BECRUX TWO SOLAR PHOTOVOLTAIC (PV) ENEGRY FACILITY

Free State Province

Social Assessment - Baseline Report

February 2022

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REPORT DETAILS

Title	:	Social Impact Assessment (SIA) Scoping Report: Becrux Two Solar Photovoltaic (PV) Energy Facility
Authors	:	Savannah Environmental (Pty) Ltd Nondumiso Bulunga
Client	:	Becrux Solar PV Project Two (Pty)Ltd
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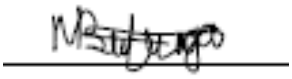
SPECIALIST DECLARATION OF INTEREST

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

18 February 2022
Date

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ACRONYMS

B-BBEE	Broad-Based Black Economic Empowerment
CLO	Community Liaison Officer
CTL	Coal-to-liquids
DFFE	Department of Forestry Fisheries and the Environment
DoE	Department of Mineral Resources and Energy
DM	District Municipality
EA	Environmental Authorisation
ECA	Environment Conservation Act (No. 73 of 1989)
ECO	Environmental Control Officer
EMPr	Environmental Management Programme
EP	Equator Principles
EPC	Engineering, Procurement and Construction
GDP	Gross Domestic Product
GDP-R	Gross Domestic Product per Region
GGP	Gross Geographic Product
GHG	Greenhous 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
IPP	Independent Power Producers (IPPs)
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
PGDS	Provincial Growth and Development Strategy
PICC	Presidential Infrastructure Coordinating Committee
PSDF	Provincial Spatial Development Framework
PV	Photovoltaic
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SIP	Strategic Infrastructure Project

1. INTRODUCTION AND PROJECT DESCRIPTION

Becrux Solar PV Project Two (Pty) Ltd is proposing to develop a 10MW$_{ac}$ Solar Photovoltaic (PV) Energy Facility and associated infrastructure on Portion 1 of the Farm Saltberry Plain 137 and Remaining Extent of Portion 1 of the Farm Roseberry Plain 250, located 4km southeast of the town Sasolburg, within jurisdiction of the Metsimaholo Local Municipality and the Fezile Dabi District Municipality in the Free State Province. The purpose of the facility will be to generate electricity for exclusive use by Sasol Limited for its Sasolburg operations.

Power generated at the facility will be delivered to Sasol Limited by feeding into the grid through a Wheeling Agreement signed with Eskom and/or direct embedded generation. To evacuate the generated power to Sasol Limited, an 11kV overhead power line will be established to connect the proposed 11kV onsite containerised/non-containerised substation to the existing Sigma Substation. A grid connection corridor up to 200m wide, extending up to ~400m around the footprint of the Sigma Substation, and up to 500m in length, has been identified for the assessment and suitable placement of the grid connection infrastructure within the corridor. This corridor will provide for the avoidance of sensitive environmental areas and features and allow for the micro-siting of the overhead power line within the corridor.

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 Basic Assessment (BA) process being conducted for the project.

1.1. Project Description

A development area of up to ~30ha and a development footprint of up to ~19.99ha have been identified within the project site (~339.87ha) by Becrux Solar PV Project Two (Pty) Ltd for the development of the Becrux Two Solar PV Energy Facility. Infrastructure associated with the Solar PV Energy Facility will include the following:

- Solar PV array comprising PV modules and mounting structures.
- Inverters and transformers.
- Cabling between the panels.
- 11kV onsite containerised/non-containerised substation.
- 11kV overhead power line for the distribution of the generated power, which will be connected to the existing Sigma Substation.
- Main access gravel road and internal gravel roads.
- Operations and Maintenance (O&M) building, including a sewage/conservancy tank and water storage tanks.
- Site office, workshop area, storage area, and laydown area.
- Fire break and fencing around the site, including an access gate.

1.2. Objective of the Basic Assessment Process

This SIA Report has been prepared as part of the BA Process being undertaken for Becrux Two Solar PV Facility and associated infrastructure. The purpose of this SIA Report is to provide details on the nature and extent of the Becrux Two 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 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 have been addressed in detail as part of the BA process 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 project 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.

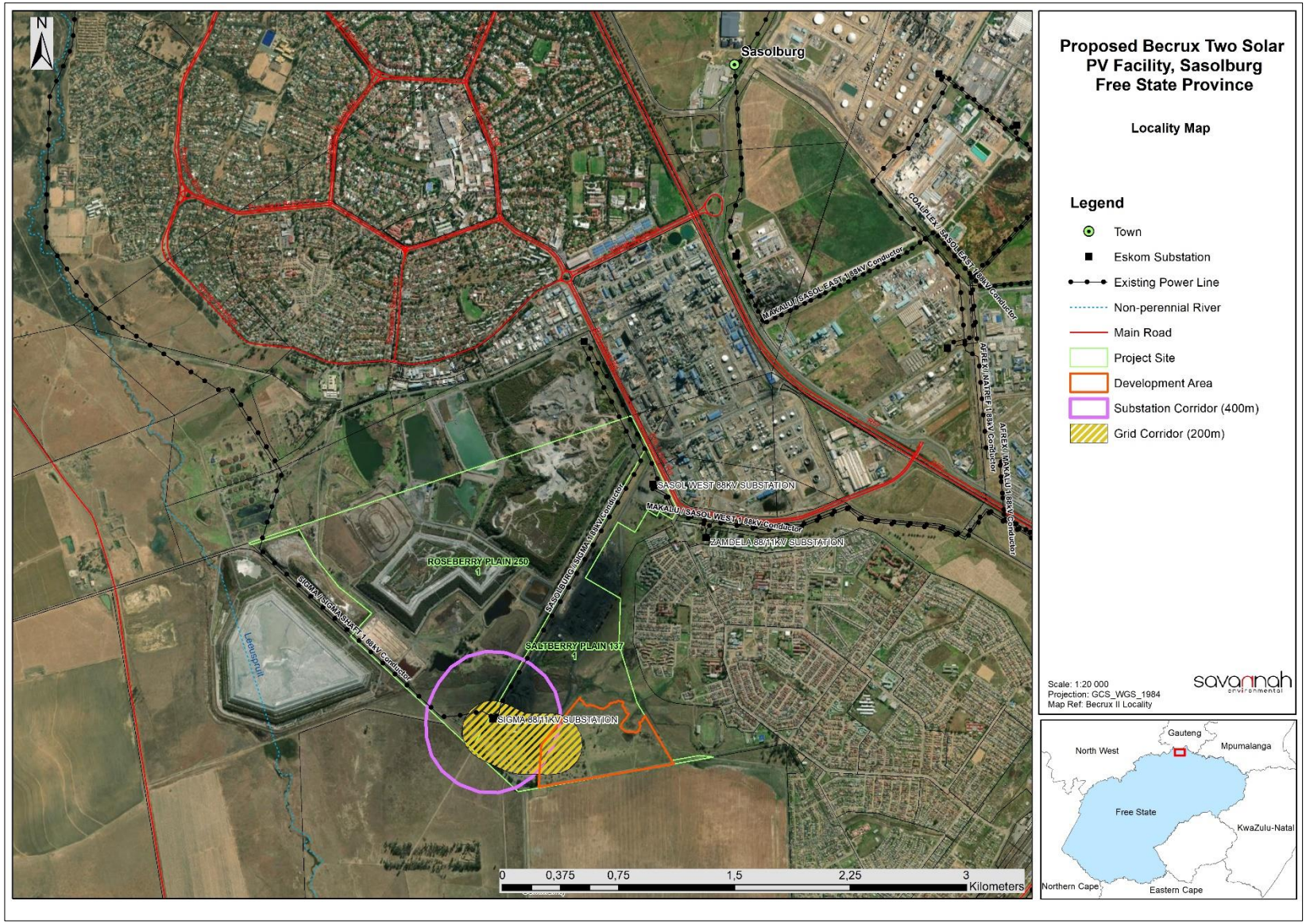

Figure 1-1: Locality map illustrating the location of the Becrux Two Solar PV facility.

1.4. Structure of the SIA Report

This SIA Report has been structured as follows:

- **Chapter 1** provides the introduction to the proposed project and the project description.
- **Chapter 2** provides an overview of the methodology and approach utilised in preparing this SIA Report.
- **Chapter 3** provides an overview of the legislative and policy environment within which the Becrux Two Solar PV Energy Facility is proposed.
- **Chapter 4** provides the socio-economic profile of the Metsimaholo Local Municipality, Fezile Dabi District, Municipality and South Africa as a whole.
- **Chapter 5** describes the potential social impacts which have been identified for the project.
- **Chapter 6** provides the conclusion of the assessment study and recommendations.

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 Process 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 Becrux Two Solar PV Energy 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 way 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 in Section Error! Reference s ource not found.. 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 Basic Assessment 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

» Data derived from the 2011 Census, documents from Free State Province, Fezi Dabi District Municipality and Metsimaholo Local Municipality was used to generate the majority of information provided in the baseline profile of the study area. The possibility therefore exists that the data utilised may be out of date and may not provide an accurate reflection of the current status quo.
» This SIA Report is intended to provide an overview of the current social environmental and assist in the identification of potential social impacts.
» This SIA Report was prepared based on information which was available to the specialist at the time of preparing the report. The sources consulted are not exhaustive, and the possibility exists that additional information which might strengthen arguments, contradict information in this report, and / or identify additional information might exist.
» Some of the project projections reflected in this SIA Report (i.e. with regards to job creation and local content) 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.

2.4. Assessment of Impacts

Direct, indirect, and cumulative impacts associated with the projects must be assessed in terms of the following criteria:

» The **nature**, which shall include a description of what causes the effect, what will be affected and how it will be affected.

» The **extent,** wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high):

» The **duration**, wherein it will be indicated whether:
* the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
* the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
* medium-term (5–15 years) – assigned a score of 3;
* long term (> 15 years) - assigned a score of 4; or
* permanent - assigned a score of 5;

» The **magnitude**, quantified on a scale from 0-10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.

» The **probability** of *occurrence,* which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1–5, where 1 is very improbable (probably will not happen),2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).

» the **significance,** which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and

» the **status**, which will be described as either positive, negative or neutral.
» the degree to which the impact can be reversed.
» the degree to which the impact may cause irreplaceable loss of resources.
» the degree to which the impact can be mitigated.

The **significance** is calculated by combining the criteria in the following formula:

S=(E+D+M)P

S = Significance weighting
E = Extent
D = Duration

M=Magnitude
P=Probability

The **significance weightings** for each potential impact are as follows:

- < 30 points: Low (i.e., where this impact would not have a direct influence on the decision to develop in the area),
- 30-60 points: Medium (i.e., where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- > 60 points: High (i.e., where the impact must have an influence on the decision process to develop in the area).

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:

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) (2016)
- National Development Plan (NDP) 2030 (2012)
- Integrated Resource Plan for Electricity (IRP) 2010 – 2030 (2011) (and subsequent updates thereto)
- Strategic Infrastructure Projects (SIPs)

Provincial Policy and Planning Context:
- Free State Provincial Growth and Development Strategy (FSPGDS) (2030)
- Free State Provincial Spatial Development Framework (FSPSDF) (2012)

Local Policy and Planning Context:
- Fezile Dabi District Growth and Development Strategy (2004 -2014)
- Fezile Dabi District Municipality Integrated Development Plan (2020 - 2021)
- Metsimaholo Local Municipality Integrated Development Plan (IDP) (2020-2021)
- Metsimaholo Local Municipality Local Economic Development (LED) (2012)
- Metsimaholo Spatial Development Framework (SDF) (2012)

3.1. National Policy and Planning Context

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

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

Table 3.1: Relevant national legislation and policies for the Becrux Two PV Energy 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.
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 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 renewable energy 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 renewable energy 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

Relevant legislation or policy	Relevance to the proposed project
	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: » 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.

Relevant legislation or policy	Relevance to the proposed project
	» 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 Metsimaholo Local Municipality municipal area.
National Climate Change Response Policy, 2011	The Conference of the Parties (COP) 21 was held in Paris from 30 November to 12 December 2015. From this conference, an agreement to tackle global warming was reached between 195 countries. This Agreement is open for signature and subject to ratification, acceptance or approval by States and regional economic integration organisations that are Parties to the Convention from 22 April 2016 to 21 April 2017. Thereafter, this Agreement shall be open for accession from the day following the date on which it is closed for signature. The agreement can only be sanctioned once it has been ratified by 55 countries, representing at least 55% of emissions. South Africa signed the Agreement in April 2016 and ratified the agreement on 01 November 2016. The Agreement was assented to by the National Council of Provinces on 27 October 2016, and the National Assembly on 1 November 2016. The Agreement was promulgated on 04 November 2016, thirty days after the date on which at least 55 Parties to the Convention, which account for at least 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary. South Africa's National Climate Change Response Policy (NCCRP) establishes South Africa's approach to addressing climate change, including adaptation and mitigation responses. The NCCRP formalises Government's vision for a transition to a low carbon economy, through the adoption of the 'Peak, Plateau and Decline' (PPD) GHG emissions trajectory whereby South Africa's emissions should peak between 2020 and 2025, plateau for approximately a decade, and then decline in absolute terms thereafter, and based on this the country has pledged to reduce emissions by 34% and 42% below Business As Usual (BAU) emissions in 2020 and 2025, respectively. The policy provides support for the Becrux Two Solar PV Energy Facility, which will contribute to managing climate change impacts, supporting the emergency response capacity, as well as assist in reducing GHG emissions in a sustainable manner.
Climate Change Bill, 2018	On 08 June 2018, the Minister of Environmental Affairs published the Climate Change Bill ("the Bill") for public comment. The Bill provides a framework for climate change regulation in South Africa aimed at governing South Africa's sustainable transition to a climate resilient, low carbon economy and society. The Bill provides a procedural outline that will be developed through the creation of frameworks and plans. The Becrux Two Solar PV Energy Facility is a renewable energy generation facility and would not result in the generation or release of emissions during its operation.

3.2. Provincial Policies

This section provides a brief review of the most relevant provincial policies. The proposed Becrux Two Solar PV Energy Facility and associated infrastructure 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 Becrux Two Solar PV Energy Facility

Relevant policy	Relevance to the proposed project
Free State Provincial Growth and Development Strategy (2030)	The draft Provincial Growth and Development Strategy (PGDS) – Free State Vision 2030 was released in May 2012. The PGDS is a critical instrument to shape and coordinate the allocation of national, provincial and local resources, and private sector investment to achieve sustainable development outcomes based on provincial development needs and priorities. The Free State Vision 2030 marks a break with the current five-year planning approach and is a reflective long-term strategic framework envisioned to create an environment to respond to the complexities that characterize the provincial development landscape. Underpinning the vision is the ability of government, together with people, to map out the density of the province. The Free State 2030 targets include: » Economic Restructuring, Growth and Employment Creation » Education, Innovation and Skills Development » Improved Quality of Life » Sustainable Rural Development » Build Social Cohesion The development of the Becrux Two Solar PV Energy Facility therefore provides the Free State with an opportunity to diversify its economy in a way that will assist in employment opportunities and contribute towards economic growth and development.
Free State Provincial Spatial Development Framework (FSPSDF) (2012)	The vision, the FSGS and the FSPSDF collectively respond to the need for the province to describe and map its future destiny through long-term development planning, and to forge a common and shared development agenda across a wide spectrum of service delivery mechanisms. This relates to the interconnectedness between development imperatives and the capacity of the various forms of capital vested in the province and to ultimately bring about a better life for all. The PSDF is a spatial and strategic supplement to the Free State Provincial Growth and Development Strategy (FSPGDS, 2030) as it relates to the shaping and coordination of the allocation of national, provincial and local resources, and private sector investment to achieve sustainable development outcomes based on provincial development needs and priorities. The Free State Vision 2030 envisages that, by 2030, the Free State shall have a resilient, thriving and competitive economy that is inclusive, with immense prospects for human development anchored on the principles of unity, dignity, diversity, equality and prosperity for all. Impelled by this vision, the Free State of 2030 will be characterized by an economy that encourages the development of new growth sectors with emphasis on the knowledge-based industries and the green economy (FSGDS, 2030). The transition towards a resilient, thriving and competitive economy will be pursued within the overarching framework of redistribution of economic resources, ownership and control of the provincial economy, and the creation of opportunities for the marginalized to play a central and meaningful role in the growth and development. The Free State Vision 2030 furthermore envisages that, by 2030, ownership and control patterns

Relevant policy	Relevance to the proposed project
	of the economy will be transformed, spatial under-development will be addressed, and basic services such healthcare, education, electricity, water and sanitation will be equitable accessed by the people of the province. In the quest for inclusive economic growth and development, the environment will be protected for future generations. Lasting responses to climate change will be part of the landscape of the development of the province. Provincial strategic growth and development pillars include: » Pillar 1: Inclusive economic growth and sustainable growth job creation » Pillar 2: Education, innovation, and skills development » Pillar 3: Improved quality of life » Pillar 4: Sustainable rural development » Pillar 5: Build social cohesion » Pillar 6: Good Governance The overarching goal of the PSDF is to enable sustainability through sustainable development. In the Free State, renewable energy is a key focus area of the Free State Development Corporation, especially the solar energy sector. Projects for the manufacturing of solar panels and geysers have already been conceptualized. The Free State SDF emphasizes the need for economic growth and renewable energy investment. Thus, the proposed development is aligned to the economic and investment priorities for the Free State provincial government.
Free State Green Economy Strategy (2014)	This Green Economy Strategy for the Free State Province (FSGES) was developed in alignment with the national green economy strategy elaborated in the National Green Economy Framework and Green Economy Accord, as well the Free State Provincial Growth and Development Strategy. The development process was spearheaded by the Department of Economic Development, Tourism and Environmental Affairs (DETEA). The objective was to develop a green economy strategy to assist the province to, amongst others, improve environmental quality and economic growth, and to develop green industries and energy efficiency within the province. The Becrux Two Solar PV Energy Facility will contribute to the aim of energy efficiency and green industry while promoting economic growth and is therefore consistent with this strategy.
Free State Investment Prospectus (2019)	The Premier of the Free State considers providing access to individual investors to accurate and pertinent information as something that makes it easier for investors to glean investor ready opportunities that are currently available in the Free State. Opportunity of the development of renewable energy is considered in the key sectors overview. The prospectus states that opportunities are opening up in the province for the energy sector, including renewable energy. Rezoning for the development of multiple solar energy facilities has already been undertaken in the province. The development of a Solar Park in the Xhariep region is seen as a driver of growth along the banks of the Orange (Gariep) River. Considering the future opportunities available for the development of renewable energy facilities (including solar PV facilities) the development of the Becrux Two Solar PV Energy Facility is considered to be in-line with the Investment Prospectus of the Province.

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 Becrux Two Solar PV

Energy 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 Becrux Two Solar PV Facility

Relevant policy	Relevance to the proposed project
Fezile Dabi District Municipality Growth and Development Strategy (2004-2014)	The Strategic Development Framework (SDF) firstly seeks to encourage rural – urban migration by providing subsidised services in key selected areas / nodes / economic clusters. Secondly, the SDF seeks to strengthen and supplement the functional economic strips / corridors characterising the District's space-economy, as well as developing industry specific economic clusters / activity areas. The following are the development principles to be achieved as part of the Spatial Development Framework for the Fezile Dabi District Municipality (FDDM): 1. To actively protect, enhance and manage the natural environmental resources of the District, in order to ensure a sustainable equilibrium between biodiversity conservation, mining, manufacturing and industrial activities, agriculture, forestry, and tourism related activities within the District. 2. To optimally capitalize on the strategic location of the District and its five key economic strips / corridors, and to functionally link all towns and settlements to one another through establishing and maintaining a strategic road and rail network comprising internal and external linkages. 3. To utilise the existing natural environmental, cultural-historic and man-made activity areas within the District as Tourism Anchors and Nodes; and to develop and promote the eastern parts of the District (around route R33) as a Primary Tourism Corridor linking the Lowveld Tourism Precinct to the north (in Ehlanzeni), to the St Lucia Tourism Precinct located to the south of the District. 4. To promote forestry within and along the identified Primary Tourism Corridor. 5. To promote intensive and extensive commercial farming activities throughout the district, and to facilitate and concentrate subsistence farming activities within certain rural communities. 6. To unlock the development potential of existing towns through developing industry specific Special Economic Zones / Economic Clusters throughout the District, in line with the Mpumalanga Provincial Integrated Spatial Framework (MPISF) and the provincial LED Strategy and in accordance with the following sectors: a. Agricultural Cluster b. Forestry Cluster c. Industrial Cluster 7. To facilitate and accommodate mining in the District in a sustainable manner in order to support local electricity generation and industrial development. 8. To establish a functional hierarchy of towns and settlements in the District, and to ensure equitable access to social infrastructure and the promotion of local economic development by way of Thusong Centres (Multi-Purpose Community Centres (MPCCs)).

Relevant policy	Relevance to the proposed project
	9. To ensure that all communities have access to at least the minimum levels of service as enshrined in the Constitution. 10. To consolidate the urban structure of the District around the highest order centres by way of infill development and densification in Strategic Development Areas (SDAs). Development Principles 1 to 9 highlighted the proposed future spatial structure of the District Municipality, as well as the major activity nodes/centres to be promoted as such. Issues and trends affecting the district include the occurrence of environmental degradation, a great deal of conflict also exists between mining, agricultural and tourism activities, over the use of land. More often than not the conflict results in the loss of valuable agricultural land, and land featuring high biodiversity and/or eco- tourism / conservation potential. The proposed development is located in a mining area. The development will not compromise on the land however this impact can be mitigated through other various means (i.e. rezone to grazing land for animals).
Fezile Dabi District Municipality Integrated Development Plan (IDP) (2021 - 2022)	The Fezile Dabi District Municipality IDP outlines the municipalities plan for 2021 – 2022. The core mission of the municipality is to improve the lives of citizens and progressively meet their basic, social and economic needs, thereby restoring community confidence and trust in government. Of the 57 key performance areas, the following goals and objectives are of specific relevance to the this project: » To enhance human capacity and productivity within the municipality » To maintain sounds labour relations » To create skills development opportunities for students and the unemployed in the district » To create an environment that stimulates the local economic growth The proposed solar energy facility is in line with the FDDM IDP objectives as the development will assist in providing opportunities to create skills development for the unemployed in the district and creating an environment that stimulates local economic growth.
Fezile Dabi District Municipality Climate Change Vulnerability Assessment and Response Plan (2016)	Fezile Dabi District Municipality acknowledges that climate change poses a threat to the environment, its residents, and future development. Actions are required to reduce carbon emissions (mitigation) and prepare for the changes that are projected to take place (adaptation) in the District. Fezile Dabi District Municipality has therefore prioritised the development of a Climate Change Vulnerability Assessment and Climate Change Response Plan. The plan was developed through the Local Government Climate Change Support (LGCCS) program, with support from the Department of Forestry, Fisheries and the Environment (DFFE), and the Deutsche Gesellschaft für Internationale (GIZ). The Becrux Two Solar PV Energy Facility indirectly contributes to the overall climate change response plan of the district municipality by providing energy without reliance on fossil fuels and therefore exacerbating climate change at a provincial and national level.
Metsimaholo Local Municipality Integrated Development Plan (IDP) (2020-2021)	The Metsimaholo Local Municipality (MLM) collected and based its strategy on the strategic areas identified by both National and Provincial Government. The five-year plan is aligned to the local priorities reflected in the election manifesto and is further based on the Medium Term Strategic Framework outcomes and the revised National Key Performance Indicators. Policies that the IDP follows that relate to the proposed development include the New Growth Path which identified five other priority areas as part of the programme to create jobs, through a series of partnerships between the State and the private sector. The one priority area in the

Relevant policy	Relevance to the proposed project
	New Growth path that is in line with the proposed development includes: "Green economy – expansions in construction and the production of technologies for solar, wind and biofuels are supported by the draft Energy on Integrated Resource Plan. Clean manufacturing and environmental services are projected to create 300 000 jobs over the next decade. The MLM mission is 'To promote the sustainable socio-economic development of our communities through effective, efficient and affordable service delivery and sound institutional and financial management'. The MLM strategic priorities, key performance areas (KPAs), objectives and programmes include: » SP1- Build our local economy to create more employment, decent work and sustainable livelihoods » SP2- Broaden access to and improve the quality of municipal services » SP3- Build united, non-racial, integrated, and safe communities » SP4- Promote active community participation » SP5- Ensure more effective, accountable and clean local government that works together with the national and provincial government. The proposed solar energy facility development will advance the objectives of local economic development and job creation outlined in the strategic priorities of the MLM IDP.
Metsimaholo Local Municipality Local Economic Development (LED) (2012)	The purpose of the MLM LED Strategy (Draft) is to develop a framework for economic growth and development. Whilst the development of economic sectors and industries is the focal point, the objective is to ensure skills development, quality employment, SMME and co-operative development becomes part of the outcome during implementation. The economic outcome of the strategy is not intended at measuring growth only, but the ability to respond to social needs like education, health, recreation and the general quality of life. The purpose of the MLM LED Strategy includes the following: » The development of local human capital that will provide capacity to the development of sectors » The creation of quality employment for local people in various sectors of the local economy » The stimulation of entrepreneurship through value chain development in sectors The objectives of the MLM strategy include the following: » To beneficiate the existing manufacturing industry and diversify the Local economy (that is, the ability to develop value chain in any industry) » To develop and position the Metsimaholo economy as the most performing economy in the Free State Province » To develop and position the Metsimaholo economy as a leading leisure destination in the Free State Province » To develop and position the Metsimaholo economy as a leading retail destination in the Fezile Dabi District The intended impacts include the following: » The development of highly skilled people in the local economy » The increase in employment of local people in the local economy » The development of SMMEs and Co-operatives in various sectors of the local economy The LED lists a number of key considerations that apply to all future planning actions in the MLM area that is relevant to the proposed development, such as an increase in employment opportunities, development of local human capital and diversifying the local economy. The proposed development will contribute to these key plans by introducing a relatively new industry to the area (diversifying the local economy), it will create new employment

Relevant policy	Relevance to the proposed project
	opportunities for the local community and introduce skills development and training that will develop the local human capital.
Metsimaholo Spatial Development Framework (SDF) (2012)	The municipality strategy aims at meeting the needs of its environmental, economic and social challenges, with a planning strategy which: » Protects and improves the environment and encourages high quality design » Relate the development of land to a fair and effective distribution of resources » Achieves sustainable and less energy intensive forms of development » Attempts to secure economic diversification » Sustains and enhances the role of the Town Centers for commercial and leisure purposes and a place to live » Fosters regeneration and redevelopment in the municipality's disadvantaged areas and the town centers currently facing decay as a result of decentralization of economic activities on the edges of the municipal area (the Gauteng bordering areas) » Encourages development in the growth areas to ensure the fair distribution of economic activities within the municipality » The protection of major open spaces within the urban and rural settlements from inappropriate development The municipality attaches considerable importance to "green" issues inducing for example energy conservation, the protection of its blue corridors, the retention of the green wedges and other areas of open space and heritage significance Key strategic guiding issues of the SDF that are of specific relevance to the proposed development include: » Sasolburg, Deneysville and Oranjeville are three of the major urban centers in the Municipality at various scales. These areas are also the major areas within which development opportunities exist and should be concentrated for higher density development » The development of these areas is therefore critical for job creation and new housing development. Several smaller areas located outside of these urban centres are also identified for new development or redevelopment. » The development of these areas must be in line with the intention of providing job opportunities and minimising travelling for the poor to benefit from these opportunities. The SDF identifies a number of priority areas which are regarded as relevant to the proposed development which include: sustainable and less energy intensive forms of development and economic diversification. The proposed development is located in close proximity to Sasolburg within an industrial area. The development also has the intention of providing job opportunities for the local community which is line with the SDF.

The findings of the review of the relevant policies and documents the , therefore, indicates that the establishment of the proposed Becrux Two Solar PV Energy Facility would contribute towards addressing key issues in Fezile Dabi, which include high levels of poverty and unemployment, skills shortage, and inequalities through the creation of employment opportunities, the provision of skills training opportunities, and local economic growth, including growth in personal income levels of those community members who would be employed on the project.

3.4. Conclusion

The review of relevant legislation, policies and documentation indicates that renewable or green energy (i.e. energy generated by naturally occurring renewable resources) and the establishment of the Becrux Two Solar PV Energy Facility 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. Specifically those relating to employment creation, social and economic development and upliftment, and an increase in renewable energy and electricity supply which has the potential to further improve individuals' standard of living.

4. SOCIAL PROFILE

The Becrux Two Solar PV Energy Facility, including its associated infrastructure, is proposed Remainder of Portion 1 of the Farm Saltberry Plain 137 and the Remaining Extent of Portion 1 of the Farm Roseberry Plain 250, located near Sasolburg within jurisdiction of the Metsimaholo Local Municipality and the Fezile Dabi District Municipality in the Free State Province (refer to **Table 4.1**).

Table 4.1: Spatial Context of the study area for the development of the Becrux Two Solar PV Energy Facility and associated infrastructure

Province	Free State Province
District Municipality	Fezile Dabi District Municipality
Local Municipality	Metsimaholo Local Municipality
Ward number	11 &14
Nearest town(s)	Sasolburg

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

4.1. Free State Province

According to the Local Government Handbook, 2012, the Free State Province is a rural province of farmland, mountains, goldfields and widely dispersed towns. The economy is dominated by agriculture, mining and manufacturing. About 90% of the province is under cultivation for crop production. The province is the world's fifth-largest gold producer, with the mining industry being the major employer in the province. The Free State Province is a leader in the chemicals industry, being home to the giant synthetic-fuels company Sasol. The Vredefort Dome, which is 10km in diameter, and is located about 100km south-west of Johannesburg, is South Africa's seventh World Heritage Site.

4.2. Fezile Dabi District Municipality (DM)

Fezile Dabi District Municipality (FDDM) is situated within the northern portion of the Free State with the major towns being Kroonstad, Parys, Sasolburg and Vredefort. FDDM is one the five district municipalities located within the Free State province. It comprises four local municipalities which are:

- Metsimaholo LM
- Mafube LM
- Moqhaka LM
- Ngwathe LM

The district municipality measures a total of 21 301 square kilometres in extent and is bordered by the Vaal Dam and Vaal River to the north which also serves as a boundary between the Free State, Gauteng and North West Province (FDDM IDP 2020 – 2021). The seat of Northern Free State is Sasolburg. Main economic sectors include: Trade (22%), community services (20%), manufacturing (13%), households (13%), agriculture (12%), finance (7%), construction (6%) and transport (5%). The main tourist attraction in the District is the Vredefort Dome, being the third largest Meteorite site in the world (Local Government Handbook, 2012).

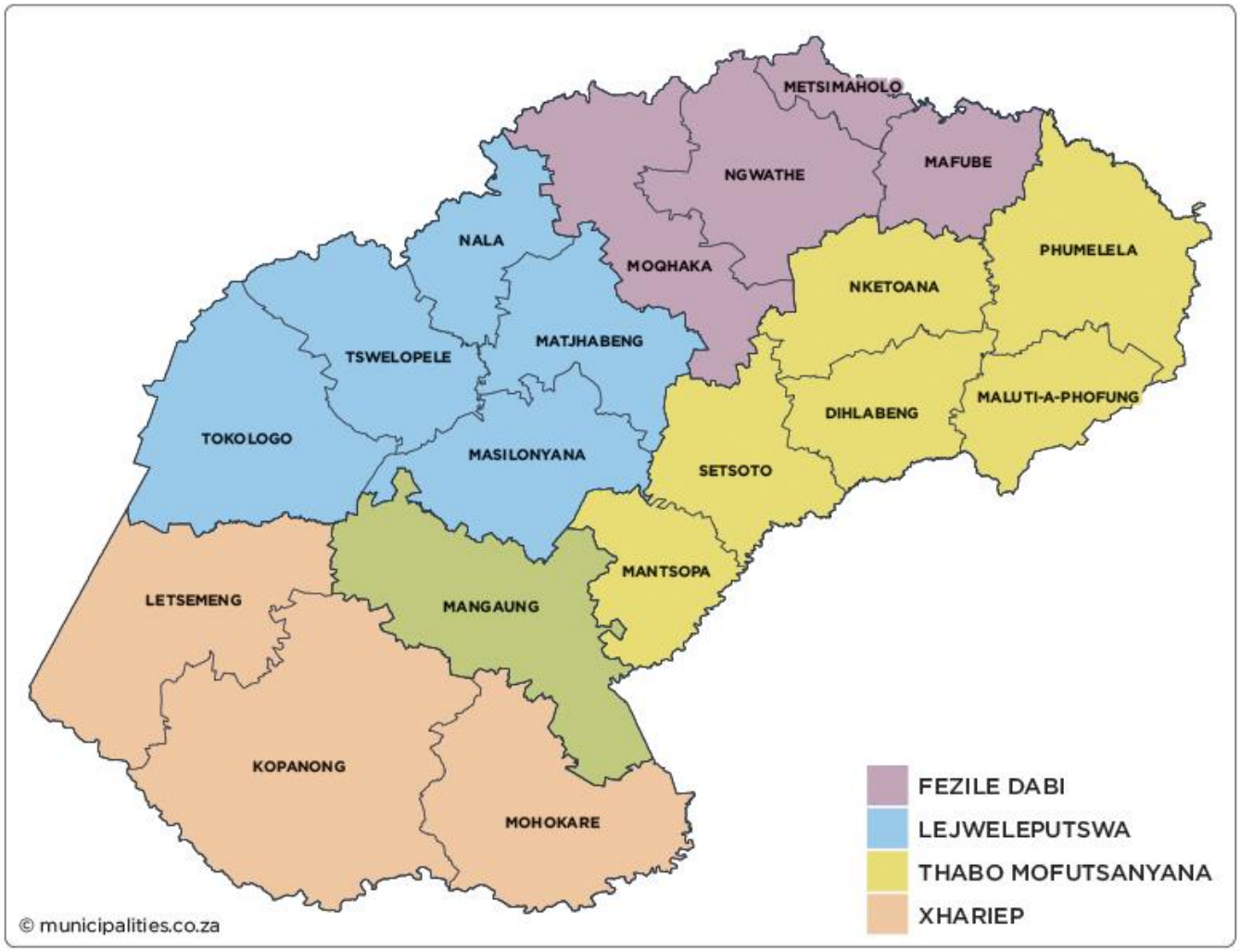

Figure 4-1 Municipalities in Free State Province

4.3. Metsimaholo Local Municipality (LM)

Metsimaholo Local Municipality (MLM) is situated in the northern part of the Fezile Dabi District. The MLM comprises the following:

Urban Configuration

- Sasolburg/Zamdela is located in the heart of worldly renowned coalfields. This predominately industrial town is further located in close proximity (20km) to the nationally well-known industrial area of Vereeniging /Vanderbijlpark. Apart from the internationally known Sasol ' oil from coal refinery', a vast number of by-products inducing olefins, waxes, alcohols, tar products, inorganic chemicals, rubber, gases, plastics, fertilizers, etc. are manufactured in the area.
- Deneysville / Refengkgotso urban area is situated in the north-eastern section of the Metsimaholo Region. Industrial activities are exclusively related to the boating industry. The town's close proximity to the coal mining and industrial activities in Sasolburg and its nearby location to the large industrial complexes of Vereeniging and Vanderbijlpark influence economic activities in Deneysville. The largest number of the inhabitants of Refengkgotso is employed in Sasolburg and the adjacent industrial complexes of Vereeniging and Vanderbijlpark. Refengkgotso can thus be labelled as a

typical satellite residential town to the surrounding industrial areas. These factors contribute to the relatively low level of economic activity in the Deneysville area.

» The Oranjeville/ Metsimaholo urban area is located on the riparian of the Vaal Dam in close proximity to the northern boundary of the Free State Province. Although the prominent economic sector of the area is agriculture, recreation and tourism sector is prominent as the town is bound on three sides by the Vaal Dam and located in close proximity to the Gauteng Province.

Recreation and Tourism:

» The hunting and guesthouse industries are rapidly growing.
» The Vaal Dam and the Vaal River Barrage are key recreational areas both for permanent residents and for weekend visitors.
» Power boating, angling and shoreline recreational activities are of significant economic value and as such may be influenced by water quality changes.
» Apart from Abrahamsrust, most of the resorts are situated on the Gauteng side of the Vaal River, indicating possibilities for future development to provide for similar facilities on the Free State side.
» Three scenic routes are identified as having tourism potential. Two thereof run virtually parallel to the Vaal River in the Koepel area and comprise extreme beauty, unique topography and landscape features. The routes also provide in some instances access to the Vaal River and are identified as:
    - The Koepel Scenic Route (Sections of Roads S264, 212, 80 & 713)
    - The Vaal Eden Scenic Route (Sections of Roads S1052 &171)
    - Roads S159 and sections of Road R716 (to Jim Fouche Resort) providing relatively good access to various tourist destinations along the Vaal Dam.

Conservation/ Natural Resources:

» Exceedingly prominent coal reserves are located within the municipal area, which makes large areas unavailable for agriculture.
» Large areas within the Sasolburg Region, in close proximity to the Vaal River, are utilised for coal mining.
» Other natural resources principally relate to productive soils of agricultural significance, which are the most prominent in the Sasolburg/Parys area.
» The tourism and agricultural sectors are directly dependent on the sustainable use and management of these natural resources.
» The most serious threats to soil resources are erosion, compaction, acidification, salination and infestation by weeds and pathogens.

Regional Instructure

Rail

» Passenger service from East London through Bloemfontein, Kroonstad, Sasolburg towards Johannesburg.
» The railway line is predominantly utilised by Sasol for industrial proposes.
» No commuter service is provided to the Greater Sasolburg community.

Roads:

The well-developed character of the region is a direct result of it being serviced by means of a strategically important road network. The most significant of these arterials are identified as the:

» N1 National Road linking the area with Gauteng and central Free State
» N3 National Road, stretching through the eastern section of the area.
» R59 linking Sasolburg, Parys and Viljoenskroon / Orkney to the North West Province

» R57 linking the industrial areas of Heilbron with Sasolburg and subsequently linking the Eastern Free State and KwaZulu Natal via Sasolburg with the Gauteng Province.

4.4. Project Site

The Becrux Two Solar PV Energy Facility is proposed on Portion 1 of the Farm Saltberry Plain 137 and the Remaining Extent of Portion 1 of the Farm Roseberry Plain 250, located near Sasolburg within jurisdiction of the Metsimaholo Local Municipality and the Fezile Dabi District Municipality in the Free State Province. The closest major town to the project site is Sasolburg. Majority of the land surrounding the proposed site comprises large industrial mining areas and agricultural areas. There is also Sasol (oil from coal refinery) and a number of by-products including olefins, waxes, alcohols, tar products, inorganic chemicals, rubber, gases, plastics, fertilizers etc., that are manufactured in the nearby area.

The site is located in an area that has a distinct rural and agricultural character, with mining activity (mine dumps/slimes dams) located north-west of the proposed development site at a distance of 500m. The Sasol CTL Plant is located north of the proposed feasible site area at a distance of 1.4km at the closest. The town of Sasolburg (proper) is located west of the Sasol Plant and north of the aforementioned mine dumps and slimes dams. The Sasol Plant is the most prominent built structure within the region, with its significantly tall smoke stacks and flare stacks visible from most parts of the study area.

The Sigma 88/11kV Substation is located within the Sigma Colliery property at a distance of approximately 400m from the PV facility site. The PV facility will connect with the substation be means of an 11kV overhead power line. Most of the proposed power line will be located within the Sigma Colliery property. Access to the proposed development area is provided by a secondary road that traverses from the Eric Louw Road (at the Sasol Plant's west gate) to the Sigma Colliery.

4.5. Baseline Description of the Social Environment

Table 4.2 provides a baseline summary of the socio-economic profile of the Metsimaholo Local Municipality within which the Becrux Two Solar PV Facility is proposed. To provide context against which the Local Municipality's socio-economic profile can be compared, the socio-economic profiles of the Fezile Dabi District, Free State Province, and South Africa as a whole have also been provided where applicable. The data presented in this section has been derived from the 2011 Census, the Fezile Dabi District Growth and Development Strategy (2004 -2014), the Free State Provincial Growth and Development Strategy (FSPGDS) (2030) and the Metsimaholo Local Municipality Integrated Development Plan (IDP) (2020-2021)

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

Location characteristics
» The project site is located within the Free State Province, and is situated on a succession of flat grassy plains sprinkled with pastureland, resting on a general elevation of 3,800 feet only broken by the occasional hill or kopje.
» The project is proposed within the Metsimaholo LM of the Fezile Dabi DM.
» The Metsimaholo LM is approximately 1 720.1 km² in extent, which is 95.1 per people per square kilometre.
Population characteristics
» Metsimaholo LM has a population of 163 564, which is about one-third of the figure in Fezile Dabi (494 777).
» The majority of the local population belong to the Black African group and the most spoken language is Sotho.
» 69.4% of the MLM population comprise the Economically Active Population (EAP); this implies that there is a larger human resource base for development projects to involve the local population. The dependency ration is high

at 30.6% of the MLM population (that is almost a third of the local population) which puts pressure on the EAP and local municipalities.
- The male population is slightly more prominent in the MLM; linked to the industrial character of the area.
- The skills profile of the area indicates that the availability of local labour for the proposed project is largely limited to low-skilled construction workers and a small number of skilled workers.
- There is a high unemployment rate in the MLM (20.3%) with a large economically active population seeking employment opportunities. Local workers should be utilised as much as possible for the proposed development in order to alleviate local unemployment.
- The continuous increase in the number of formal households in the local area will have an upward impact on electricity demand, thus requiring greater electrical capacity.
- Higher unemployment and lower income levels in the study area demonstrate the need for job creation.
- The high demand for employment can be addressed (although marginally) through direct job creation during the construction and operation phase of the proposed development.

Economic, education and household characteristics

- Access to basic services is generally greater in the MLM than at provincial level demonstrating that service delivery is generally more accessible.
- The shift of the economy from a primary to a tertiary economy is resulting in a large number of job losses and the mining sector is identified as suffering the largest loses. Metsimaholo has been earmarked as a development nodal point for the coming 20 years, which is line with the proposed development.
- 72.4% of the population has completed Grade 9 or higher, which is a little higher than the rate in Fezile Dabi (68.39%).
- 42.4% have completed matric or higher which is about 10% percent higher than the rate in Fezile Dabi (38.86%).
- For households headed by children under 18 years, there is 167 households, which is about one-fifth of the figure in Fezile Dabi (751).
- 15% child-headed households are informal dwellings (shack), which is about three-fifths of the rate in Fezile Dabi (24.1%)
- 58.7% child-headed households have women as their head, which is about 1.3 times the rate in Fezile Dabi (45.27%).
- Annual household income is R7200, which is more than double the amount in Fezile Dabi (R2 400).

Services

- There are 59 115 households in the municipality, which is about one-third of the figure in Fezile Dabi (172,370).
- About 12.2% households are informal dwellings.
- 96.9% are getting water from regional or local service providers, which is a little higher than the rate in Fezile Dabi (93.29%).
- 12.6% have no access to electricity, which is about double the rate in Fezile Dabi (6.48%).
- 74.9% have access to flush or chemical toilets, which is about 90 percent of the rate in Fezile Dabi (82.55%).
- 80.1% are getting refuse disposal from a local authority, private company or community members, which is about 90% of the rate in Fezile Dabi (86.5%).

5. IDENTIFCIATION OF POTENTIAL SOCIAL IMPACTS

This Chapter provides an overview of the potential social impacts that have been identified, which may be associated with the development of the Becrux Two 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.

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. Potential 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 include:

- 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
- Visual impacts and sense of place impacts

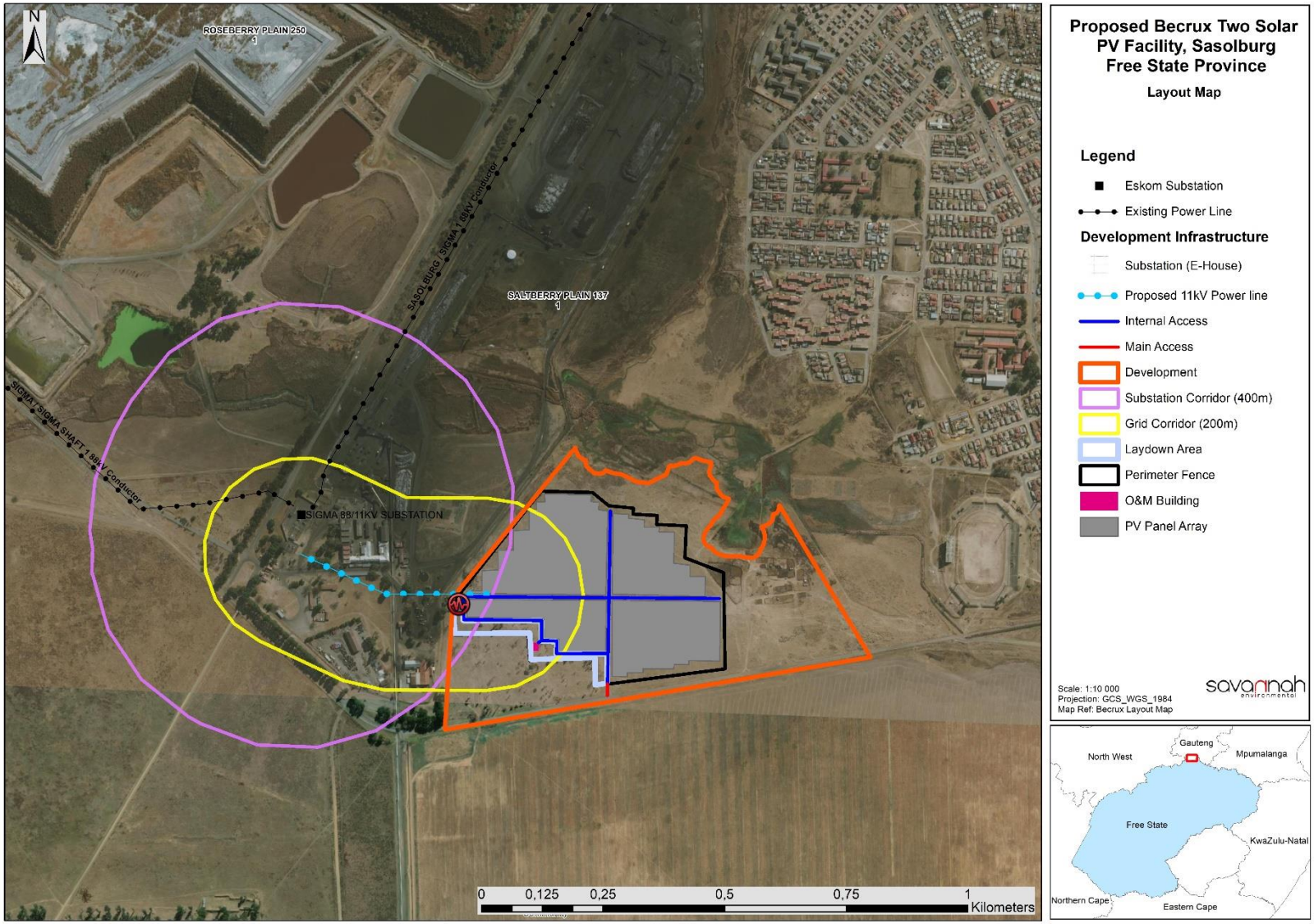

Figure 5.1: Layout of the Becrux Two Solar PV Energy Facility

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 (1)	The construction period will last for less than one year	**Low Positive (30)**
Extent	Local – Regional (5)	The impact will occur at a local, regional and national level	
Magnitude	Low (4)	The creation of employment opportunities will assist to an extent in alleviating unemployment levels within the area	
Probability	Probable (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. Becrux Solar PV Project Two (Pty) Ltd 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., Metsimaholo 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 (1)	The construction period will last for less than one year	**Medium Positive (55)**
Extent	Regional (4)	The impact will occur at a local, regional and national 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			

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 (4)	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	Probable (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 (Metsimaholo Local Municipality). » Becrux Solar PV Project Two (Pty) Ltd 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. » 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 (4)	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	Definite (5)	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.			

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 neighboring community members at risk.	
Probability	Probable (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 (2)	As for pre-mitigation	

Residual Risks:
None anticipated.

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 neighboring 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 (2)	As for pre-mitigation	

Residual Risks:
None anticipated.

Nature:
Increased pressure on local services/resources

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	Moderate (6)	Intensify existing service delivery and resource problems and backlogs, especially sewerage and road networks	
Probability	Probable (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.
- Becrux Solar PV Project Two (Pty) Ltd should liaise with the MLM 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 (2)	As for pre-mitigation	
Residual Risks: Possibility of outside workers remaining in the area after construction is completed and subsequent pressures on local infrastructure.			

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 (1)	This will remain within the project extent from construction activities.	
Magnitude	High (8)	Dust impacts and noise nuisance from construction activities.	
Probability	Highly Probable (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 (18)**
Extent	Local (1)	Mitigation measures will assist with increasing the impact.	
Magnitude	Moderate (6)	Appropriate mitigation will reduce the risk of this project	
Probability	Improbable (2)	As for pre-mitigation	
Residual Risks: None anticipated			

5.2. Potential Social impacts during the Operation Phase

It is anticipated that the Becrux Two Solar PV Energy Facility will operate up to 30 years (which is equivalent to the operational lifespan of the project).

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

» Direct and indirect employment opportunities
» Development of clean, renewable energy infrastructure
» Visual impact and sense of place

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	Probable (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, Metsimaholo 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 Probable (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			

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 Fezile Dabi 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 10MW$_{ac}$	
Probability	Highly Probable (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 Probable (4)	As for pre-enhancement	
Residual Risks: Reduce carbon emissions through the use of renewable energy and contribute to reducing global warming			

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 (2)	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

Cumulative impacts have been considered as part of this energy facility has the potential to result in significant positive cumulative impacts and relatively low cumulative impact; specifically with the establishment of a number of Solar energy facilities in the vicinity of the Local Municipality will create a number of socio-economic opportunities for the area, which in turn, will result in a positive social benefit. The positive cumulative impacts include creation of employment, skills development and training opportunities, and downstream business opportunities. Benefits to the local, regional and national economy through employment and procurement of services could be substantial should many renewable energy facilities proceed. This benefit will increase significantly should critical mass be reached that allows local companies to develop the necessary skills to support construction and maintenance activities and that allows for components of the renewable energy facilities to be manufactured in South Africa. Furthermore, at municipal level, the cumulative impact could be positive and could incentivize operation and maintenance companies to centralize and expand their activities towards education and training.

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	Probable (3)	Probable (3)
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 (1)	Local-regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Minor (2)	Low (4)
Probability	Very improbable (1)	Improbable (2)
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.		

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 detailed design, construction and operation phases are presented in Error! Reference source not found. and Error! Reference source not fo und. for the potential impacts identified.

Table 6.1: Summary of potential social impacts identified for the detailed design and construction phase of the Becrux Two Solar PV Energy Facility

Impact	Significance without mitigation/enhancement	Significance with mitigation/enhancement
Positive Impacts		
Direct employment and skills development	Low	Medium
Economic multiplier effects	Medium	Medium
Negative Impacts		
Safety and security risks	Medium	Low
Impacts on daily living and movement patterns	Medium	Medium
Nuisance impact (noise and dust)	Medium	Low

Table 6.2: Summary of potential social impacts identified for the operation phase of the Becrux Two Solar PV Energy Facility

Impact	Significance without mitigation/enhancement	Significance with mitigation/enhancement
Positive Impacts		
Direct employment and skills development	Medium	Medium
Development of clean, renewable energy infrastructure	Medium	Medium
Negative Impacts		
Visual and sense of place impacts	Medium	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 (these relate to influx of non-local workforce and jobseekers, 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 Becrux Two Solar PV Energy 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, enhancement measures and management actions contained in the report.

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8. APPENDIX A: SIA ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

Construction Phase:

Direct employment and skills development

OBJECTIVE: Maximise local employment and skills development opportunities associated with the construction phase		
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Creation of local employment and skills development	
Activity/risksource	» Construction procurement practice employed by the EPC contractor » The Developer's investment plan	
Mitigation Target/Objective	The developer should aim to employ as many low-skilled and semi-skilled workers from the local area as possible. This shouldalso be made a requirement for all contractors.	
Enhancement: Action/control	**Responsibility**	**Timeframe**
Employ local contractors that are compliant with Broad Based Black Economic Empowerment (BBBEE) criteria	The Developer & EPC Contractors	Pre-construction & construction phase
Adopt a local employment policy to maximise the opportunities made available to the local labour force as far as possible (preference to Metsimaholo Local Municipality)	The Developer & EPC Contractors	Pre-construction & construction phase
Consideration must be given to women during the recruitment process	EPC Contractors	Pre-construction & construction phase
Set realistic local recruitment targets for the construction phase (preference to Metsimaholo Local Municipality)	The Developer & EPC Contractors	Pre-construction & construction phase
Training and skills development programmes must be initiated prior to the commencement of the construction phase	The Developer	Pre-construction & construction phase
Performance Indicator	» Employment and business policy document that sets out local employment and targets completed before construction phase commences; » The majority of employed semi and unskilled labour are from the local areaor local municipality; and » Training and skills development programme undertaken prior to the commencement of the construction phase.	
Monitoring	» The developer and EPC contractor must keep a record of local recruitments and information on local labour to be shared withthe ECO for reporting purposes.	

Economic multiplier effects

OBJECTIVE: Maximise local economic multiplier effect during the construction phase			
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure		
Potential Impact	Potential local economic benefits		
Activity/risksource	Developer's procurement plan		
Mitigation Target/Objective	Increase the procurement of goods and services, especially within the local economy		
Enhancement: Action/control		**Responsibility**	**Timeframe**
A local procurement policy to be adopted to maximise the benefit to the local economy, where feasible		The Developer & EPC Contractors	Pre-construction & construction phase
Develop a database of local companies, specifically Historically Disadvantaged (HD) companies which qualify as potential service providers (e.g. construction companies, security companies, catering companies, waste collection companies, transportation companies etc.) prior to the tender process and invite them to bid for project-related work where applicable		The Developer & EPC Contractors	Pre-construction & construction phase
Source as many goods and services as possible from the local area (Metsimaholo Local Municipality). Engage with local authorities and business organisation to investigate the possibility		The Developer	Pre-construction & construction phase
Performance Indicator	» Local procurement policy is adopted » Local goods and services are purchased from local suppliers, where feasible (Metsimaholo Local Municipality)		
Monitoring	» The developer must monitor indicators listed above to ensure that they have been met for the construction phase.		

Safety and security impacts

OBJECTIVE: To avoid or reduce the possibility of the increase in crime and safety and security issues during the construction phase			
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure		
Potential Impact	Increase in crime and security issues due to influx of non-local workforce and job seekers into the area		
Activity/risksource	Construction workers working on site and residing in the nearby communities		
Mitigation Target/Objective	To avoid or minimise the potential impact on local communities and their livelihoods		
Enhancement: Action/control		**Responsibility**	**Timeframe**
Access in and out of the construction camp should be strictly controlled by a securitycompany		EPC Contractor	Construction phase
The appointed EPC contractor must appoint a security company and appropriate securityprocedures are to be implemented to limit access to the site and surrounding areas.		EPC Contractor	Construction phase

Open fires on site for heating, smoking orcooking are not allowed, except in designated areas.	EPC Contractor	Construction phase
The contractor must provide adequate firefighting equipment on site and provide firefighting training to selected construction staff.	EPC Contractor	Pre-construction & construction phase
A comprehensive employee induction programme must be developed and utilised to cover land access protocols, fire managementand road safety	EPC Contractor	Pre-construction & construction phase
A grievance mechanism should be implemented whereby local landowners can express any complaints or grievances with the construction process	EPC Contractor	Pre-construction & construction phase
Performance Indicator	» Employee induction programme, covering land access protocols, fire management and road safety » The construction site is appropriately secured with a controlled access system » Security company appointed and security procedures implemented	
Monitoring	» The developer and EPC contractor must monitor the indicators listed above to ensure that they have been met for theconstruction phase	

Impacts on daily living and movement patterns

OBJECTIVE: To avoid or reduce traffic disruptions and movement patterns of local community during the construction phase		
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Increase in traffic disruptions, safety hazards, and impacts onmovement patterns of local community	
Activity/risksource	Construction activities, including the transportation of components to site	
Mitigation Target/Objective	To avoid or minimise the potential impacts associated with traffic and movement patterns on local communities	
Enhancement: Action/control	**Responsibility**	**Timeframe**
All vehicles must be road worthy, and drivers must be qualified, obey traffic rules, followspeed limits and made aware of the potential road safety issues	EPC Contractor	Construction phase
Heavy vehicles should be inspected regularly to ensure their road safety worthiness.	EPC Contractor	Construction phase
Implement penalties for reckless driving for the drivers of heavy vehicles as a way toenforce compliance to traffic rules.	EPC Contractor	Construction phase
Any damage / wear and tear caused by construction related traffic to the roads must be repaired	The Developer & EPC contractor	Construction phase
Provide adequate and strategically placed traffic warning signs and control measures along the regional and secondary roads to warn road users of the construction activities taking place, displaying road safety messages and speed limits for the duration of the construction phase. Traffic warning signs must also be well illuminated at night.	EPC Contractor	Pre-construction & construction phase

A comprehensive employee induction programme that covers land access protocols and road safety must be prepared.	EPC Contractor	Construction phase
Appoint a Community Liaison Officer and a create method of communication whereby local community members can express any complaints or grievances	The Developer & EPC Contractor	Pre-construction & construction phase
Performance Indicator	» Vehicles are roadworthy, inspected regularly and speed limits are adhered to » Traffic warning signs along regional and secondary roads, also illuminated at night appointed and security procedures implemented » Community liaison officer available for community grievances and communication channel	
Monitoring	» The developer and EPC contractor must monitor the indicators listed above to ensure that they have been met for theconstruction phase	

Pressure on economic and social infrastructure impacts from an in migration of people

OBJECTIVE: Reduce the pressure on economic and social infrastructure and social conflicts from an influx of a non-local workforce and jobseekers during the construction phase		
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Increase in traffic disruptions, safety hazards, and impacts onmovement patterns of the local community	
Activity/risksource	Construction activities	
Mitigation Target/Objective	To avoid or minimise the potential impact on economic and social infrastructure and reduce/eliminate social conflicts	
Enhancement: Action/control	**Responsibility**	**Timeframe**
Where possible, make it a requirement for contractors to implement a 'locals first' policy. It is suggested that advertisement for construction employment opportunities be placed in a local newspaper, especially for semi and low-skilled job categories (preference to Metsimaholo Municipality). Enhance employment opportunities for the immediate local arealf this is not possible, then the broader focus areas should be considered for sourcing workers such as the Metsimaholo Local Municipality	The Developer & EPC Contractor	Pre- construction phase & construction phase
Prior to construction commencing, representatives from the local community e.g., ward councillor, surrounding landowners should be informed of details of the construction schedule and exact size of the workforce.	EPC Contractor	Construction phase
Recruitment of temporary workers at the gates of the development should not be allowed. A recruitment office located in town with a Community Liaison officer should be established to deal with jobseekers.	EPC Contractor	Construction phase
Have clear rules and regulations for access to the proposed site	The Developer & EPC contractor	Construction phase

to control loitering.		
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	EPC Contractor	Pre-construction & construction phase
Performance Indicator	» Percentage of the workers employed during construction come from local communities » Community liaison officer available for community grievances and communication channel	
Monitoring	» The developer must keep a record of local recruitments and information on local labour to be shared with the ECO for reporting purposes	

Nuisance impacts (Noise &Dust)

OBJECTIVE: To avoid or minimise the potential impacts of noise and dust from construction activities during the construction phase		
Project component/s	Construction of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Heavy vehicles and construction activities can generate noise and dust impacts.	
Activity/risksource	Construction activities	
Mitigation Target/Objective	To avoid and or minimise the potential noise and dust impacts associated with construction activities	
Enhancement: Action/control	**Responsibility**	**Timeframe**
Implement dust suppression measures for heavy vehicles such as wetting the roads on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers	EPC Contractor	Construction phase
Ensure all vehicles are road worthy, and that driversare qualified and are made aware of the potential noise and dust issues	EPC Contractor	Construction phase
Ensure that drivers adhere to speed limits	EPC Contractor	Construction phase
A Community Liaison Officer should be appointed. A method of communication should be implemented whereby proceduresto lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process	The Developer & EPC contractor	Pre-construction & construction phase
Performance Indicator	» Dust suppression measures implemented for all heavy vehicles that require such measures during the construction phase » Enforcement of strict speeding limits » Road worthy certificates in place for all vehicles » Community liaison officer available for community grievances and communication channel	

Monitoring	» The EPC contractor must monitor the indicators to ensure that they have been met for the construction phase

Operational Phase:

Direct employment and skills development during operation phase

OBJECTIVE: Maximise local employment and skills development opportunities associated with the operation phase		
Project component/s	Operation and maintenance of the proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Creation of local employment and skills development opportunities	
Activity/risksource	Labour practices employed during operations	
Enhancement: Target/Objective	Maximise local community employment benefits in the local economy	
Enhancement: Action/control	**Responsibility**	**Timeframe**
Adopt a local employment policy to maximise the opportunities made available to the local labour force (preference to Metsimaholo Local Municipality)	Operator	Operation phase
The recruitment selection process should seek to promote gender equality and the employment of women, wherever possible	Operator	Operation phase
Establish vocational training programs for the local labour force to promote the development of skills	The Developer & Operator	Operation phase
Performance Indicator	» The majority of workers are employed from local communities (Metsimaholo Local Municipality) » A number of people attending vocational training throughout the operation phase	
Monitoring	» The developer must keep a record of local recruitments and information on local labour to be shared with the ECO for reporting purposes	

Visual and 'sense of place' impacts

OBJECTIVE: Reduce the visual and sense of place impacts associated with the operation phase of the project		
Project component/s	Operation and maintenance of the Proposed Becrux Two Solar PV Energy Facility and associated infrastructure	
Potential Impact	Change in the sense of place that also leads to the negative impact on the area and visual intrusions	
Activity/risksource	The PV facility and associated infrastructure	
Enhancement: Target/Objective	Reduce the visual disturbances to minimise the loss of the sense of place	
Enhancement: Action/control	**Responsibility**	**Timeframe**
» Vegetation screening to be placed between the site and	Operator	Operation phase

adjacent properties, if required.			
Performance Indicator	» Vegetation screening if required/necessary		
Monitoring	» The developer must monitor the indicators if vegetation screening is required by adjacent landowners		

9. APPENDIX B: KEY STAKEHOLDERS CONTACTED AND MEETING SCHEDULED

A site visit was undertaken on 28 January 2022 and observations were made outside the Sasol facility as site access was not arranged accordingly and permission was not yet granted.

A questionnaire will be administrated when the Basic Assessment is made available to the public, and when the public participation process kicks off.

Plan of Study (for consultation):

The Interested and Affected Database will be utilised and taken from the Public Participation Process (PPP) to reach key stakeholders and arrange a discussion. Key stakeholders that are not reachable through the PPP process will be emailed and/or if no email is available a voice message will be left on their phone, even more a message on WhatsApp or SMS.