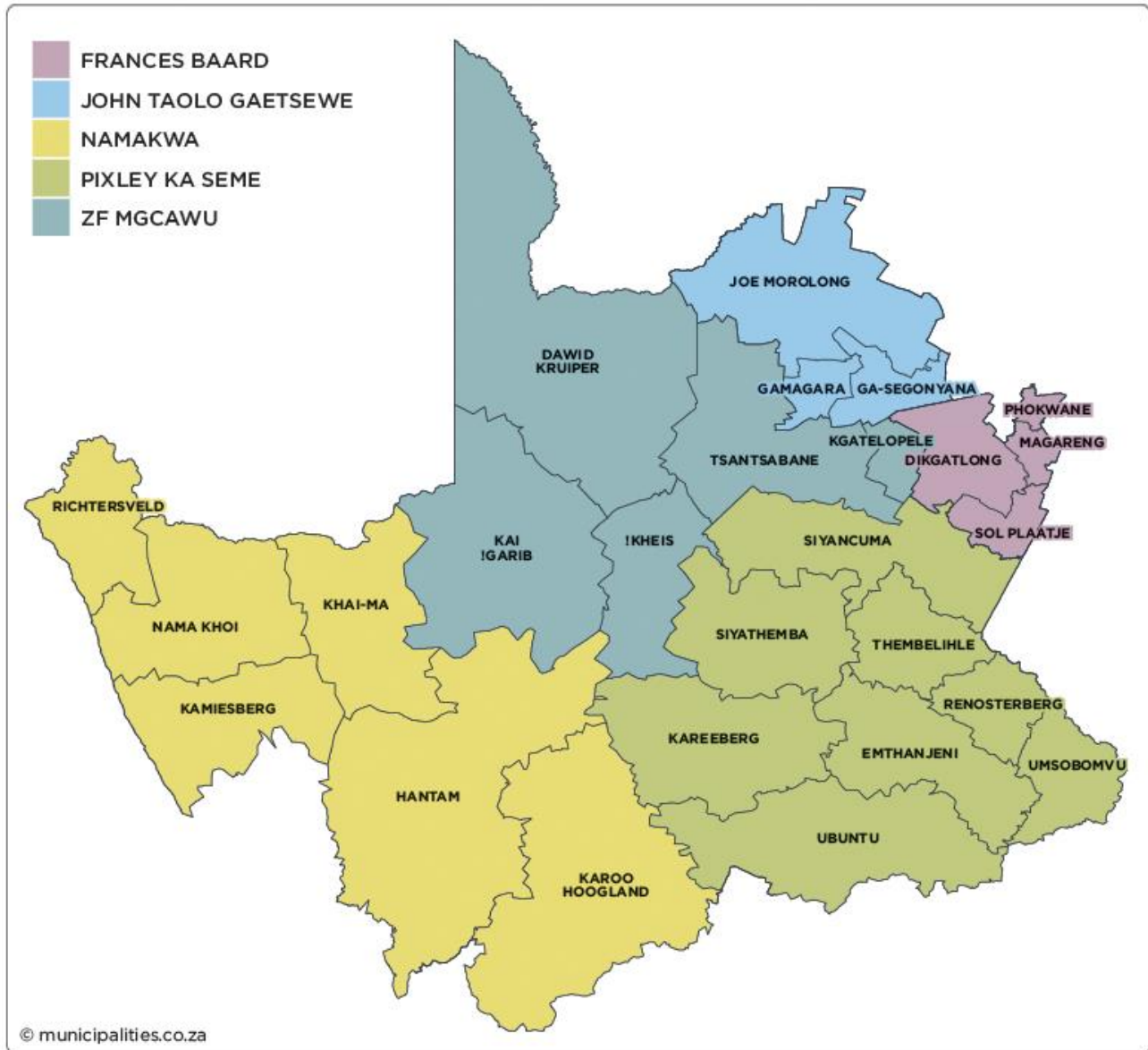


Figure 4.1: Map showing the municipalities of the Northern Cape (Source: www.municipalities.co.za).

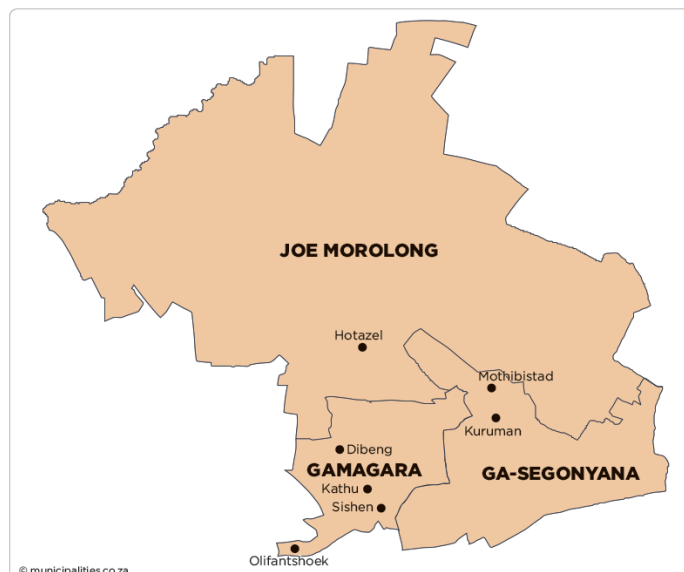


Figure 4.2: Map showing the municipalities of the John Taolo Gaetsewe DM (Source: www.municipalities.co.za).

4.3. Gamagara LM

The Gamagara LM serves an area of 2619km², which is approximately 10% of the total John Taolo Gaetsewe DM area. The LM is located in the north-eastern section of the Northern Cape on the N14 National Road between Upington and Vryburg.

The Gamagara LM is a category B local municipality and includes four (4) towns namely, Kathu, Sishen, Olifantshoek and Dibeng. Dingleton was a town within the LM but the residents of the town are planned to be relocated to Kathu due to mining activity planned by the Sishen iron-ore mine. The LM is classified as a small mining town.

The Gamagara LM is described as a developing municipality, and in order for the municipality to grow and develop land is needed. Most of the land is currently privately owned. The municipality does not have serviced land currently available due to illegal land grabs, however the municipality is in a process of negotiating with the mining companies in the area for land.

4.4. Baseline Description of the Social Environment

Table 4.2 provides a baseline summary of the socio-economic profile of the Gamagara LM within which the San 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 John Taolo Gaetsewe DM, Northern Cape 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, the Northern Cape

Provincial Spatial Development Framework (PSDF), and the John Taolo Gaetsewe DM and Gamagara LM IDPs.⁴

The region is sparsely populated (less than 5 people per km²), with the highest concentrations occurring in the towns of Kathu and Dibeng, and at the Sishen Mine. In addition to the towns and the mine settlements, a number of isolated homesteads occur throughout the study area. Some of these in the study area include:

- Bosaar
- Flatlands
- Halliford
- Selsden
- Haakboskerm homestead and restaurant
- Limebank
- Klein Landbank
- Curtis
- Dundrum

The Stokkiesdraai guesthouse is located adjacent (south-west) of the proposed San Solar PV facility site. The proposed San Solar facility site is in a rural/agricultural area of the north-eastern part of the Northern Cape Province, ~ 5 km north east of the town of Dibeng and 16 km south west of Kathu. The topography of the site is flat, sloping gently towards the Gamagara River in the west. The highest point in the area is the road over rail-bridge located to the south of the site. The dominant land use in the area is farming, specifically beef cattle, sheep and goats. The road (R380) between Dibeng and Kathu cuts across the southern portion of the property. This road links Dibeng and Kathu with the N14. The eastern boundary of the southern section of site is formed a railway line which runs in a north-south direction. Significant tracts of land in the south of the study area have been transformed by mining and prospecting activities. In addition to the towns and the mine settlements, a number of isolated homesteads occur throughout the study area, usually located along or in close proximity to the national road (N1), arterial road (R380) or secondary roads.

Table 4.2: Baseline description of the socio-economic characteristics of the area within which the San Solar PV Facility is proposed

| Location characteristics |
|--|
| » The project is proposed within the Northern Cape Province, which is South Africa's largest, but least populated Province. |
| » The project is proposed within the Gamagara LM of the John Taolo Gaetsewe DM. |
| » The Gamagara LM is approximately 2619km ² in extent, equivalent to approximately 10% of the John Taolo Gaetsewe DM. |
| Population characteristics |
| » Between 2011 and 2016 the Gamagara LM experienced a population growth rate of 28.93% over 5 years. |
| » The Gamagara LM has a high urbanisation rate of 97.6%, which is significantly higher than that of the DM (24.9%). The main reason for the high rate is due to the Gamagara LM being a mining hub and individuals are moving in to the area seeking employment opportunities. |

⁴ While information was derived from the Local Government Handbook South Africa 2019, Northern Cape PSDF, John Taolo Gaetsewe DM and Gamagara 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).

- » The Gamagara LM is male dominated, with males comprising approximately 56.4% of the LM population. The John Taolo Gaetsewe DM is female dominated, with females comprising approximately 50.8% of the DM population.
- » Black Africans comprise the predominant population group within the Gamagara LM and John Taolo Gaetsewe DM.
- » The Gamagara LM, John Taolo Gaetsewe DM, and Northern Cape provincial, and South African national population age structures are all youth dominated. A considerable proportion of the respective populations therefore comprise individuals within the economically active population between the ages of 15 and 64 years of age

Economic, education and household characteristics

- » The Gamagara LM has a dependency ratio of 34.2, which is lower than the John Taolo Gaetsewe DM (57.9), Northern Cape Province (35.8), and South Africa (34.5).
- » Education levels within the Gamagara LM are low with approximately 33% of the population aged 20 years and older who have completed Grade 12 / Matric. Only 10.8% of the age group have received higher education. This implies that the majority of the population can be expected to have a relatively low-skill level and would either require employment in low-skill sectors, or skills development opportunities in order to improve the skills level of the area.
- » The unemployment rate of the Gamagara LM (17.7%) is lower than that of the John Taolo Gaetsewe DM (29.7%).
- » Approximately 32% of people in the Gamagara LM have no monthly income. At least 64% of the population are earning less than R6400 per month. The area can therefore be expected to have a high poverty level with associated social consequences such as not being able to pay for basic needs and services and poor living conditions.
- » The main economic sectors of the Gamagara LM includes mining, game farming and business services.
- » 43% of employed people in the Gamagara LM are employed in the formal sector, of which 5% are employed in the informal sector.
- » As of 2016 there were a total of 15 723 households within the Gamagara LM. This is equivalent to 21.7% of the total number of households within the John Taolo Gaetsewe DM (72 310), and 5% of the total number of households within Northern Cape Province (313 402).
- » The majority of households within the Gamagara LM comprise of houses or brick houses, informal dwellings (i.e. shacks), a flat or house in a backyard, townhouse and flat or apartment in a block of flats.

Services

- » The Gamagara LM achieved to provide the following household services:
 - * 80.8% have access to flush toilet connected to sewerage;
 - * 8.9% have weekly refuse removal;
 - * 52% have access to piped water inside a dwelling; and
 - * 88.1% have electricity for lighting.

5. OVERVIEW OF SOCIAL ISSUES

This Chapter provides a detailed description and assessment of the potential social impacts that have been identified for the detailed design and construction, operation, and decommissioning phases, of the proposed San Solar PV Facility.

The development area will be larger than the area needed for the construction of a 100MW PV facility and will provide the opportunity for the optimal placement of the infrastructure, ensuring avoidance of major identified environmental sensitivities by the development footprint⁵. To avoid areas of potential sensitivity and to ensure that potential detrimental environmental impacts are minimised as far as possible, the development footprint within which the infrastructure of San Solar PV facility and its associated infrastructure will be located will be fully assessed during the EIA Phase.

Three (3) solar facilities have been constructed in the broader area. These include the Sishen Solar PV and Kathu Solar PV facilities located immediately west of the farm Remaining extent of the Farm Wincanton 472. The Kathu Solar facility is a CSP facility located to the east of the study area.

Through the undertaking of this Social Impact Assessment for the development of the power line, the current *status quo* of the area from a social and land use perspective was considered in order to provide an indication of the positive and negative social impacts expected to occur. This assessment considered the following points:

- » The nature, extent and significance of the features within the social landscape being considered.
- » The existing disturbance already present within the social landscape (i.e. mining activities and other industrial developments/infrastructure).

Social impacts are expected to occur during both the construction and operation phases of the 132kV power line. 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 (~12 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

⁵ The development footprint is the defined area (located within the development area) where the PV panel array and other associated infrastructure for San Solar PV will be planned to be constructed. This will be the actual footprint of the facility, and the area which would be disturbed. The extent of the development footprint will be determined in the EIA Phase.

- » 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

| Impact | | | |
|--|--|--|-------------------------------|
| Creation of direct and indirect employment opportunities and skills development | | | |
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Construction of the project will result in the creation of a number of direct and indirect employment opportunities, which will assist in addressing unemployment levels within the area and aid in skills development of communities in the area. | Positive – the creation of employment opportunities will assist to an extent in alleviating unemployment levels within the area. | The impact will occur at a local, regional and national level. | None identified at this stage |
| Description of expected significance of impact | | | |
| At its peak, the construction is likely to result in the creation of approximately 300 – 400 employment opportunities. Of those employment opportunities available, approximately 60% will comprise opportunities for low skilled workers, 25% for semi-skilled workers, and 15% for skilled workers. Skills developed through experience in the construction of the facility will be retained by the community members involved. The impact is likely to be positive, local to national in extent, short-term, and of medium significance | | | |
| Gaps in knowledge & recommendations for further study | | | |
| <ul style="list-style-type: none"> » Collection on exact direct and indirect employment opportunities and skills development opportunities. » Collection of information on local hospitality and services sector | | | |
| Recommendations with regards to general field surveys | | | |
| <ul style="list-style-type: none"> » Site visits and interviews with representatives from local municipality, and the hospitality and services sector. » Site visit and interviews with local chamber of commerce | | | |

Table 5.2: Economic multiplier effects

| Impact Economic multiplier effects | | | |
|--|--|--|-------------------------------|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Economic multiplier effects from the use of local goods and services during the construction phase. | Positive – There are likely to be opportunities for local businesses to provide goods and services during the construction phase of development. | The impact will occur at a local and regional. | None identified at this stage |
| Description of expected significance of impact Economic multiplier effects from the use of local goods and services opportunities include but are not limited to, the provision of construction materials and equipment, and workforce essentials such as services, safety equipment, ablution, accommodation, transportation and other goods. The increase in demand for goods and services may stimulate local business and local economic development (however locally sourced materials and services may be limited due to availability). There is likely to be a direct increase in industry and indirect increase in secondary businesses. The impact is likely to be positive, local to regional in extent, short-term, and of medium significance. | | | |
| Gaps in knowledge & recommendations for further study <ul style="list-style-type: none"> » Collection on exact direct and indirect employment opportunities and skills development opportunities. » Collection of information on local hospitality and services sector Recommendations with regards to general field surveys <ul style="list-style-type: none"> » Site visits and interviews with representatives from local municipality, and the hospitality and services sector. » Site visit and interviews with local chamber of commerce | | | |

Table 5.3: Assessment of impacts from an influx of jobseekers and change in population

| Impact Influx of jobseekers and change in population | | | |
|--|--|---|-------------------------------|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Issue Increased pressure on infrastructure and basic services, and social conflicts during construction as a result of in-migration of people. | Negative – The in-migration of job seekers to the area could result in increased pressure being placed on infrastructure and basic services, and a rise in social conflicts. | The impact will occur at a local level. | None identified at this stage |
| Description of expected significance of impact An influx of people looking for employment or other economic opportunities could result in increased pressure being placed on economic and social infrastructure, and a change in the local population. Population change refers to the size, structure, density as well as demographic profile of the local community. An influx of jobseekers into an area, could lead to a temporary increase in the level of crime, cause social disruption and put pressure on basic services. It could also potentially create conflict between locals and outsiders due to potential differences in racial, cultural and ethnic composition. A further negative impact that could result due to an influx of jobseekers into an area is an increase in unemployment levels due to an oversupply of available workforce, particularly with respect to semi- and unskilled workers. | | | |
| Gaps in knowledge & recommendations for further study <ul style="list-style-type: none"> » Collection of information on existing community challenges and needs Recommendations with regards to general field surveys <ul style="list-style-type: none"> » Site visit and interviews with representatives from local municipality and community representative | | | |

Table 5.4: Assessment of safety and security impacts

| Impact Safety and security impacts | | | |
|--|---|---|--|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Temporary increase in safety and security concerns associated with the influx of people during the construction phase. | Negative – The in-migration of job seekers to the area could be perceived to result in increased criminal activity. | The impact will occur at a local level. | None identified. No workers should be allowed to reside on-site during construction. |
| Description of expected significance of impact The commencement of construction activities can be associated with an increase in crime within an area. The perceived loss of security during the construction phase of a project due to an influx of workers and / or outsiders to the area (as in-migration of newcomers, construction workers or jobseekers are usually associated with an increase in crime), may have indirect effects such as increased safety and security concerns for neighbouring properties, damage to property, increased risk of veld fire, stock theft, poaching, crime and so forth. The labour force will not permanently reside within the construction site. | | | |
| Gaps in knowledge & recommendations for further study <ul style="list-style-type: none"> » Information on existing crime levels within the area. » Mechanisms for employment of local labour and minimisation of in-migration. Recommendations with regards to general field surveys <ul style="list-style-type: none"> » Site visit and interviews with local farmers and representatives from local farming associations etc. | | | |

Table 5.5: Assessment of impacts on daily living and movement patterns.

| Impact Impacts on daily living and movement patterns | | | |
|--|--|---|--------------------|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Temporary increase in traffic disruptions and movement patterns during construction | Negative – An increase in traffic due to construction vehicles and heavy vehicles could create short-term disruptions and safety hazards for current road users. | The impact will occur at a local level. | None identified. |
| Description of expected significance of impact Increased traffic due to construction vehicles and heavy vehicles could cause disruptions to road users and increase safety hazards. The use of local roads and transport systems may cause road deterioration and congestion. The impact is likely to be negative, local in extent, short-term, and of low significance given the proximity of the project to existing mining operations within the area | | | |
| Gaps in knowledge & recommendations for further study Gaps in Knowledge <ul style="list-style-type: none"> » Number of vehicle trips anticipated during construction. Recommendations with regards to general field surveys <ul style="list-style-type: none"> » Site visit and interviews with local farmers and representatives from local farming associations etc. | | | |

Table 5.6: Assessment of nuisance impacts (noise and dust)

| Impact |
|-----------------------------------|
| Nuisance impacts (noise and dust) |

| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
|--|---|---|------------------|
| Nuisance impacts in terms of temporary increase in noise and dust, and wear and tear on access roads to the site. | Negative – The impact will negatively impact sensitive receptors and could cause disruptions for neighbouring properties. | The impact will occur at a local level. | None identified. |
| Description of expected significance of impact | | | |
| Nuisance impacts associated with construction related activities include noise, dust, and possible disruption to adjacent properties. Site clearing activities increase the risk of dust and noise being generated, which can in turn negatively impact on adjacent properties. The movement of heavy construction vehicles and construction activities and equipment also have the potential to create noise, as well as impacts on travellers travelling along the R505 national road, and gravel access roads. The primary sources of noise during construction would be from construction equipment, vehicle and truck traffic. Noise levels can be audible over a large distance although are generally short in duration. Dust would be generated from construction activities as well as trucks / vehicles driving on gravel access roads. This impact will negatively impact sensitive receptors. The impact of noise and dust on sensitive receptors can be reduced through the application of appropriate mitigation measures. | | | |
| Gaps in knowledge & recommendations for further study | | | |
| » Impact of noise and dust on surrounding landowners. | | | |
| Recommendations with regards to general field surveys | | | |
| » Site visit and interviews with local farmers and representatives from local farming associations etc. | | | |

Table 5.7: Assessment of visual impacts and impacts on the sense of place

| Impact | | | |
|---|--|---|------------------|
| Visual and sense of place impacts | | | |
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Intrusion impacts from construction activities will have an impact on the area's "sense of place". | Negative – The project could alter the area's sense of place which could negatively impact on sensitive receptors. | The impact will occur at a local level. | None identified. |
| Description of expected significance of impact | | | |
| Intrusion impacts such as aesthetic pollution (i.e. building materials, construction vehicles, etc.), noise and light pollution will impact the "sense of place" for the local community. Construction related activities have the potential to negatively impact a local area's "sense of place". Such an impact is likely to be present during the construction phase. It is however expected that the power line will only affect areas and receptors that have already been exposed to other existing grid connection infrastructure (i.e. power lines and substations) and other industrial infrastructure, specifically mining related infrastructure (i.e. for which the sense of place has already been altered). | | | |
| Gaps in knowledge & recommendations for further study | | | |
| » Collection of information on location of existing farming and hospitality operations and activities. | | | |
| Recommendations with regards to general field surveys | | | |
| » Site visit and interviews with local farmers and representatives from local municipality and farming and hospitality association etc. | | | |

5.2. Potential Social impacts during the Operation Phase

It is anticipated that the San Solar PV will operate for approximately 20 years which is equivalent to the operational lifespan of the project).

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
- » Visual impact and sense of place impacts
- » Impacts associated with the loss of agricultural land

Table 5.8: Employment opportunities and skills development

| Impact Direct and indirect employment opportunities and skills development | | | |
|---|---|--|-------------------------------|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Creation of direct and indirect employment and skills development opportunities and skills development as a result of the operation of the project. | Positive – The creation of employment opportunities and skills development will assist to an extent in alleviating unemployment levels within the area. | The impact will occur at a local, regional and national level. | None identified at this stage |
| Description of expected significance of impact During operation a number of direct full time employment opportunities will be created. Of those employment opportunities created approximately 70% will comprise opportunities for low-skilled workers, 25% will comprise opportunities for semi-skilled workers, and approximately 5% will comprise opportunities for skilled workers. Employment opportunities include safety and security staff, operation and monitoring; and maintenance crew. Maintenance activities will be carried out throughout the lifespan of the project, and will include washing of solar panels, vegetation control, and general maintenance around the solar energy facility. The impact is likely to be positive, local to national in extent, long-term, and of medium significance. | | | |
| Gaps in knowledge & recommendations for further study » Information on the exact direct and indirect employment opportunities and skills development opportunities likely to be created during construction | | | |
| Recommendations with regards to general field surveys » Desktop review of REIPPPP | | | |

Table 5.9: Assessment of the visual impact and impacts on sense of place

| Impact Visual and sense of place impacts | | | |
|--|---|---------------------------------------|-------------------------------|
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| Sense of place impacts from a social perspective associated with the operation phase of the solar energy facility and associated infrastructure. | Negative – The project could alter the areas sense of place which could negatively impact on sensitive receptors. | The impact will occur at local level. | None identified at this stage |
| Description of expected significance of impact An area's sense of place is created through the interaction of various characteristics of the environment, including atmosphere, visual resources, aesthetics, climate, lifestyle, culture, and heritage. An area's sense of place is however subjective and largely dependent on the demographics of the population residing within the area and their perceptions regarding trade-offs. For example, while some individuals may prefer not to see any form of infrastructure development, others may be interested in large-scale infrastructure, or engineering projects and consider the impact to be less significant. Such a scenario may be true given that one of the main economic sectors within the area is mining which has altered the landscape from natural to industrial. | | | |
| Gaps in knowledge & recommendations for further study Gaps in Knowledge » Potential sensitive visual receptors need to be identified. | | | |

- » Visual Impact Assessment to inform impact on sense of place.

Recommendations with regards to general field surveys

- » Site visit and interviews with local farmers and representatives from local municipality and farming and hospitality associations etc.

Table 5.90: Assessment on the loss of agricultural land and overall productivity

| Impact | | | |
|--|--|---------------------------------------|-------------------------------|
| Impacts associated with the loss of agricultural land. | | | |
| Issue | Nature of Impact | Extent of Impact | No-Go Areas |
| The development footprint on which the solar energy facility will be developed will be removed from agricultural production. | Negative – Impacts associated with loss of agricultural land due to occupation of land by the solar energy facility. | The impact will occur at local level. | None identified at this stage |
| Description of expected significance of impact | | | |
| The development of the proposed project on an agricultural property would result in the area of land required to support the development footprint being removed from potential agricultural production. This could have negative implications in terms of food production and security and could also threaten jobs of workers employed in the agricultural activities. | | | |
| Gaps in knowledge & recommendations for further study | | | |
| » The current land use and agricultural potential of the area likely to be removed from agricultural production needs to be determined. | | | |
| Recommendations with regards to general field surveys | | | |
| » Site visit and interviews with local farmers and representatives from local municipality and farming and hospitality associations etc. | | | |

6. CONCLUSION AND RECOMMENDATIONS

This SIA focused on the collection of data to provide an understanding of the current social environment associated with the San Solar PV Facility and grid connection corridor that is proposed and identifying and assessing social issues and potential social impacts associated with the development of such a nature. The environmental assessment framework for assessment of impacts and the relevant criteria was applied to evaluate the significance of the potential impacts and to recommend appropriate mitigation and enhancement measures for the identified impacts.

A summary of the potential positive and negative impacts identified for the detailed design, construction and operation phases are presented in Table 6.1 and Table 6.2. A summary of the potential positive and negative cumulative social impacts identified for the project is provided in key findings and recommendations.

Table 6.1: Summary of potential social impacts identified for the detailed design and construction phase of the San 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 |
| Visual and sense of place impacts | Negative | Medium |

Table 6.2: Summary of potential social impacts identified for the operation phase of the San 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 |
| Impacts associated with the loss of agricultural land. | Negative | Low |

6.1. Key findings and Recommendations

The social impacts identified (including all positive and negative impacts) will be either of a low or medium significance. No negative impacts with a high significance rating have been identified to be associated with the development of the San Solar PV Facility. All negative social impacts are within acceptable limits with no impacts considered as unacceptable from a social perspective. The recommendations proposed for the project are considered to be appropriate and suitable for the mitigation of the negative impacts and the enhancement of the positive impacts.

It is recommended that a full EIA level Social Impact Assessment (SIA) be conducted as part of the EIA phase. Based on the findings of the social impact assessment, the following recommendations are made:

- » Review comments pertaining to social impacts received from members of the public, key stakeholders, and any organ of state during the public review of the Scoping Report. Where applicable, comments received from the Department of Environment, Forestry and Fisheries on the Final Scoping Report (FSR), which may pertain to social impacts or have relevance to the SIA, will also be reviewed.
- » Collect primary data during a site visit. Interview directly affected and adjacent landowners, and key stakeholders to obtain primary information related to the project site, social environment, and to gain their inputs on the proposed project and its perceived social impact (positive and /or negative).
- » Update the baseline information with information received during the site visit, as well as any additional information received from the client, or updates to the project description.
- » Assess impacts identified for the project in terms of their nature, extent, duration, magnitude, probability, status, and significance; as well as the degree to which the impact can be reversed, may cause irreplaceable loss of resources, and can be mitigated.
- » Identify mitigation measures with which to reduce negative impacts and enhance positive impacts for inclusion in the Environmental Management Programme (EMPr). As far as possible the mitigation hierarchy of "avoid, minimise, and reduce" will be followed in the mitigation of potential negative impacts.
- » Identify any conditions for inclusion in the Environmental Authorisation (EA).
- » Identify any monitoring requirements for inclusion in the EMPr or EA.
- » Provide a reasoned opinion regarding the acceptability of the project, and whether the proposed project should be authorised.
- » Prepare a SIA Report for inclusion in the EIA Report to be prepared for the project.
- » Subject the SIA Report prepared for the project for inclusion in the EIA Report to external peer review.

6.2. Conclusion

A site visit will be undertaken during the Assessment Phase of the SIA. The site visit will include interviews with key stakeholders and interested and affected parties. The proposed San Solar PV facility and associated infrastructure is unlikely to result in permanent damaging social impacts. From a social perspective it is concluded that the project could be developed subject to the implementation of the recommended mitigation measures and management actions contained in the report.

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