SOCIAL IMPACT REPORT

HARMONY ONE PLANT

SCOPING REPORT

JULY 2022

SOCIAL IMPACT REPORT

Savannah Environmental, Free State

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ACRONYMS, ABBREVIATIONS AND GLOSSARY

Acronyms & Abbreviations	
DESTEA	Free State Department of Economic, Small Enterprise, Tourism and Environmental Affairs
DoE	Department of Energy
DM	District Municipality
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GDP	Gross Domestic Product
GNR	Government Notice
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IEP	Integrated Energy Plan
IRP	Integrated Resource Plan
km	Kilometer
LM	Local Municipality
NEMA	National Environmental Management Act (No. 107 of 1998)
NDP	National Development Plan
O&M	Operation and Maintenance
PGDS	Provincial Growth and Development Strategy
PICC	Presidential Infrastructure Coordinating Committee
PSDF	Provincial Spatial Development Framework
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SIP	Strategic Infrastructure Project
DESTEA	Free State Department of Economic, Small Enterprise, Tourism and Environmental Affairs
DoE	Department of Energy
DM	District Municipality
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GDP	Gross Domestic Product
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I&AP	Interested and Affected Party

EXECUTIVE SUMMARY

Free Gold Harmony (Pty) Ltd is looking to supplement its energy supply by implementing Photovoltaic (PV) generation, aiding their transition to a more sustainable and environmentally friendly energy mix.

Located south-west of the Witpan dam, and South of the Harmony One Gold Plant operations, approximately ~14km north-west of the town of Virginia within the Matjhabeng Local Municipality and within the Lejweleputswa District Municipality, Free State Province.

The PV facility is located on the Remaining Extent of the Farm Marmageli 20 and Remainder Extent of the Farm Welkom 80.

A technically feasible project site, with an extent of 100 ha has been identified by Free Gold Harmony (Pty) Ltd as a technically suitable area for the development of the Project. A development area of ~75 ha was demarcated within this project site and allows an adequate footprint for the installation of a solar PV facility with a contracted capacity of up to 30MW, while allowing for the avoidance of environmental site sensitivities. The size of the development footprint within the development area will be confirmed in the EIA Phase once the facility layout is available for assessment.

The development footprint will contain the following infrastructure to enable the Solar PV Facility to generate up to 30MW:

- PV modules and mounting structures
- Inverters and transformers a SCADA room, and maintenance room
- Cabling between the project components, to be laid underground where practical
- Access roads, internal roads and fencing around the development area.
- Temporary and permanent laydown areas and O&M buildings.
- Overhead Power Lines (OHPL)

Grid connection solution including an on-site 44kV facility substation, 44kV switching station, to be connected to the Brand Gold (6.6/132kV) Substation via a 44kV overhead power line (located ~2km north of the site).

As of 2019, the Industrial sector was the leading electricity consumer in South Africa, with up to 56 percent of the total consumption (*Ratshomo, 2019*). Mining and quarrying accounted for 10% of the industrial consumption while non-ferrous metals and non-metallic both accounted for 8% and 5%, respectively (*Chamber of Mines of South Africa, 2017*).

The successful development of the renewable energy projects will enable Harmony Gold to make a valuable and meaningful contribution towards growing the green economy within the province and South Africa. This will assist the Free State in creating green jobs and reducing Green House Gas emissions, whilst reducing the energy demand on the National Grid.

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 mismanagement of the construction phase activities.

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

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

This SIA focused on the collection of data to provide an understanding of the current social environment associated with the Harmony One Plant Solar PV Facility and grid connection corridor that is proposed and identifying social issues and potential social impacts associated with the development of such a nature.

It is recommended that a detailed SIA be conducted as part of the EIA phase. Based on the findings of the SIA, the following approach to the EIA phase study is proposed:

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

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1. INTRODUCTION AND PROJECT DESCRIPTION

1.1. Project Description

Free Gold Harmony (Pty) Ltd is looking to supplement its energy supply by implementing Photovoltaic (PV) generation, aiding their transition to a more sustainable and environmentally friendly energy mix.

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The successful development of the renewable energy projects will enable Harmony Gold to make a valuable and meaningful contribution towards growing the green economy within the province and South Africa. This will assist the Free State in creating green jobs and reducing Green House Gas emissions, whilst reducing the energy demand on the National Grid.

1.2. Objective of the Scoping Process

This Social Impact Assessment (SIA) Report has been prepared as part of the Scoping Process being undertaken for Harmony One Plant Solar PV Facility and associated infrastructure. The purpose of this SIA Report is to provide details on the nature and extent of development of Harmony One Plant 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 identify potential social issues which will be addressed in detail as part of the EIA 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 EIA phase.
- Agree on the level of assessment to be undertaken, including the methodology to be applied to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to propose 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. Structure of the SIA Report

The report is organised into six sections:

- Section 1: Introduction and Project Description.
- Section 2: Methodology & Approach.
- Section 3: Legislation and Policy Review.
- Section 4: Social Profile.
- Section 5: Overview of Social Issues.
- Section 6: Plan of Study for EIA Phase.

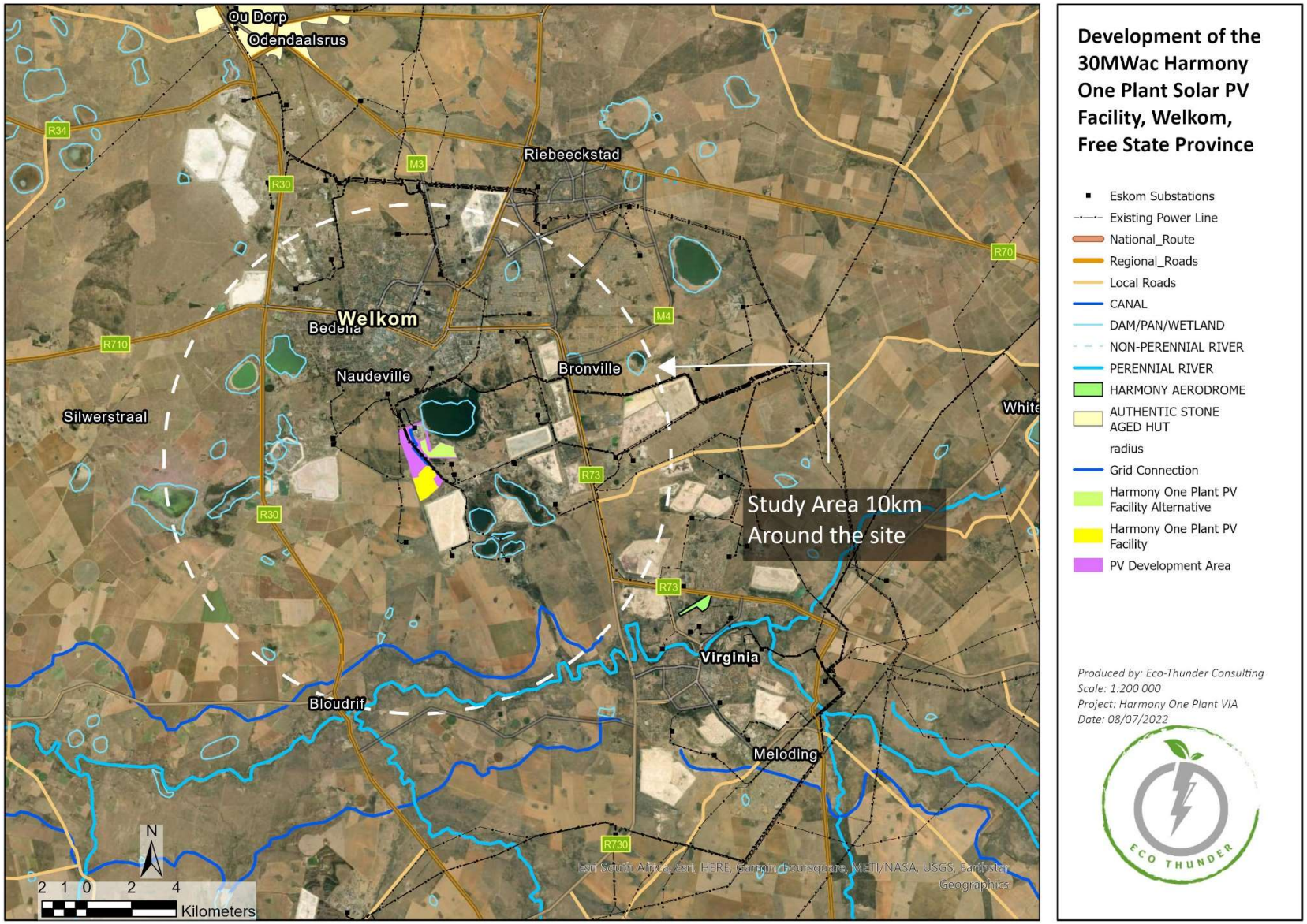

Figure 0. Locality map illustrating the location of Harmony One Solar PV Facility, Free State Province.

2. METHODOLOGY AND APPROACH

2.1. Purpose of the Study

The International Principles for Social Impact Assessment define SIA as: "The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions".

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

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

The purpose of this SIA Report is therefore to:

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

2.2. Approach to the Study

This SIA Report provides a snapshot of the current social setting within which the Harmony One Plant Solar PV Facility is proposed. It provides an overview of the manner and degree to which the current status quo is likely to change or be impacted by the construction, operation and decommissioning of the project, as well as the manner in which the social environment is likely to impact development itself.

An overview of the assessment methodology utilised as part of this SIA is provided below.
The SIA process comprised the following:

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

2.2.1. Collection and Review of Existing Information

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

- Project maps.
- 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.

2.3. Limitations and Assumptions

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

- It was assumed that information provided by Harmony Mining Gold and Savannah Environmental team was accurate and that the technical specifications of the Project and site selection are in accordance with the relevant requirements.
- This report and assessment are dependent on the accuracy of the publicly available secondary information such as Statistics South Africa (StatsSA, 2016).
- This SIA Report was prepared based on information that was available to the specialist at the time of preparing the report. The sources consulted are not exhaustive, and the possibility exists that additional information which might strengthen arguments, contradict information in this report, and / or identify additional information might exist. Additional information available from the public participation undertaken during the Scoping process will be included and considered within the final report, where relevant.
- Some of the project projections reflected in this SIA Report may be subject to change, and therefore may be higher or lower than those estimated by the project proponent.
- It is assumed that the motivation for the planning and feasibility study of the project were undertaken with integrity, and that information provided by the project proponent was accurate and true at the time of preparing this SIA Report.

3. LEGISLATION AND POLICY REVIEW

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

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

National Policy and Planning Context:

- Constitution of the Republic of South Africa, 1996
- National Environmental Management Act (No. 107 of 1998) (NEMA)
- White Paper on the Energy Policy of the Republic of South Africa (1998)
- National Energy Act (No. 34 of 2008)
- Integrated Energy Plan (IEP) (2015)
- National Development Plan (NDP) 2030 (2012)
- Strategic Infrastructures (SIPs)

Provincial Policy and Planning Context:

- Free State Provincial Growth and Development Strategy (FSGDS) (2005 – 2014)
- Free State Provincial Growth and Development Strategy (FSGDS), Revised October 2007
- Free State Provincial Spatial Development Framework (PSDF) - Executive Summary (Inception Report)
- Free State Green Economy Strategy (2014)
- Free State Investment Prospectus (2019)

Local Policy and Planning Context:

- Lejweleputswa District Municipality Integrated Development Plan (IDP) 2020 / 2021
- Matjhabeng Local Municipality Integrated Development Plan IDP (2020 – 2021)

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

A brief review of the most relevant national legislation and policies is provided in table format **(Table 1)** below.

Table 1: Relevant national legislation and policies for the Harmony One Plant Solar PV Facility

Relevant legislation or policy	Relevance to the proposed project
Constitution of the Republic of South Africa, 1996	Section 24 of the Constitution pertains specifically to the environment. It states that Everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. The Constitution outlines the need to promote social and economic development. Section 24 of the Constitution therefore requires that development be conducted in such a manner that it does not infringe on an individual's environmental rights, health, or well-being. This is especially significant for previously disadvantaged individuals who are most at risk to environmental impacts.
National Environmental Management Act (No. 107 of 1998) (NEMA)	This piece of legislation is South Africa's key piece of environmental legislation and sets the framework for environmental management in South Africa. NEMA is founded on the principle that everyone has the right to an environment that is not harmful to their health or well-being as contained within the Bill of Rights.

	The national environmental management principles state that the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment. The need for responsible and informed decision-making by government on the acceptability of environmental impacts is therefore enshrined within NEMA.
National Development Plan 2030 (2012)	The National Development Plan (NDP) 2030 is a plan prepared by the National Planning Commission in consultation with the South African public which is aimed at eliminating poverty and reducing inequality by 2030. In terms of the Energy Sector's role in empowering South Africa, the NDP envisages that, by 2030, South Africa will have an energy sector that promotes: • Economic growth and development through adequate investment in energy infrastructure. The sector should provide reliable and efficient energy service at competitive rates, while supporting economic growth through job creation. • Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households. • Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy.
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 RE sources and ensuring energy security through the diversification of supply.
National Energy Act (No.34 of 2008)	The purpose of the National Energy Act (No. 34 of 2008) is to ensure that diverse energy resources are available, in sustainable quantities and at affordable prices, to the South African economy in support of economic growth and poverty alleviation; while taking environmental management requirements into account. In addition, the Act also provides for energy planning, and increased generation and consumption of Renewable Energies (REs). The objectives of the Act, are to amongst other things, to: • Ensure uninterrupted supply of energy to the Republic. • Promote diversity of supply of energy and its sources. • Facilitate energy access for improvement of the quality of life of the people of the Republic. • Contribute to the sustainable development of South Africa's economy. The National Energy Act therefore recognises the significant role which electricity plays growing the economy while improving citizens' quality of life. The Act provides the legal framework which supports the development of RE facilities for the greater environmental and social good and provides the backdrop against which South Africa's strategic planning regarding future electricity provision and supply takes place. It also provides the legal framework which supports the development of RE facilities for the greater environmental and social good.
Integrated Energy Plan (IEP) (2016)	The Integrated Energy Plan (IEP) (which was developed under the National Energy Act (No. 34 of 2008)), recognises that energy is essential to many human activities, and is critical to the social and economic development of a country. The purpose of the IEP is essentially to ensure the availability of energy resources, and access to energy services in an affordable and sustainable manner, while minimising associated adverse

	environmental impacts. Energy planning therefore needs to balance the need for continued economic growth with social needs, and the need to protect the natural environment. The IEP is a multi-faceted, long-term energy framework which has multiple aims, some of which include: • 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.
Strategic Infrastructure Projects (SIPs)	The Presidential Infrastructure Coordinating Committee (PICC) are integrating and phasing investment plans across 18 Strategic Infrastructure Projects (SIPs) which have the following 5 core functions: • To unlock opportunity. • Transform the economic landscape. • Create new jobs. • Strengthen the delivery of basic services. • Support the integration of African economies. A balanced approach is being fostered through greening of the economy, boosting energy security, promoting integrated municipal infrastructure investment, facilitating integrated urban development, accelerating skills development, investing in rural development and enabling regional integration. SIP 8 of the energy SIPs supports the development of RE projects as follow: • SIP 8: Green energy in support of the South African economy: Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP 2010) and supports bio-fuel production facilities. The development of the proposed project is therefore also aligned with SIP 8 as it constitutes a green energy initiative which would contribute clean energy in accordance with the IRP 2010 – 2030.

3.2. Provincial Policies

This section provides a brief review of the most relevant provincial policies. The proposed Harmony One Plant Solar PV Facility is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant provincial policies is provided in table format **(Table 2)** below.

Table 2: Relevant provincial policies for the Harmony One Plant Solar PV Facility

Relevant policy	Relevance to the proposed project
Free State Provincial Growth and Development Strategy (FSGDS) (2005 – 2014)	The overarching goal of the Free State Growth and Development Strategy (FSGDS) is to align the provincial and national policies and programmes and to guide development in terms of effective and efficient management and governance to achieve growth and development. The strategy is a living document that uses the latest business planning and evaluation tools in order to maximise the effect of all spending. Based on the social and economic development challenges of the province, the Strategy identifies a few primary objectives, including stimulating economic development and developing and enhancing the infrastructure for economic growth and social development, poverty alleviation through human and social development, ensuring a safe and secure environment for all and the promotion of effective and efficient governance and administration. The development of the Solar PV and infrastructure development supports the overall objective of stimulating economic development and infrastructure investment towards growth and social development, by contributing to the energy mix, supply and infrastructure of the province. The development of the facility will

	also contribute (albeit limited) to the alleviation of poverty through the creation of direct and indirect employment opportunities and well as skills development
Free State Provincial Growth and Development Strategy (FSGDS), Revised October 2007	The revised FSGDS refers to specific imperatives which sets the tone and pace for shared growth and development in the Province. These include: • The need to effectively use scarce resources within the Province, whilst addressing the real causes of development challenges. • The need to accelerate service delivery based on a common provincial development agenda as the basis for provincial strategic direction. • The need to identify investment opportunities and provide an environment of certainty critical for private-sector investment. • The need to promote intergovernmental coordination between the three spheres of government. • The need to facilitate the implementation of the People's Contract within the Province. • The need to provide a common vision as the basis for common action amongst all stakeholders, both inside and outside government. • The need to provide a framework for budgets, implementation, performance management and spatial development. The development of the Solar PV and infrastructure development will assist with the need to effectively use scare resources and the need to identify investment opportunities, including private sector-investment. The development of a solar facility reduces the need to make use of non-renewable resources for the generation of electricity and opens up the Province to further future solar energy development.
Free State Provincial Spatial Development Framework (PSDF) - Executive Summary (Inception Report)	The Free State PSDF is a provincial spatial and strategic planning policy that responds to and complies with, in particular, the National Development Plan Vision 2030 and the National Spatial Development Perspective (NSDP). The latter encourages all spheres of government to prepare spatial development plans and frameworks (such as the PSDF) that promote a developmental state in accordance with the principles of global sustainability as is advocated by, among others, the South African Constitution and the enabling legislation. The Free State Provincial Growth and Development Strategy states that sustainable economic development is the only effective means by which the most significant challenge of the Free State, namely poverty, can be addressed. The PSDF gives practical effect to sustainable development, which is defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. The PSDF is prepared in accordance with bioregional planning principles that were adapted to suit the site-specific requirements of the Free State. It incorporates and complies with the relevant protocols, conventions, agreements, legislation and policy at all applicable levels of planning, ranging from the international to the local. The Solar PV and infrastructure development will contribute to sustainable and economic development goals of the Free State PSDF, once completed and formally adopted.
Free State Green Economy Strategy (2014)	This green economy strategy for 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 Solar PV and infrastructure development will contribute to the aim of energy efficiency and green industry whilst 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 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 River. Considering the future opportunities available for the development of renewable energy facilities (including solar PV facilities) the development of the Solar PV and infrastructure development 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 Harmony One Plant Solar PV Facility is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant district and local municipal policies is provided in table format **(Table 3)** below.

Table 3. Relevant district and local municipal policies for the Harmony One Plant Solar PV Facility

Relevant policy	Relevance to the proposed project
Lejweleputswa District Municipality Integrated Development Plan (IDP) 2020/2021	Lejweleputswa District Municipality main objectives according to its IDP is to promote economic development in the District to create jobs and wealth, reduce poverty levels and promote Lejweleputswa region as a commercial hub and also function as springboard for Private, Public Partnership (PPP) for the District. The vision for the district is to be a leader in sustainable development and service delivery to all. Economic development opportunities are the key determinant of the settlement pattern and also the distribution of industrial areas in the district. Economic development typically responds to the availability of environmental capital (e.g. water, suitable agricultural soil, mining resources etc) and infrastructural capital (e,g roads, electricity, bulk engineering services etc). Under SPC F. Renewable Energy Structures the IDP refers to support by the district on any wind turbines or solar voltaic apparatus, or grouping thereof, which captures and converts wind or solar radiation into energy for commercial gain irrespective of whether it feeds onto an electricity grid or not. The Final Draft Free State Provincial Spatial Development Framework 2014 supports the NDP strategic priority which states that new large-scale infrastructure should be prioritized in settlements with high economic growth potential. Currently the Solar Energy Hub in Virginia where projects are at Dealesville and Boshof should be promoted to expand into a solar energy hub for the southwestern part of the district. The said towns are also indicated as solar energy nodes on the district sdf map.
Matjhabeng Local Municipality Integrated Development Plan IDP (2020 – 2021)	The Municipality's vision and mission are translated into the following five municipal key performance areas: **KPA1**: Good governance **KPA 2**: Basic Service delivery **KPA 3**: Inclusive economic development and job creation **KPA 4**: Institutional Transformation **KPA 5**: Financial sustainability and viability The Matjhabeng Local Municipality recognises the need to meet the energy requirements of its residents in a dynamic changing sector. The LM understands the benefits of renewable energy development as playing the following factors to the region: • Savings on the current and already substantial Eskom Bill as the Project's tariff is lower than the Eskom tariff and the escalation rate is fixed per year at its applicable CPI rates during the life-cycle of the Project; • Potential to attract foreign investments and subsequently achieve economic growth; • Additional revenue stream due to the innovational technology, which has the potential to enable the selling of excess power to Eskom or another off-taker; • Refinancing the current Eskom debt for immediate relief; • Financial investment into the municipality jurisdiction that will boost the economic cycle of the community; • New upcoming industrialization activity attraction; • Job creation, skills development and Small Medium Micro Enterprises (SMME) development; and • Transforming the energy sector in SA and Africa as per its current timeline.

	The Harmony One Solar PV 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 ta provincial and national level.

3.4. Conclusion

The review of relevant legislation, policies and documentation pertaining to the proposed development indicates that the establishment of the Harmony One Plant Solar PV development and associated infrastructure is supported at a national, provincial, and local level, and that the proposed project will contribute positively towards a number of targets and policy aims.

4. SOCIAL PROFILE

The Harmony One Plant Solar PV Facility will be located on the RE of portion 20 on farm Marmageli 20 and RE of portion 80 on farm Welkom 80 which is south-west of the Witpan dam, and South of the Harmony One Gold Plant operations, approximately ~14km north-west of the town of Virginia within the Matjhabeng Local Municipality and within the Lejweleputswa District Municipality, Free State Province. A development site of approximately up to 100ha for Harmony One Plant Solar PV has been identified for the development of the Solar facilities, of which an approximate of 75 ha will be identified for the project footprint.

Table 0. Spatial Context of the study area for the development of the Harmony One Solar PV

Province	**Free State Province**
District Municipality	Lejweleputswa District Municipality
Local Municipality	Matjhabeng Local Municipality
Ward number(s)	24
Nearest town(s)	~ 14km nouth-west of the town of Virginia
Current Zoning	Mining
Current land use	The properties both currently lie fallow, having been used historically for agriculture
Access	The site can be readily accessed via an existing gravel access road (Unnamed Rd Welkom)

This Chapter provides an overview of the socio-economic environment of the province, District Municipality (DM), and Local Municipality (LM) within which the Harmony One Plant Solar PV Facility is proposed and provides the socio-economic basis against which potential issues can be identified.

4.1. Free State Province

The Free State Province lies in the center of South Africa, located between the Vaal River in the north and the Orange River in the south. The region is one of flat, rolling grassland and fields of crops, rising to mountains in the north-east.

The province is the granary of South Africa, with agriculture central to its economy, while mining in the goldfield reefs is its largest employer.

Economic towns include Bloemfontein, Welkom, Kroonstad, Parys, QwaQwa, and Bethlehem. The Free State is the third-largest Province in South Africa, but it has the second-smallest population and the second-lowest population density. The culture is centered on traditional cultures but built on the influences of the early European settlers.

Close to 2.8-million people live in the Free State, with two-thirds speaking Sesotho, followed by Afrikaans, Zulu, Tswana, Xhosa and English.

The Free State is strategically placed to take advantage of the national transport infrastructure. Two corridors are of particular importance: the Harrismith node on the N3 corridor between Gauteng and KwaZulu-Natal, and the N8. The N1 connects Gauteng to the Western Cape. Bram Fischer International Airport in Bloemfontein handles about 250 000 passengers and 221 000 tons of cargo a year. Manufacturing also features in the provincial economic profile. This sector makes up 14% of the provincial output, with petrochemicals (via Sasol) accounting for more than 85% of the output.

The Free State Province comprises of four (4) Districts, namely Fezile Dabi, Lejweleputswa, Thabo Mofutsanyana and Xhariep (refer to **Figure 2).**

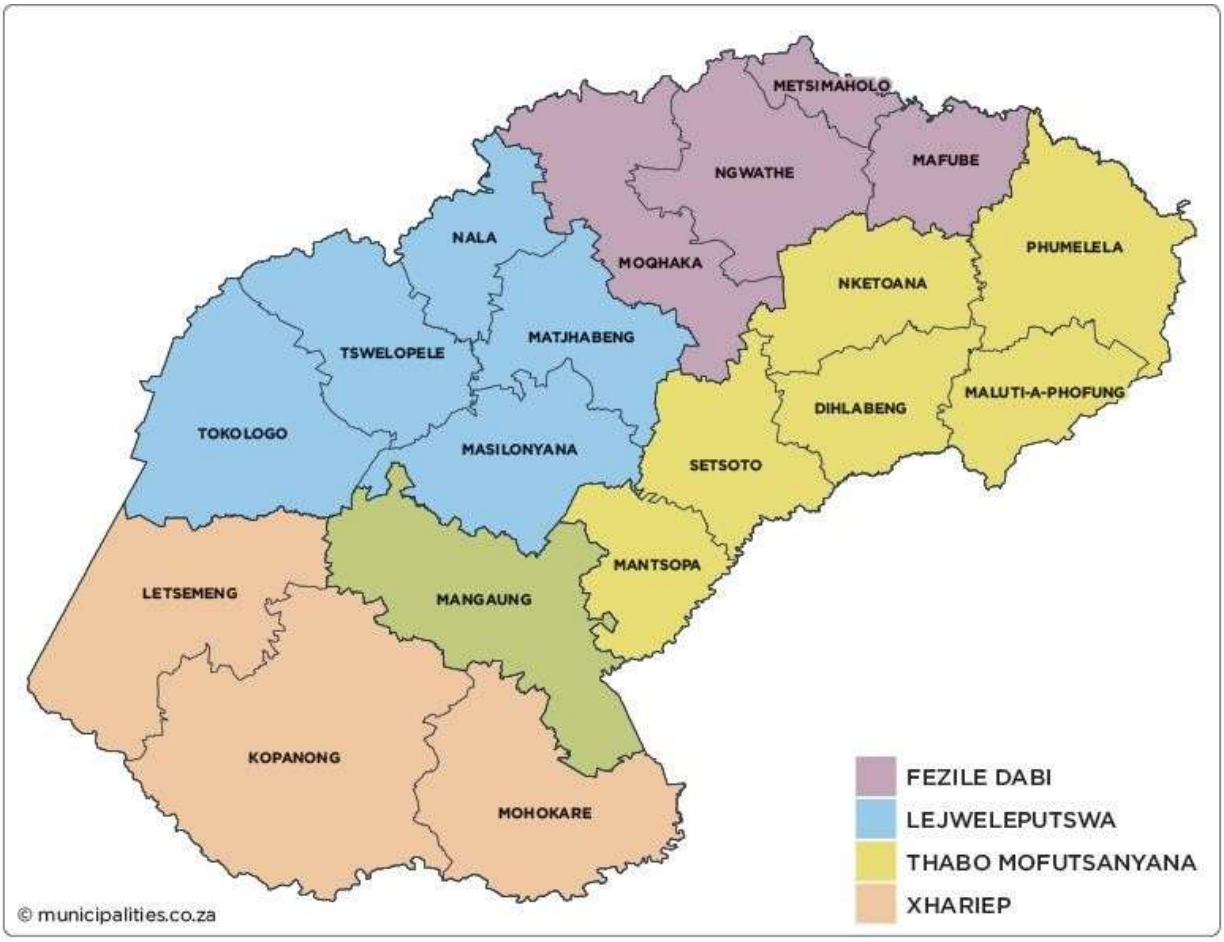

Figure 2: Map showing the districts of the Free State Province (Source: www.municipalities.co.za).

4.2. Lejweleputswa District Municipality

Lejweleputswa District Municipality is situated in the mid-western part of the Free State province, with an estimated area of about 31 930 km^2 (*Local government hand book, 2013*). The district borders the North-West province to the north, Fezile Dabi District Municipality to the north-east, and Thabo Mofutsanyane District Municipality to the east. It also borders Mangaung Metro and Xhariep District to the south and the Northern Cape Province to the west. It consists of 22.9% of the Free State province's population, down from 26.7 % in 1996 (*IHS Global Insight, 2015*). The District is made up of five local municipalities, namely; Matjhabeng, Tokologo, Tswelopele, Nala and Masilonyana with about 17 towns.

The economy of the district relies heavily on the gold mining sector as the largest sector, dominant in two of the municipalities, Matjhabeng and Masilonyana, whilst the other Municipalities are dominated by agriculture. There is less diversification of the district's economy relying heavily on the mining sector and community service sector as the largest employers in the District. Matjhabeng is the largest municipality in the district and contributes the largest share of GVA-R in the District. The average annual GDP-R growth rate stands at -1.5 percent in 2014 for the district and is forecasted to decline even further to -2.9 percent in 2016 according to IHS Global Insight, as a result of low international commodity prices and a persistent drought in the agricultural sector. Output in agriculture is forecast downwards and prices in agricultural goods are expected to rise due to low output levels as given by the South African Reserve Bank in their monetary policy statement in September 2015 for the country in general.

The Lejweleputswa District Municipality has five municipalities within its district (refer to **Figure 3**).

Figure 3: Local Municipalities of Lejweleputswa District Municipality (Source: Local Government Handbook, 2015)

4.3. Matjhabeng Local Municipality

Matjhabeng Local Municipality is situated in the Lejweleputswa District Municipality in the Free State. It is bound by the Nala Local Municipality to the north, Masilonyana Local Municipality to the south, Tswelopele Local Municipality to the east and Moqhaka Local Municipality to the west. Matjhabeng represents the hub of mining activity in the Free State province.

Matjhabeng is the largest municipality in the district and it contains most of the mining activities, especially gold mining, followed by Masilonyana with some of the gold mining and diamond mining. Recently the mining sector has been on a downward trend as a result of the closure of many of the shafts due to of high costs of production, among others, and the need for deep mining. The recent decline in world commodity prices, has aggravated the situation in general with many businesses that have traditionally been dependent on the mining sector, either have closed or are in the process of closing down. Other municipalities primary sector relies heavily on agriculture.

The Matjhabeng Municipal area, previously known as the Free State Goldfields, consists of the following towns:

- Welkom / Thabong
- Allanridge / Nyakalong
- Odendaalsrus / Kutlwanong
- Hennenman / Phomelong
- Ventersburg / Mmamahbane
- Virginia / Meloding

The area is favourably located in the north-eastern Free State about 250 km south of Johannesburg and 160 km north of Bloemfontein. The nearest harbour is Durban approximately 565km from Matjhabeng by road.

5. OVERVIEW OF SOCIAL ISSUES

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

This assessment considered the following points:

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

Social impacts are expected to occur during both the construction and operation phases of the Harmony One Plant Solar PV Facility. The status of the impacts will either be positive or negative and either mitigation or enhancement measures are recommended for the management of the impacts depending on the status of the impacts.

5.1. Social Impacts during the Construction Phase

The majority of social impacts associated with the project are anticipated to occur during the construction phase of the development and are typical of the type of social impacts generally associated with construction activities. These impacts will be temporary and short-term (~12 months) but could have long-term effects on the surrounding social environment if not planned or managed appropriately. It is therefore necessary that the detailed design phase be conducted in such a manner so as not to result in permanent social impacts associated with the ill-placement of project components or associated infrastructure or result in the mismanagement of the construction phase activities.

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

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

Table 5.: Impact assessment on direct and indirect employment opportunities

Impact Creation of direct and indirect employment opportunities and skills development			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Construction of the project will result in the creation of a number of direct and indirect employment opportunities, which will assist in addressing unemployment levels within the area and aid in skills development of communities in the area.	Positive – the creation of employment opportunities will assist to an extent in alleviating unemployment levels within the area.	The impact will occur at a local, regional and national level.	N/A
Description of expected significance of impact At its peak, the construction is likely to result in the creation of approximately 100 – 120 employment opportunities. Of those employment opportunities available, approximately 60% will comprise opportunities for low skilled workers, 25% for semi-skilled workers, and 15% for skilled workers. Skills developed through experience in the construction of the facility will be retained by the community members involved. The impact is likely to be positive, local to national in extent, short-term, and of medium significance			
Gaps in knowledge & recommendations for further study • Collection on exact direct and indirect employment opportunities and skills development opportunities. • Collection of information on local municipality and services sector **Recommendations with regards to general field surveys** • Site visits and interviews with representatives from local municipality, and mining sector. • Site visit and interviews with local farmers and local community			

Table 6: Economic multiplier effects

Impact Economic multiplier effects			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Economic multiplier effects from the use of local goods and services during the construction phase.	Positive – There are likely to be opportunities for local businesses to provide goods and services during the construction phase of development.	The impact will occur at a local and regional level.	N/A
Description of expected significance of impact Economic multiplier effects from the use of local goods and services opportunities include but are not limited to, the provision of construction materials and equipment, and workforce essentials such as services, safety equipment, ablution, accommodation, transportation and other goods. The increase in demand for goods and services may stimulate local business and local economic development (however locally sourced materials and services may be limited due to availability). There is likely to be a direct increase in industry and indirect increase in secondary businesses. The impact is likely to be positive, local to regional in extent, short-term, and of medium significance.			
Gaps in knowledge & recommendations for further study • Collection on exact direct and indirect employment opportunities and skills development opportunities. • Collection of information on local mining, farming and services sector **Recommendations with regards to general field surveys** • Site visits and interviews with representatives from local municipality, and services sector. • Site visit and interviews with local farmers			

Table 7: Assessment of impacts from an influx of jobseekers and change in population

Impact Influx of jobseekers and change in population			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Increased pressure on infrastructure and basic services, and social conflicts during construction as a result of in-migration of people.	Low Negative – The in-migration of job seekers to the area could result in increased pressure being placed on infrastructure and basic services, and a rise in social conflicts.	The impact will occur at a local level.	N/A
Description of expected significance of impact An influx of people looking for employment or other economic opportunities could result in increased pressure being placed on economic and social infrastructure, and a change in the local population. Population change refers to the size, structure, density as well as demographic profile of the local community. An influx of jobseekers into an area, could lead to a temporary increase in the level of crime, cause social disruption and put pressure on basic services. It could also potentially create conflict between locals and outsiders due to potential differences in racial, cultural and ethnic composition. A further negative impact that could result due to an influx of jobseekers into an area is an increase in unemployment levels due to an oversupply of available workforce, particularly with respect to semi- and unskilled workers. The impact is likely to be negative, local in extent, short-term, and of medium significance.			
Gaps in knowledge & recommendations for further study • Collection of information on existing community challenges and needs **Recommendations with regards to general field surveys** • Site visit and interviews with representatives from local municipality and community representative			

Table 8: Assessment of safety and security impacts

Impact Safety and security impacts			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Temporary increase in safety and security concerns associated with the influx of people during the construction phase.	Negative – The in-migration of job seekers to the area could be perceived to result in increased criminal activity.	The impact will occur at a local level.	No workers should be allowed to reside on-site during construction.
Description of expected significance of impact			

The commencement of construction activities can be associated with an increase in crime within an area. The perceived loss of security during the construction phase of a project due to an influx of workers and / or outsiders to the area (as in-migration of newcomers, construction workers or jobseekers are usually associated with an increase in crime), may have indirect effects such as increased safety and security concerns for neighbouring properties, damage to property, increased risk of veld fire, stock theft, poaching, crime and so forth.

The labour force will not permanently reside within the construction site. The impact is likely to be negative, local in extent, short-term, and of medium significance.

Gaps in knowledge & recommendations for further study

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

Recommendations with regards to general field surveys

- Site visit and interviews with local farmers and community members

Table 9: Assessment of impacts on daily living and movement patterns.

Impact Impacts on daily living and movement patterns			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Temporary increase in traffic disruptions and movement patterns during construction	Low Negative – An increase in traffic due to construction vehicles and heavy vehicles could create short-term disruptions and safety hazards for current road users.	The impact will occur at a local level.	N/A

Description of expected significance of impact

Increased traffic due to construction vehicles and heavy vehicles could cause disruptions to road users and increase safety hazards. The use of local roads and transport systems may cause road deterioration and congestion. The impact is likely to be negative, local in extent, short-term, and of low significance given the proximity of the project to existing mining operations within the area.

Gaps in knowledge & recommendations for further study

- Number of vehicle trips anticipated during construction.

Recommendations with regards to general field surveys

- Site visit and interviews with local farmers and local community

Table 10: Assessment of nuisance impacts (noise and dust)

Impact Nuisance impacts (noise and dust)			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Nuisance impacts in terms of temporary increase in noise and dust, and wear and tear on access roads to the site.	Negative – The impact will negatively impact sensitive receptors and could cause disruptions for neighbouring properties.	The impact will occur at a local level.	N/A.

Description of expected significance of impact

Nuisance impacts associated with construction related activities include noise, dust, and possible disruption to adjacent properties. Site clearing activities increase the risk of dust and noise being generated, which can in turn negatively impact on adjacent properties. The movement of heavy construction vehicles, construction activities, and equipment also have the potential to create noise, as well as impacts on travellers travelling via the Unnamed Rd Welkom area. The primary sources of noise during construction would be from construction equipment, vehicle and truck traffic. Noise levels can be audible over a large distance although are generally short in duration. Dust would be generated from construction activities as well as trucks / vehicles driving on gravel access roads. This impact will negatively impact sensitive receptors. The impact of noise and dust on sensitive receptors can be reduced through the application of appropriate mitigation measures. The impact is likely to be negative, local in extent, short-term, and of medium significance.

Gaps in knowledge & recommendations for further study

- Impact of noise and dust on surrounding landowners.

Recommendations with regards to general field surveys

- Site visit and interviews with farmers and local agricultural representatives

Table 11: Assessment of visual impacts and impacts on the sense of place

Impact Visual and sense of place impacts			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Intrusion impacts from construction activities will have an impact on the area's "sense of place".	Low Negative – The project could alter the area's sense of place which could impact on sensitive receptors.	The impact will occur at a local level.	N/A
Description of expected significance of impact Intrusion impacts such as aesthetic pollution (i.e., building materials, construction vehicles, etc.), noise and light pollution will impact the "sense of place" for the local community. Construction related activities have the potential to negatively impact a local area's "sense of place". Such an impact is likely to be present during the construction phase. The impact is likely to be negative, local in extent, short-term, and of medium significance.			
Gaps in knowledge & recommendations for further study • Collection of information on location of existing farming. **Recommendations with regards to general field surveys** • Site visit and interviews with local farmers.			

5.2. Potential Social impacts during the Operation Phase

It is anticipated that the Harmony One Plant Solar PV will operate for approximately 25 years or as long as required by the development.

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

- Direct and indirect employment opportunities
- Visual impact and sense of place impacts
- Development of non-polluting, renewable energy infrastructure
- Contribution to local economic development and social upliftment
- Impacts associated with the loss of agricultural land

Table 12: Employment opportunities and skills development

Impact Direct and indirect employment opportunities and skills development			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Creation of direct and indirect employment and skills development opportunities and skills development as a result of the operation of the project.	Positive – The creation of employment opportunities and skills development will assist to an extent in alleviating unemployment levels within the area.	The impact will occur at a local, regional and national level.	N/A
Description of expected significance of impact During operation a number of direct full time employment opportunities will be created. Of those employment opportunities created approximately 70% will comprise opportunities for low-skilled workers, 25% will comprise opportunities for semi-skilled workers, and approximately 5% will comprise opportunities for skilled workers. Employment opportunities include safety and security staff, operation and monitoring; and maintenance crew. Maintenance activities will be carried out throughout the lifespan of the project, and will include washing of solar panels, vegetation control, and general maintenance around the Solar PV development. The impact is likely to be positive, local to national in extent, long-term, and of medium significance.			
Gaps in knowledge & recommendations for further study • Information on the exact direct and indirect employment opportunities and skills development opportunities likely to be created during construction **Recommendations with regards to general field surveys** • Site visits and interviews with representatives from local municipality and farming. • Site visit and interviews with local farmers			

Table 13: Assessment of the visual impact and impacts on sense of place

Impact Visual and sense of place impacts			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Sense of place impacts from a social perspective associated with the operational phase of the PV development and associated infrastructure.	Low Negative – The project could alter the areas sense of place which could negatively impact on sensitive receptors.	The impact will occur at local level.	N/A
Description of expected significance of impact An area's sense of place is created through the interaction of various characteristics of the environment, including atmosphere, visual resources, aesthetics, climate, lifestyle, culture, and heritage. An area's sense of place is however subjective and largely dependent on the demographics of the population residing within the area and their perceptions regarding trade-offs. For example, while some individuals may prefer not to see any form of infrastructure development, others may be interested in large-scale infrastructure, or engineering projects and consider the impact to be less significant. Such a scenario may be true given that one of the main economic sectors within the area is mining which has altered the landscape from natural to industrial.			
Gaps in knowledge & recommendations for further study • Potential sensitive visual receptors need to be identified as part of the SIA. **Recommendations with regards to general field surveys** • Site visit and interviews with local farmers and representatives from local municipality and farming			

Table 14: Assessment of the non-polluting, renewable energy infrastructure

Impact Development of non-polluting, renewable energy infrastructure			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Development of non-polluting, renewable energy infrastructure.	Positive – Increasing the contribution of the renewable energy sector to the local economy would contribute to the diversification of the local economy and provide greater economic stability.	The impact will occur at local, regional, and national levels.	N/A
Description of expected significance of impact The generation of renewable energy will contribute to South Africa's electricity market and may contribute to the diversification of the local economy. The growth in the RE sector as a whole could introduce new skills and development into the area. The impact is likely to be positive, local to national in extent, long-term, and of medium significance.			
Gaps in knowledge & recommendations for further study • Information on the proposed project's contribution towards diversifying the local economy. **Recommendations with regards to general field surveys** • Site visit and interviews with local representatives from local municipality			

Table 15: Assessment of the local economic development and social upliftment.

Impact Contribution to local economic development and social upliftment			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
Benefits to the local area from Socio-Economic Development (SED) / Enterprise Development (ED) programmes	Positive – The creation of employment opportunities, skills development, and the contributions to local economic development will assist to an extent in both alleviating unemployment levels within the area, and improving the quality of life.	The impact will occur at local, regional, and national levels.	N/A.
Description of expected significance of impact Under the REIPPP Programme renewable energy projects are required to contribute to local economic development in the area. Awarded projects are required to spend a certain amount of their generated revenue (as defined in the agreement with DoE) on Socio-Economic Development (SED) and Enterprise Development (ED) and share ownership in the project company with local communities. The impact is likely to be positive, local to national in extent, long-term, and of high significance.			
Gaps in knowledge & recommendations for further study • Information on the project's proposed contributions to SED and ED. **Recommendations with regards to general field surveys** • Site visit and interviews with local representatives from local municipality			

Table 16: Assessment of the impacts associated with the loss of agricultural land.

Impact Impacts associated with the loss of agricultural land			
Issue	**Nature of Impact**	**Extent of Impact**	**No-Go Areas**
The development footprint on which the solar energy facility will be developed will be removed from agricultural production.	Negative – Impacts associated with loss of agricultural land due to occupation of land by the solar energy facility.	The impact will occur at a local level.	N/A
Description of expected significance of impact The development of the proposed project on a mining property would result in the area of land required to support the development footprint being removed from potential agricultural production, however the projects site has been left derelict for more than 10 years with no future prospects of re-undertaking agricultural activities. The impact is likely to be negative, local in extent, long-term, and of very low significance.			
Gaps in knowledge & recommendations for further study • The current land use and agricultural potential of the area likely to be removed from agricultural production needs to be determined. **Recommendations with regards to general field surveys** • Site visit and interviews with local representatives from local municipality			

5.3. Decommissioning phase

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

5.4. Assessment of Impacts for the No-Go Option

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

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

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

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

- Potential direct and indirect employment opportunities.
- Potential economic multiplier effect.

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

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

6. PLAN OF STUDY FOR EIA PHASE

This SIA focused on the collection of data to provide an understanding of the current social environment associated with the Harmony One Plant Solar PV Facility and grid connection corridor that is proposed and identifying social issues and potential social impacts associated with the development of such a nature.

It is recommended that a detailed SIA be conducted as part of the EIA phase. Based on the findings of the SIA, the following approach to the EIA phase study is proposed:

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

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