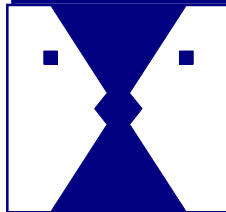


Proposed development of 225 MW solar PV plant in Northern Cape Province

Social Impact Assessment Report



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March 2017



Executive Summary

Soventix South Africa (Pty) Ltd proposes the development of a 225MW solar PV plant on the Remainder of Goedehoop 26C; Portion 6 of Leuwe Fountain 27C; Remainder of Riet Fountain 39 C; Portion 1 of Riet Fountain 39C; Remainder of Kwanselaarshoek 40C; Portion 1 of Kwanselaars Hoek 40C, Portion 4 of Taaiboschfontein 41C; and Portion 1 of Kafferspoort 56C in the Hanover district.

The proposed solar electricity generating facility intends to accommodate a photovoltaic (PV) component and associated infrastructure. The size of the proposed development footprint is approximately 520ha and includes three 75MW solar PV plants of 170 ha each with associated infrastructure, as well as the sub-station that will tie into the ESKOM 132 KV or 400 KV power lines. Existing roads will be used for main access and these may need to be enlarged to allow large equipment to access the site during construction. The construction phase is estimated to be 18 months. Three site alternatives have been identified. The 225MW plant is considered the first phase of the project, and depending on the available capacity on the ESKOM power lines, additional phases may be added in the future; but would form part of a separate environmental authorisation process.

The receiving environment is located in Ward 6 of the Emthanjeni Local Municipality that is located in the Pixley Ka Seme District Municipality in the Northern Cape province. The towns in the area are small and the proposed site is located between the towns of Hanover and De Aar. There are no areas under traditional leadership in the district and commercial farms surround the site.

The area showed an increase in population as well as the number of households since 2011, with the increase in the number of households greater than the increase in population. The household sizes have shown a decrease since 2011. This can be due to children leaving their parents' house to stay on their own and to start families of their own.



In Ward 6, the proportion of households that are multi-dimensionally poor has increased, compared to a decrease on local level. This means that the households are deprived on a number of dimensions, which mostly relate to access to basic services. Education levels are low and there are very few employment opportunities. Agriculture forms the backbone of the economy.

A number of stakeholder groups with direct interest in the proposed project have been identified. The first group includes government and Parastatal groups. The Northern Cape Provincial Government, Pixley Ka Seme District Municipality, Emthanjeni Local Municipality and Eskom are included in this group. The second group of stakeholders represents civil society and includes the residents of Hanover and De Aar and the residents of the adjacent and affected properties (farmers and farm workers). The third stakeholder group are the local businesses and service providers. The final stakeholder group represents the internal stakeholders, which is Soventix and its employees and shareholders.

Impacts of the proposed project have been identified according to the project phases. Pre-construction, construction, operation and decommissioning phases have been considered in the impact assessment. The pre-construction impacts are already taking place, and relates to expectations that people have about the proposed project and uncertainty about some of the project details.

It is anticipated that the construction phase will be where the most severe impacts will take place. Impacts predicted for the construction phase includes impacts that will occur because a change of land use/livelihoods; impact on traffic and roads, potential damage to farm infrastructure, safety and security concerns due to more people in the area, concern about social disturbance and community safety, economic impacts and impacts on the sense of place.

During the operation phase there will be less impacts, and these impacts will include impacts on community relations, economic benefits, safety and security, generation of renewable energy and sense of place. It is anticipated that the impacts in the decommissioning phase will be similar to the impacts in the construction phase, with



the loss of economic opportunities being the most severe impact. Given that this phase is 20 years in the future, and that the social environment is dynamic and subject to change, it is recommended that another SIA should be conducted before decommissioning.

The project will have a positive economic impact in the rural area. None of the potential negative social impacts are severe, and all the impacts can be mitigated.

Based on the findings of this study, the following key recommendations are made:

- Mitigation about safety and security must be implemented as soon as construction commences. The process must involve local security groups and landowners;
- A community liaison officer that is trusted by the community and has the necessary skills and education must be appointed before construction commences;
- Protocols on farm access, compensation, communication and road maintenance must be agreed upon and be in place before construction commences;
- A grievance mechanism and claims procedure must be in place and shared with all the stakeholders before the construction commences; and
- Economic benefits must be enhanced and local labour and procurement should be prioritised.

None of the social impacts identified are so severe that the project should not continue. Based on the findings of this report, it is recommended that the project continues, on the conditions that the mitigation measures are implemented.

Equispectives



Social Impact Assessment



Declaration of Independence

Equispectives Research and Consulting Services declare that:

- All work undertaken relating to the proposed project were done as independent consultants;
- They have the necessary required expertise to conduct social impact assessments, including the required knowledge and understanding of any guidelines or policies that are relevant to the proposed activity;
- They have undertaken all the work and associated studies in an objective manner, even if the findings of these studies were not favourable to the project proponent;
- They have no vested interest, financial or otherwise, in the proposed project or the outcome thereof, apart from remuneration for the work undertaken under the auspices of the abovementioned regulations;
- They have no vested interest, including any conflicts of interest, in either the proposed project or the studies conducted in respect of the proposed project, other than complying with the relevant required regulations;
- They have disclosed any material factors that may have the potential to influence the competent authority's decision and/or objectivity in terms of any reports, plans or documents related to the proposed project as required by the regulations.



Record of Experience

Ilse Aucamp and San-Marié Aucamp compiled this report.

Ilse Aucamp holds a D Phil degree in Social Work obtained from the University of Pretoria. She also has Masters degree in Environmental Management (Cum Laude) from the Potchefstroom University for Christian Higher Education. Prior to that she completed a BA degree in Social Work at the University of Pretoria. She is frequently a guest lecturer in pre- as well as post-graduate programmes at various tertiary institutions. Her expertise includes social impact assessments, social management plans, social and labour plans, social auditing, training and public participation. She is the past international chairperson of the Social Impact Assessment section of the International Association of Impact Assessment (IAIA) and a past member of the National Executive Council of IAIA South Africa. She advises the Centre for Environmental Rights on social issues, and is also on the advisory panel of the SIAhub, an international website aimed at SIA practitioners. She is a co-author of the *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* document published by the International Association for Impact Assessment.

San-Marié Aucamp is a registered Research Psychologist with extensive experience in both the practical and theoretical aspects of social research. She has more than 10 years of experience in social research and she occasionally presents guest lectures on social impact assessment. Her experience includes social impact assessments, social and labour plans, training, group facilitation and social research. She is a past council member of the Southern African Marketing Research Association (SAMRA).



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GLOSSARY OF TERMS

Sense of place: Defining oneself in terms of a given piece of land. It is the manner in which humans relate or feel about the environments in which they live.

Social impact: Something that is experienced or felt by humans. It can be positive or negative. Social impacts can be experienced in a physical or perceptual sense.

Social change process: A discreet, observable and describable process that changes the characteristics of a society, taking place regardless of the societal context (that is, independent of specific groups, religions etc.) These processes may, in certain circumstances and depending on the context, lead to the experience of social impacts.

Social Impact Assessment: 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 these interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.

Social license to operate: The acceptance and belief by society, and specifically local communities, in the value creation of activities.

Social risk: Risk resulting from a social or socio-economic source. Social risk comprises both the objective threat of harm and the subjective perception of risk for harm.

**LIST OF ABBREVIATIONS**

BBBEE	Broad-Based Black Economic Empowerment
DoE	Department of Energy
DM	District Municipality
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESOMAR	European Society for Opinion and Marketing Research
FPL	Food Poverty Line
HDSA	Historically Disadvantaged South African
IDP	Integrated Development Plan
LBPL	Lower Bound Poverty Line
LM	Local Municipality
NEMA	National Environmental Management Act
NPO	Non Profit Organisation
SAMPI	South African Multidimensional Poverty Index
SAMRA	Southern African Marketing Research Association
SIA	Social Impact Assessment
UBPL	Upper Bound Poverty Line
UNEP	United Nations Environmental Programme



1 Introduction

Soventix South Africa (Pty) Ltd proposes the development of a 225MW solar PV plant on the following farms in the Hanover district:

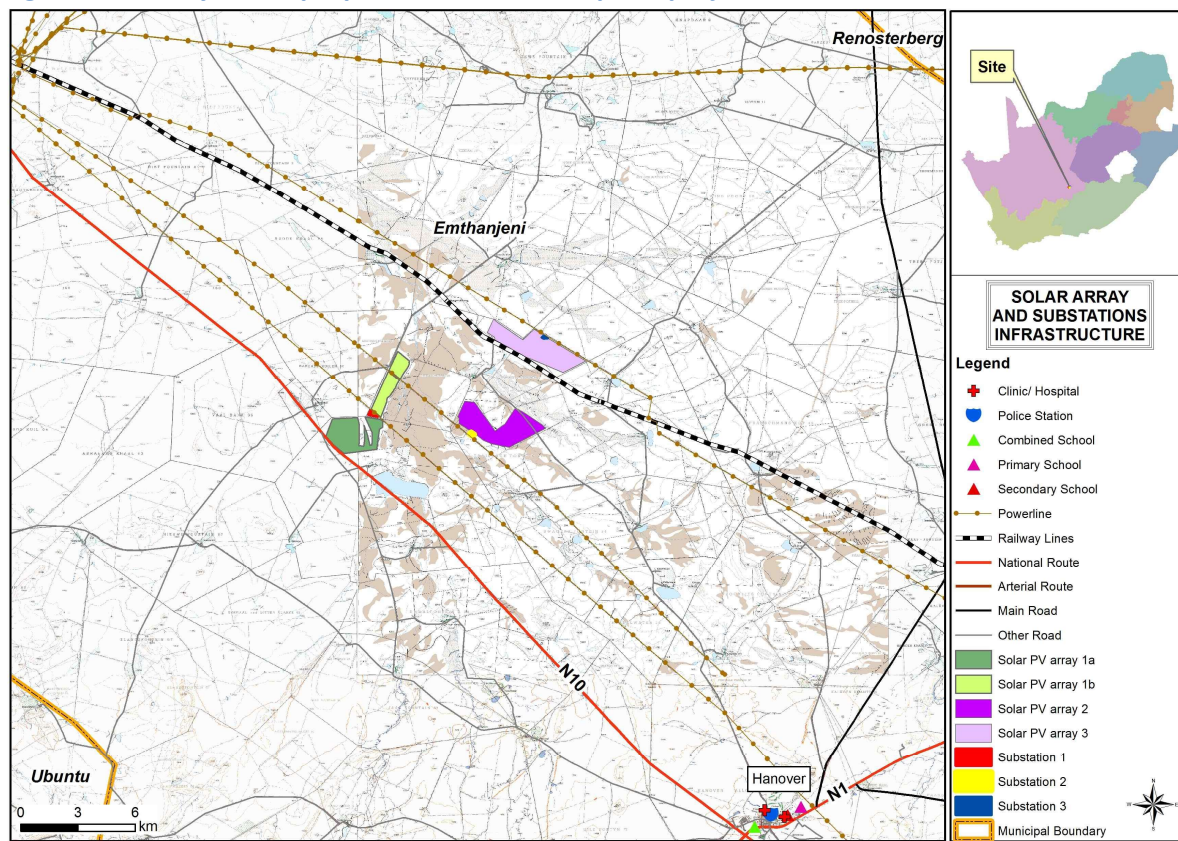
- Remainder of Goedehoop 26C;
- Portion 6 of Leuwe Fountain 27C;
- Remainder of Riet Fountain 39 C;
- Portion 1 of Riet Fountain 39C;
- Remainder of Kwanselaarshoek 40C;
- Portion 1 of Kwanselaars Hoek 40C;
- Portion 4 of Taaiboschfontein 41C; and
- Portion 1 of Kafferspoort 56C.

The proposed solar electricity generating facility intends to accommodate a photovoltaic (PV) component and associated infrastructure. The size of the proposed development footprint is approximately 520ha and includes three 75MW solar PV plants of 170 ha each with associated infrastructure, as well as the sub-station that will tie into the ESKOM 132KV or 400 KV power lines. Existing roads will be used for main access and these may need to be enlarged to allow large equipment to access the site during construction. The construction phase is estimated to be 18 months. Three site alternatives have been identified. The 225MW plant is considered the first phase of the project, and depending on the available capacity on the ESKOM power lines, additional phases may be added in the future; but would form part of a separate environmental authorisation process.

Figure 1 shows the proposed location for the project.



Figure 1: Locality of the proposed 225 MV solar plant project.



The purpose of this report is to provide baseline information regarding the socio-economic environment, to identify possible social and economic impacts and to suggest ways in which these impacts can be mitigated. This will assist decision-makers on the project in making informed decisions by providing information on the potential or actual consequences of their proposed activities. The process entailed the following:

- A baseline socio-economic description of the affected environment;
- Identification of potential social and economic change processes that may occur as a result of the project; and
- Identification of potential social and economic impacts.

One of the ways in which social risk can be managed is by conducting a social impact assessment (SIA). Such an assessment can assist with identifying possible social impacts and risks. Disregarding social impacts can alter the cost-benefit equation of



development and in some cases even undermine the overall viability of a project. A proper social impact assessment can have many benefits for a proposed development (UNEP, 2002) such as:

- Reduced impacts on communities of individuals;
- Enhanced benefits to those affected;
- Avoiding delays and obstruction – helps to gain development approval (social license);
- Lowered costs;
- Better community and stakeholder relations; and
- Improved proposals.

Ecoleges Environmental Consultants was appointed to manage the Environmental Impact Assessment for the project and they appointed Equispectives Research and Consulting Services to perform a social impact assessment for the proposed project. This report represents the findings and recommendations of the social impact assessment.

2 Scope of Work

The purpose of the SIA is to provide input in the Environmental Impact Assessment (EIA) and Environmental Management Programme (EMP) Report for the proposed solar electricity generating facility. Prior to the SIA, a scoping level assessment has been completed in November 2016.

2.1 EIA/EMP Level Assessment

The EIA level assessment includes the following:

- Update of Baseline Information as determined post Scoping Phase;



- A detailed social impact assessment based on the proposed activities and the alternatives identified during the Scoping phase;
- Identification and description of sensitivities and constraints from a social perspective;
- ‘Need and desirability’ taking into account the social and economic aspects;
- Recommendations with regard to the planning, construction and operation of the proposed development that will benefit all stakeholders, including the community;
- Contribution to the preparation of an EMP relating to the specific field of expertise and impacts identified;
- Detailed mitigation / management measures for the management of the identified impacts for inclusion in the EMP. The mitigation / management measures are presented in a tabulated format for each phase of the project and include:
 - Detailed description of mitigation measures or management options;
 - Roles and Responsibilities for Implementation;
 - Timeframes for implementation;
 - Means of measuring successful implementation (Targets & Performance Indicators).
- Suggestions on effective corporate social responsibility projects that can be undertaken by the developer based on the needs of the community.



3 Methodology

3.1 Information base

The information used in this report was based on the following:

- A literature review (see list provided in the References);
- Data from Statistics South Africa;
- Professional judgement based on experience gained with similar projects;
- The public participation records provided by Ecoleges; and
- Consultation with stakeholders in February 2017 (Face-to-face and telephonic interviews).

In terms of the way forward, it is believed that a participatory approach is the best way to approach social research in the South African context. The World Bank Social Standards, Equator Principles, International Principles for Social Impact Assessment, as well as the *Guidance document for assessing and managing the social impacts of projects* of IAIA guided the study. It must be noted that international standards and principles will be adapted to ensure that it can be applied in the local social context. Apart from obtaining environmental permits as required by law, any proposed project would also require “social license to operate” from the community where it will be situated. This is seen to be a crucial element to ensure the successful implementation of the recommendations resulting from the environmental studies. The methodology proposed therefore focussed on involving the affected public in the research and planning where it was realistically possible and executable. Different methodologies were utilised to ensure the affected communities were consulted in the way that is most appropriate to the community. Information obtained through the public processes informed the writing of the social report.



3.2 Assumptions and limitations

The following assumptions and limitations were relevant:

1. Not every individual in the community could be interviewed therefore only key people in the community were approached for discussion. These key people include the directly affected landowner, the neighbours and representatives of local government. Additional information was obtained using existing data.
2. The social environment constantly changes and adapts to change, and external factors outside the scope of the project can offset social changes, for example changes in local political leadership, environmental disasters or economic conditions. It is therefore difficult to predict all impacts to a high level of accuracy, although care has been taken to identify and address the most likely impacts in the most appropriate way for the current local context within the limitations. In addition, it is also important to manage social impacts for the life of the project, especially in the light of the changing social environment.
3. Social impacts can be felt on an actual or perceptual level, and therefore it is not always straightforward to measure the impacts in a quantitative manner.
4. Social impacts commence when the project enters the public domain. Some of these impacts will occur irrespective of whether the project continues or not, and other impacts have already started. These impacts are difficult to mitigate and some would require immediate action to minimise the risk.
5. There are different groups with different interests in the community, and what one group may experience as a positive social impact, another group may experience as a negative impact. This duality will be pointed out in the impact assessment phase of the report.
6. Social impacts are not site-specific, but take place in the communities surrounding the proposed development.
7. The social impact assessment used the information and project description that was available to the social scientists at the time of the writing of the assessment.



3.3 Methods

Scientific social research methods were used for this assessment. In order to clarify the process to the reader, this section will start with a brief explanation of the processes that have been used in this study.

3.3.1 Defining of concepts

The theoretical model used for this impact assessment was developed by Slootweg, Vanclay and Van Schooten and presented in the *International Handbook of Social Impact Assessment* (Vanclay & Becker, 2003). This model identifies pathways by which social impacts may result from proposed projects. The model differentiates between social change processes and social impacts, where the social change process is the pathway leading to the social impact. Detail of how the model works is not relevant to this study, but it is important to understand the key concepts, which will be explained in the following paragraphs.

Social change processes are set in motion by project activities or policies. A social change process is a discreet, observable and describable process that changes the characteristics of a society, taking place regardless of the societal context (that is, independent of specific groups, religions etc.) These processes may, in certain circumstances and depending on the context, lead to the experience of social impacts (Vanclay, 2003). If managed properly, however, these changes may not create impacts. Whether impacts are caused will depend on the characteristics and history of the host community, and the extent of mitigation measures that are put in place (Vanclay, 2003). Social change processes can be measured objectively, independent of the local context. Examples of social change processes are an increase in the population, relocation, or the presence of temporary workers.

For the purpose of this report, the following social change process categories were considered:

- Demographic processes;
- Economic processes;
- Geographic processes;



- Institutional and legal processes;
- Emancipatory and empowerment processes;
- Socio-cultural processes; and
- Other relevant processes.

The *International Association for Impact Assessment* (2003) states that **Social Impact Assessment** includes 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 these interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.

A **social impact** is something that is experienced or felt by humans. It can be positive or negative. Social impacts can be experienced in a physical or perceptual sense. Therefore, two types of social impacts can be distinguished:

- **Objective social impacts** – i.e. impacts that can be quantified and verified by independent observers in the local context, such as changes in employment patterns, in standard of living or in health and safety.
- **Subjective social impacts** – i.e. impacts that occur “in the heads” or emotions of people, such as negative public attitudes, psychological stress or reduced quality of life.

It is important to include subjective social impacts, as these can have far-reaching consequences in the form of opposition to, and social mobilisation against the project (Du Preez & Perold, 2005).

For the purpose of this SIA, the following Social Impact Assessment categories were investigated:

- Health and social well-being;
- Quality of the living environment;
- Economic impacts and material well-being;



- Cultural impacts;
- Family and community impacts;
- Institutional, legal, political and equity impacts; and
- Gender impacts.

Relevant criteria for selecting significant social impacts included the following:

- Probability of the event occurring;
- Number of people that will be affected;
- Duration of the impact;
- Value of the benefits or costs to the impacted group;
- Extent to which identified social impacts are reversible or can be mitigated;
- Likelihood that an identified impact will lead to secondary or cumulative impacts;
- Relevance for present and future policy decisions;
- Uncertainty over possible effects; and
- Presence or absence of controversy over the issue.

For the purpose of this study, the model was adapted to suit the South African context, and where processes and impacts were not relevant to the study, it was omitted. Each category has a number of sub-categories, which also have been investigated. The Equator Principles, International Finance Corporation Performance Standards and World Bank Environmental, Health and Safety guidelines were consulted in the writing of this report and the mitigation suggested adheres to these requirements.

3.3.2 Literature study

A detailed literature search was undertaken to obtain secondary data for the baseline description of the socio-economic environment. The information in this report was acquired via statistical data obtained from Statistics South Africa, SIA



literature (see References) as well as information from reputable sources on the Internet.

3.3.3 Research approach

Traditionally there are two approaches to SIA, a technical approach and a participatory approach. A technical approach entails that a scientist remains a neutral observer of social phenomena. The role of the scientist is to identify indicators, obtain objective measures relevant to the situation and provide an expert assessment on how the system will change (Becker, Harris, Nielsen & McLaughlin, 2004). A participatory approach uses the knowledge and experiences of individuals most affected by the proposed changes as the basis for projecting impacts. In this case the role of the scientist is facilitator of knowledge sharing, interpretation and reporting of impacts (Becker et al, 2004). A combination of these approaches was used for this study.

The findings presented in this report are based on secondary and primary research. A qualitative approach was followed for the primary research, while qualitative and quantitative data were used for the secondary research.

3.4 Ethical issues

The fact that human beings are the objects of study in the social sciences brings unique ethical problems to the fore. Every individual has a right to privacy which is the individual's right to decide when, where, to whom, and to what extent his or her attitude, beliefs and behaviour will be revealed (Strydom, 2002). Every person interviewed for the purposes of this report has been ensured that although the information disclosed will be used, their names will not be disclosed without their permission, even the people who had no objection if their names were disclosed. Therefore, to protect those consulted and to maintain confidentiality, the people interviewed for this report will not be named in the report. Records of the interviews have been kept. Where participants requested, the records pertaining to them have been shared with them. This is in line with international as well as national research practice such as the World Association for Market, Social and Opinion Researchers



(ESOMAR) and Southern African Marketing Research Association (SAMRA) codes of conduct.

4 Legislative and Policy Framework

Although there are no explicit acts referring directly to SIA, there are many acts and policies that require specific social outcomes that can be related to this project, and these are discussed in the section below.

4.1 The Constitution of the Republic of South Africa 1996

The current Constitution of the Republic of South Africa 1996 can be regarded as one of the most progressive constitutions in the world. Human rights are enshrined in the South African Constitution, which forms the basis of all the country's legislation. Chapter 2 consists of a Bill of Rights, which explicitly spells out the rights of every South African citizen. Human rights and dignity are fundamental to SIA and it recognises fundamental human rights and the prerogative to protect those rights as core values (Vanclay, 2003). The human rights relevant to the environmental management field that are safeguarded by the Constitution of the Republic of South Africa 1996 in the Bill of Rights, include:

- Right to a healthy environment;
- Right of access to land and to security of tenure; and
- Right to adequate housing and protection against evictions and demolitions.

The right to a protected biophysical environment, the promotion of social development and trans-generational equity is explicitly included in the Constitution of the Republic of South Africa 1996, which states:

“Everyone has the right -

1. To an environment that is not harmful to their health and wellbeing, and



2. To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:

1. *Prevent pollution*
2. *Promote conservation, and*
3. *Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

When considering an environment that is not harmful to peoples' health and wellbeing, it is important to reflect on the interconnectedness of biophysical, economic and social aspects. The impact of development on people, and the true cost of development, as well as the consideration of “who pays the price?” versus “who reaps the benefits?” cannot be ignored in a discussion about human rights and the environment.

The right to a generally satisfactory environment is increasingly seen as a human right in Africa (Du Plessis, 2011), and South Africa's environmental legislation support this.

4.1.1 The National Environmental Management Act 107 of 1998

The National Environmental Management Act (NEMA) 107 of 1998 states that the State must respect, protect, promote and fulfil the **social**, economic and environmental rights of everyone and strive to meet the needs of previously disadvantaged communities. It states further that sustainable development requires the integration of **social**, economic and environmental factors in the planning, evaluation and implementation of decisions to ensure that development serves present and future generations.

Chapter 1 of NEMA contains a list of principles and states clearly that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests (NEMA, 1998). It states further that negative impacts on the environment and on



peoples' environmental rights must be anticipated and prevented, and if they cannot be prevented, they should be minimised and remedied. It elaborates further on the equity of impacts, and the fact that vulnerable communities should be protected from negative environmental impacts. It refers to the principle that everyone should have equal access to environmental resources, benefits and services to meet their basic human needs (NEMA, 1998). Therefore there is a clear mandate for environmental and restorative justice in the act, something that must be considered in this project.

Another important aspect of NEMA is the principle of public participation. It states that people should be empowered to participate in the environmental governance processes, and that their capacity to do so should be developed if it does not exist. All decisions regarding the environment should take the needs, interest and values of the public into account, including traditional and ordinary knowledge (NEMA, 1998). There are also specific environmental management acts that fall under NEMA, such as the National Environmental Management, Air Quality Act 39 of 2004 (NEM: AQA), and the National Environmental Management, Waste Act 59 of 2008 (NEM: WA). These acts require similar public participation processes to NEMA and the principles of NEMA also apply to them (Department of Environmental Affairs & Development Planning [DEA&DP], Provincial Government of the Western Cape, 2010).

Chapter 6 of NEMA elaborates on the public participation requirements. This is supplemented by the EIA regulations published in GN 982 of 4 December 2014, which contained requirements for public participation (GN 982 in GG 38282 of 4 December 2014). It provides requirements for the public participation, the minimum legal requirements for public participation processes, the generic steps of a public participation process, requirements for planning a public participation process and a description of the roles and responsibilities of the various role players. A compulsory Public Participation Guideline that was published in 2012 (GN 807 of 10 October 2012) in terms of section J of NEMA (NEMA, 1998) complements these requirements. According to the guidelines, public participation can be seen as one of



the most important aspects of the environmental authorisation process. Public participation is the only requirement of the environmental impact assessment process for which exemption cannot be given, unless no rights are affected by an application. This stems from the requirement in NEMA that people have a right to be informed about potential decisions that may affect them and that they must be given an opportunity to influence those decisions.

The principles of NEMA 107 of 1998 declare further that community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, sharing of environmental knowledge and experience and any other appropriate means. It states that the social, environmental and economic impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions taken must be appropriate given the assessment and evaluation. NEMA 107 of 1998 recognises that the environment is held in public trust for the people, and therefore the beneficial use of environmental resources must serve the peoples' interest and protect the environment as the peoples' common heritage.

NEMA takes a holistic view of the environment, and promotes the consideration of social, economic and biophysical factors to obtain sustainable development and achieve effective management of the biophysical environment.

4.1.2 The National Water Act 36 of 1998

Chapter 1 of the National Water Act (NWA) 36 of 1998 states that sustainability and equity are identified as central guiding principles in the protection, use, development, conservation, management and control of water resources. It affirms that the guiding principles recognise the basic human needs of present and future generations and the need to promote social and economic development using water. Chapter 2 of the NWA states amongst others that the purpose of the act is to ensure that everyone has equitable access to water, and that the results of past racial and gender discrimination are redressed. It aims to promote the efficient, sustainable, and beneficial use of water in the public interest, and to facilitate social



and economic development. The NWA recognises that the nations' water resources are held in public trust for the people, and therefore the sustainable, equitable and beneficial use of water resources must serve the peoples' interest.

4.1.3 The National Energy Act 34 of 2008

The preamble to the National Energy Act 34 of 2008 states that the aim of the act 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. The development of energy resources must take environmental management requirements and interactions amongst economic sectors into account. The act also aims to assist with increased generation and consumption of renewable energies.

4.1.4 The White Paper on Energy Policy of the Republic of South Africa (1998)

The White Paper on Energy Policy (December 1998) supports investments in renewable energy. It states that government policy is based on an understanding that renewables are energy sources in their own right, are not limited to small-scale and remote applications, and have significant medium and long-term commercial potential. According to the White Paper, advantages of renewable energy include minimal environmental impacts in 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. The White Paper acknowledge that renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future. It further recognises that renewable energy can be suitable for both small/local and large/centralised applications.

The White Paper underlines the fact that the state must establish a national energy policy which will ensure that the national energy resources shall be adequately tapped and developed to cater for the needs of the nation. Energy should therefore



be available to all citizens at an affordable cost. Energy production and distribution should not only be sustainable, but should also lead to improvement of the standard of living for all of the country's citizens.

4.1.5 The White Paper on Renewable Energy (2003)

The White Paper on Renewable Energy (November 2003) supplements the White Paper on Energy Policy (1998) that recognise that the medium and long-term potential of renewable energy is significant. It states that renewable energy needs to assume a significant role in supporting economic development.

The White Paper express that government is committed to the introduction of greater levels of competition in electricity markets, and that promoting renewable energy will contribute towards the diversification of electricity supply and energy security. Renewable energy that is produced from sustainable natural sources will contribute to sustainable development.

4.1.6 The National Heritage Resources Act 25 of 1999

The National Heritage Resources Act (NHRA) 25 of 1999 affirms that every generation has a moral responsibility to act as trustee of the national heritage for later generations and that the State is obliged to manage heritage resources in the interest of all South Africans. The Act further elaborates on the fact that heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

4.1.7 Promotion of Administrative Justice Act 3 of 2000

The Bill of Rights in the Constitution of the Republic of South Africa 1996 states that everyone has the right to administrative action that is legally recognised, reasonable and procedurally just. The Promotion of Administrative Justice Act (PAJA) 3 of 2000 gives effect to this right. The PAJA applies to all decisions of all State organisations exercising public power or performing a public function in terms of any legislation



that negatively affects the rights of any person. The Act prescribes what procedures an organ of State must follow when it takes decisions. If an organ of State implements a decision that impacts on an individual or community without giving them an opportunity to comment, the final decision will be illegal and may be set aside. The Promotion of Administrative Justice Act 3 of 2000 also forces State organisations to explain and give reasons for the manner in which they have arrived at their decisions and, if social issues were involved, and how these issues were considered in the decision-making process.

The Promotion of Administrative Justice Act 3 of 2000 therefore protects the rights of communities and individuals to participate in decision-making processes, especially if these processes affect their daily lives.

4.2 Additional governance tools

Legislation is not the only tool that authorities can use to achieve sustainable development and social development outcomes. There are a number of tools, policies and strategic planning instruments that can contribute to this.

4.2.1 Integrated Development Plans

For the purpose of this project, Integrated Development Plan (IDP) documents of two municipalities were considered: the Emthanjeni Local Municipality and the Pixley Ka Seme District Municipality.

The Emthanjeni Local Municipality has agreed on seven Strategic Objectives that are to be achieved, namely:

- Provision of access to all basic services rendered to residents within available resources;
- Development and transformation of the institution with the aim of capacitating the municipality in meeting their objectives;
- Promote the equitable creation and distribution of wealth in Emthanjeni Local Municipality;



- Maintaining a financially sustainable and viable municipality;
- Promote representative governance through the sustainable utilisation of available resources in consultation with the residents of Emthanjeni Municipality;
- Contribute to the creation of communities where residents and visitors can work, live and play without threat to themselves or their properties; and
- Contribute to the development and protection of the rights and the needs of all residents with a particular focus on the poor.

The Pixley Ka Seme District Municipality has indicated four focus areas in its strategic IDP, namely:

- Socio-economic development – these are issues that are key to the long-term survival and prosperity, such as economic growth and job creation, eradication of poverty, broad-based black economic empowerment, maintaining the integrity of the environment, etc.;
- Service delivery – the provision of quality and efficient basic services such as water, electricity, sewerage etc. to communities;
- Governance – this issue revolves around a number of aspects such as the relationship in the district between the district and local municipalities, between local municipalities, intergovernmental relationships, performance management, capacity building of officials and councillors, etc. The major driving force behind this IDP is the National Spatial Development Strategy, the Northern Cape Growth and Development strategy and the District Growth and Development Strategies; and
- Economic growth – making the locality functional and appealing through proper infrastructure and service provision and building the skills and confidence of local communities for a key part of this strategy.



Through its potential contribution to the local economy, social development projects and sustainability the Soventix project aligns with the local and district IDPs.

4.2.2 Provincial Growth and Development Strategies

The Northern Cape Provincial Growth and Development Strategy (NCPGDS), coupled with the Provincial Spatial Development Framework (PSDF), will ensure sustainable economic growth and development and increased spatial equity of that growth and development. The vision of the NCPGDS is to build a prosperous, sustainable, growing provincial economy to eradicate poverty and improve social development for a caring society and it rests on six pillars, namely:

- Promoting and facilitating economic growth, diversification and transformation;
- Efficient and effective infrastructure network;
- Poverty eradication through social development;
- Improving governance efficiency and effectiveness;
- Comprehensive rural development programme; and
- Spatial development framework.

These rest on a number of inter-dependent provincial priorities / foundations:

- Ensure availability of affordable energy;
- Trade development and promotion;
- Enterprise development and broad-based economic empowerment;
- Regional and local economic development;
- Environmental and sustainable development;



- Development of the knowledge-based society and economy (science and technology); and
- Ensure availability of adequate financial services.

The Soventix project will contribute to economic growth and diversification, social development projects, economic development in the region, sustainable development and affordable energy, and are therefore in line with the NCPGDS.

4.2.3 National Development Plan

On 11 November 2011 the National Planning Commission released the National Development Plan: Vision for 2030 (NPC, 2012) for South Africa and it was adopted as government policy in August 2012. The National Development Plan (NDP) was undertaken to envision what South Africa should look like in 2030 and what action steps should be taken to achieve this (RSA, 2013). The aim of the NDP is to eliminate poverty and reduce inequality by 2030. The report identifies nine central challenges to development in South Africa:

1. Too few people work.
2. The standard of education for most black learners is of poor quality.
3. Infrastructure is poorly located, under-maintained and insufficient to foster higher growth.
4. Spatial patterns exclude the poor from the fruits of development.
5. The economy is overly and unsustainably resource intensive.
6. A widespread disease burden is compounded by a failing public health system.
7. Public services are uneven and often of poor quality.
8. Corruption is widespread.
9. South Africa remains a divided society (NPC, 2012).



The plan focuses on creating an enabling environment for development and wants to shift from a paradigm of entitlement to a paradigm of development that promotes the development of capabilities, the creation of opportunities and the involvement of all citizens (NPC, 2012). The National Development Plan (NPC, 2012) wants to achieve the following:

1. An economy that will create more jobs.
2. Improving infrastructure.
3. Transition to a low-carbon economy.
4. An inclusive and integrated rural economy.
5. Reversing the spatial effects of apartheid.
6. Improving the quality of education, training and innovation.
7. Quality healthcare for all.
8. Social protection.
9. Building safer communities.
10. Reforming the public service.
11. Fighting corruption.
12. Transforming society and uniting the country.

Each of the points above is a chapter in the plan, and contains a range of targets and proposals. Some are general statements of policy intent, while others are specific policy proposals, actions or processes that should take place (NPC, 2012). Through its contribution to a low-carbon economy, job creation, infrastructure and the rural economy, the Soventix project will contribute to achieving some of the goals of the National Development Plan.



4.2.4 Sustainable Development Goals

All 189 Members States of the United Nations, including South Africa, adopted the United Nations Millennium Declaration in September 2000 (UN, 2000). The commitments made by the Millennium Declaration are known as the Millennium Development Goals (MDGs), and 2015 was targeted as the year to achieve these goals. The United Nations Open Working Group of the General Assembly identified seventeen sustainable development goals, built on the foundation of the MDGs as the next global development target (UN, 2014). The sustainable development goals include aspects such as ending poverty, addressing food security, promoting health, wellbeing and education, gender equality, water and sanitation, economic growth and employment creation, sustainable infrastructure, reducing inequality, creating sustainable cities and human settlements, and addressing challenges in the physical environment such as climate change and environmental resources (UN, 2014). These aspects are included in the NPD, and it can therefore be assumed that South Africa's development path is aligned with the international development agenda. Soventix can assist with contributing to achieving goals such as economic growth and employment creation, sustainable infrastructure and promoting health, wellbeing and education through their enterprise development and socio-economic development programmes.

4.3 National and international standards

National and international industry standards aimed at sustainable development and social justice specifically have become abundant in the last decade. Many industries use these standards as indicators for best practice. The discussion below highlights only a few of these standards.

4.3.1 ISO 26000:2010/SANS 26000:2010

Performance standards have long been a voluntary tool used by industry to achieve certain outcomes. The first standard on social responsibility, ISO 26000 was published on 1 November 2010 (ISO, 2010). It was developed using a multi-stakeholder approach involving experts from more than 90 countries and 40



international or broadly based regional organisations involved in different aspects of social responsibility (ISO, 2010).

The South African Bureau of Standards (SABS), a statutory body that is mandated to develop, promote and maintain South African National Standards (SABS, [sa]) adopted the ISO 26000 Standard as a South African National Standard (SANS) 26000:2010.

Social responsibility is defined in the standard as the responsibility of an organisation for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that contributes to sustainable development, including health and welfare of society; takes into account the expectations of the stakeholders; complies with applicable law and is consistent with international behaviour norms, and is integrated throughout the organisation and practiced in its relationships (ISO, 2010).

The document identifies seven principles for social responsibility and seven core subjects that should be addressed by organisations. The seven principles for social responsibility are accountability, transparency, ethical behaviour, respect for stakeholder interests, respect for the rule of law, respect for international norms of behaviour and respect for human rights (ISO, 2010). The core subjects that should be addressed include organisational governance, human rights, labour practices, environment, fair operating practices, consumer issues and community involvement and development (ISO, 2010). Economic aspects, health and safety and the value chain are dealt with throughout the seven core subjects, and gender issues are considered.

ISO 26000 is a good introduction to what social responsibility is and what measures should be taken to move towards being a more socially responsible company. It deals with equity issues and can encourage social development initiatives by companies through activities such as social investment projects, employment creation, skills development and income creation. Any company operating in area where people are affected by their activities has a social responsibility towards the



affected community, and as such it would be in the interest of Soventix to address the core subjects as suggested by ISO 26000:2010.

4.3.2 International Social Performance Standards/Initiatives

There is a profusion of global initiatives aiming at assisting companies to make their operations more sustainable. Human rights, environmental protection and social justice are gaining support from industry. The social agenda forms an important part of this trend. Only a few relevant initiatives will be mentioned in this section.

The Global Reporting Initiative (GRI) is a leading organisation in the sustainability field that promotes sustainability reporting as a way for companies to become more sustainable and contribute to sustainable development. A company publishes a sustainability report to report the economic, social and environmental impacts of its everyday activities, present its values and governance model and explain the link between its strategy and its commitment to sustainable development (GRI, [sa]). The GRI have strategic partnerships with the United Nations Environment Programme, the United Nations Global Compact, the Organisation for Economic Co-operation and Development and the International Organisation for Standardisation, amongst others (GRI, [sa]). The social category relates to the impact of the company on the social systems in which it operates. The social category consist of four subcategories namely labour practices and decent work; human rights; society; and product responsibility. Each of the categories is unpacked by using a number of aspects that should be considered (GRI, [sa]). GRI Focal Points are national offices that drive the initiatives in particular countries and regions. On 26 February 2013 the GRI Focal Point South Africa was launched. South Africa is one of the countries with the largest number of GRI reporters in the world. The GRI Focal Point South Africa aims to work with multi-national companies to expand and share best practices across the continent (GRI, [sa]).

Many of the multi-lateral funding agencies such as the World Bank have social standards that they must uphold. The most frequently used in the EIA industry is the International Finance Corporation's (IFC) principles (IFC, 2012). The IFC is a member



of the World Bank group, and as a part of their sustainability framework they created performance standards on environmental and social sustainability (IFC, 2012). The standards relevant to the social environment are the following:

1. Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
2. Performance Standard 2: Labour and Working Conditions
3. Performance Standard 4: Community Health, Safety, and Security
4. Performance Standard 5: Land Acquisition and Involuntary Resettlement
5. Performance Standard 7: Indigenous Peoples
6. Performance Standard 8: Cultural Heritage (IFC, 2012)

Issues such as gender, climate change, water and human rights are addressed across the standards. A guidance note accompanies each standard (IFC, 2012:4). Environmental and social risks and impacts must be managed by using an Environmental and Social Management System. The standard applies to all the activities funded by the IFC for the duration of the loan period. A number of private banks adopted most of the IFC standards in an initiative known as the Equator Principles (Esteves, Franks & Vanclay, 2012).

4.3.3 International Principles for SIA

The practice of SIA is guided by a set of *International Principles* that defines the core values, fundamental principles for development and principles specific to SIA practice (Vanclay, 2003). When the *International Principles* are considered, it is clear that SIA aspires to more than just assessing the impact of development on people, and includes sustainable outcomes. The following specific principles refer to these sustainable outcomes (Vanclay, 2003):



- Development projects should be broadly acceptable to the members of those communities likely to benefit from, or be affected by, the planned intervention.
- The primary focus of all developments should be positive outcomes, such as capacity building, empowerment, and the realisation of human and social capital.
- The term “environment” should be defined broadly to include social and human dimensions, and in such inclusion, care must be taken to ensure that adequate attention is given to the realm of the social.
- Equity considerations should be a fundamental element of impact assessment and of development planning.
- There should be a focus on socially sustainable development, with the SIA contributing to the determination of best development alternative(s) – SIA (and EIA) has more to offer than just being an arbiter between economic benefit and social cost.
- In all planned interventions and their assessments, avenues should be developed to build the social and human capital of local communities and to strengthen democratic processes.
- Local knowledge, experience and acknowledgement of different cultural values should be incorporated in any assessment.
- Development processes that infringe the human rights of any section of society should not be accepted.

In addition to the *International Principles*, the international SIA community produced a document titled: *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay, Esteves, Aucamp & Franks, 2015) in April 2015. The purpose of this document is to provide advice to various stakeholders (including proponents) about good practice SIA and social impact management (Vanclay et al., 2015). This document aspires to provide a much-needed benchmark for SIA practice across the globe.



5 Receiving environment

According to the National Environmental Management Act (NEMA, 1998) environment refers to the surroundings in which humans exist. When viewing the environment from a socio-economic perspective the question can be asked what exactly the social environment is. Different definitions for social environment exist, but a clear and comprehensive definition that is widely accepted remains elusive. Barnett & Casper (2001) offers the following definition of human social environment:

“Human social environments encompass the immediate physical surroundings, social relationships, and cultural milieus within which defined groups of people function and interact. Components of the social environment include built infrastructure; industrial and occupational structure; labour markets; social and economic processes; wealth; social, human, and health services; power relations; government; race relations; social inequality; cultural practices; the arts; religious institutions and practices; and beliefs about place and community. The social environment subsumes many aspects of the physical environment, given that contemporary landscapes, water resources, and other natural resources have been at least partially configured by human social processes. Embedded within contemporary social environments are historical social and power relations that have become institutionalized over time. Social environments can be experienced at multiple scales, often simultaneously, including households, kin networks, neighbourhoods, towns and cities, and regions. Social environments are dynamic and change over time as the result of both internal and external forces. There are relationships of dependency among the social environments of different local areas, because these areas are connected through larger regional, national, and international social and economic processes and power relations.”

Environment-behaviour relationships are interrelationships (Bell, Fisher, Baum & Greene, 1996). The environment influences and constrains behaviour, but behaviour

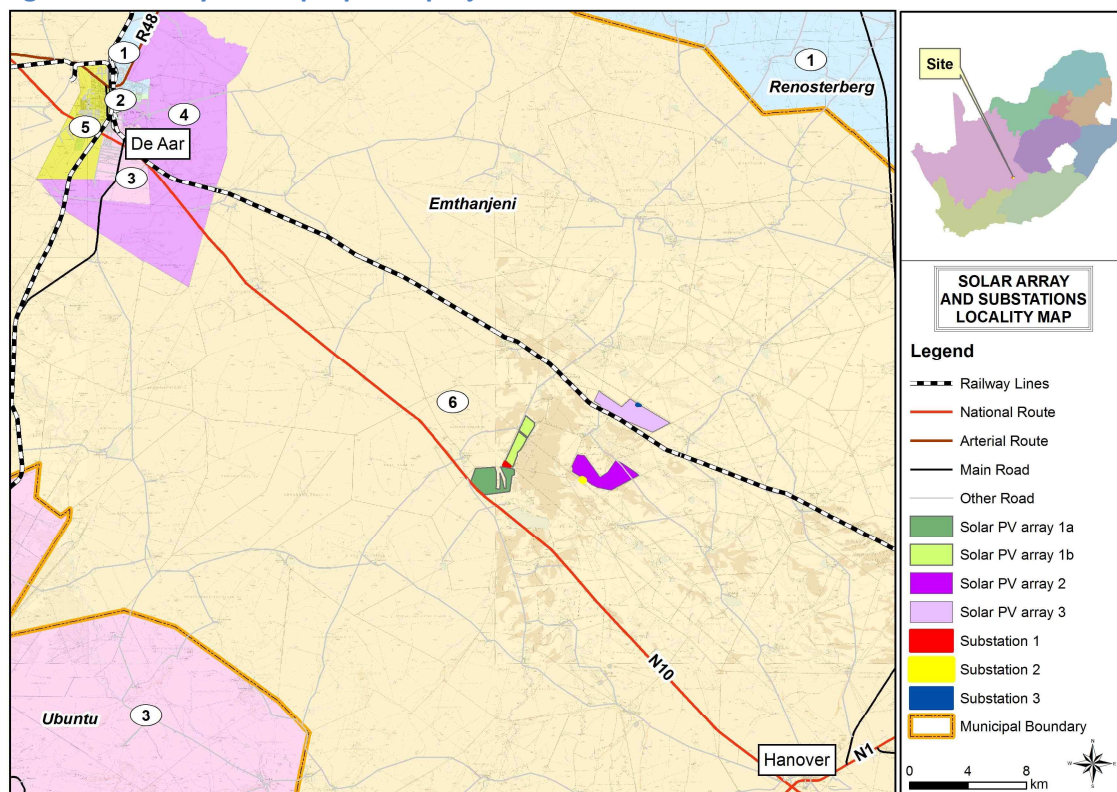


also leads to changes in the environment. The impacts of a project on people can only be truly understood if their environmental context is understood. The baseline description of the social environment will include a description of the area within a provincial, district and local context that will focus on the identity and history of the area and a description of the population of the area based on a number of demographic, social and economic variables.

5.1 Description of the area

The proposed project will be located in Ward 6 of the Emthanjeni Local Municipality that falls under the Pixley Ka Seme District Municipality in the Northern Cape Province. For the baseline description of the area, data from Census 2011, Community Survey 2016, municipal IDP's and websites were used.

Figure 2: Locality of the proposed project.



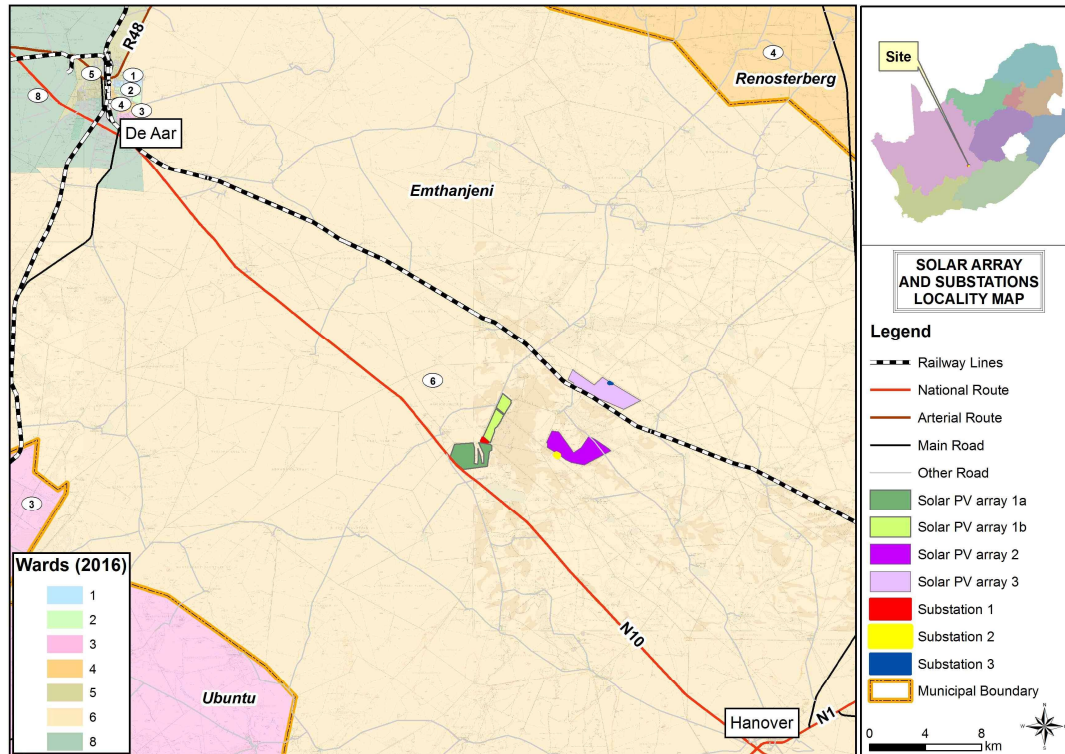
It must be noted that the demarcation of the wards changed in 2016. Wards 3 and 8 are adjacent to Ward 6, and for consultation purposes the councillors in these wards must be included in the process. However, the statistical data was obtained in the



2011 census, and therefore the discussion of the statistics uses the old ward demarcations, since no census data that is aligned with the 2016 wards is available.

Figure 3 below indicates the 2016 demarcation.

Figure 3: Ward demarcations in 2016.



The Northern Cape province is South Africa's largest province and takes up almost a third of the country's land area (www.localgovernment.co.za). It covers an area of 372 889 km² and is the least populous of South Africa's provinces. In the north it is bordered by Namibia and Botswana, in the west by the Atlantic Ocean. North West, Free State, Eastern Cape and Western Cape provinces also borders the Northern Cape Province. Main towns in the province include Kimberley, Upington, Springbok, Kuruman and De Aar. The province is divided into five district municipalities, namely Frances Baard, ZF Mgcaawu, John Taolo Gaetsewe, Pixley Ka Seme and Namakwa.

The Pixley Ka Seme District Municipality is located in the south-east of the Northern Cape Province and covers an area of 103 410 km². It shares a border with the Free State, Eastern Cape and Western Cape provinces and is the second-largest district in the province. The district is divided in eight local municipalities, namely Ubuntu, Umsobomvu, Emthanjeni, Kareeberg, Thembelihle, Siyathemba and Siyancuma. De



Aar is the main town in the area and other towns include Britstown, Burgerville, Campbell, Carnarvon, Colesberg, Copperton, Douglas, Griekwastad, Griesenkraal, Hanover, Hopetown, Hutchinson, Loxton, Marydale, Niekerkshoop, Norvalspont, Noupoort, Petrusville, Philipstown, Prieska, Richmond, Riet River, Schmidtsdrif, Strydenburg, Van der Kloof, Vanwyksvlei, Victoria West and Vosburg. The Vanderkloof and Gariep dams, two of the major dams in South Africa are situated on the borders of the district municipality.

The Emthanjeni Local Municipality is the seat of the district and is located centrally on the main railway line between Johannesburg, Cape Town, Port Elizabeth and Namibia. It covers an area of 13 472 km². The main towns in the area are Britstown, Burgerville, De Aar, Griesenkraal and Hanover.

Census 2011 shows the proportions of people living in urban areas, areas under traditional authority and on farms in the area (Table 1). In Ward 6 there are no areas that are under traditional leadership and about a quarter of the people in the area live on farms.

Table 1: Geotypes (source: Census 2011, households)

Area	Urban	Tribal/Traditional	Farm
Northern Cape Province	76%	16%	8%
Pixley Ka Seme DM	87%	0%	13%
Emthanjeni LM	94%	0%	6%
Ward 6	74%	0%	26%

In the Emthanjeni Local Municipality there are 16 schools, of which 13 are no-fee schools (Emthanjeni LM IDP, 2016/2021). Ward based teams in all wards deliver an extended primary health care service in the community and there are six centres where preventative and curative services are provided to the community free of charge. The Central Karoo Hospital is in De Aar and there are also some sport grounds in the area.

5.2 Description of the population

The baseline description of the population will take place on three levels, namely provincial, district and local. Impacts can only truly be comprehended by



understanding the differences and similarities between the different levels. The baseline description will focus on the Northern Cape Province, Pixley Ka Seme District Municipality, Emthanjeni Local Municipality and Ward 6 of the Emthanjeni Local Municipality. The data used for the socio-economic description was sourced from Census 2011. Census 2011 was a de facto census (a census in which people are enumerated according to where they stay on census night) where the reference night was 9-10 October 2011. The results should be viewed as indicative of the population characteristics in the area and should not be interpreted as absolute.

The following points regarding Census 2011 must be kept in mind (www.statssa.co.za):

- Comparisons of the results of labour market indicators in the post-apartheid population censuses over time have been a cause for concern. Improvements to key questions over the years mean that the labour market outcomes based on the post-apartheid censuses have to be analysed with caution. The differences in the results over the years may be partly attributable to improvements in the questionnaire since 1996 rather than to actual developments in the labour market. The numbers published for the 1996, 2001, and 2011 censuses are therefore not comparable over time and are higher from those published by Statistics South Africa in the surveys designed specifically for capturing official labour market results.
- For purposes of comparison over the period 1996–2011, certain categories of answers to questions in the censuses of 1996, 2001 and 2011, have either been merged or separated.
- The tenure status question for 1996 has been dropped since the question asked was totally unrelated to that asked thereafter. Comparisons for 2001 and 2011 do however remain.
- All household variables are controlled for housing units only and hence exclude all collective living arrangements as well as transient populations.



- When making comparisons of any indicator it must be taken into account that the time period between the first two censuses is of five years and that between the second and third census is of ten years. Although Census captures information at one given point in time, the period available for an indicator to change is different.

Where available, the Census 2011 data will be supplemented with data from Community Survey 2016.

5.2.1 Population and household sizes

According to the Community Survey 2016, the population of South Africa is approximately 55,7 million and has shown an increase of about 7.5% since 2011. The household density for the country is estimated on approximately 3.29 people per household, indicating an average household size of 3-4 people (leaning towards 3) for most households, which is down from the 2011 average household size of 3.58 people per household. Smaller household sizes are in general associated with higher levels of urbanisation.

The greatest increase in population since 2016 has been on local level (Table 2), although the increase is still below the national average. Population density refers to the number of people per square kilometre. In all the areas in the study area the population density has increased slightly since 2011.

Table 2: Population density and growth estimates (sources: Census 2011, Community Survey 2016)

Area	Size in km ²	Population 2011	Population 2016	Population density 2011	Population density 2016	Growth in population (%)
Northern Cape Province	372,889	1,145,861	1,193,780	3.07	3.20	4.18
Pixley Ka Seme DM	103,410	186,351	195,595	1.80	1.89	4.96
Emthanjeni LM	13,472	42,356	45,404	3.14	3.37	7.20



The number of households in the study area has increased on all levels (Table 3), while the average household size has shown a decrease. This means there are more households, but with less members.

Table 3: Household sizes and growth estimates (sources: Census 2011, Community Survey 2016)

Area	Households 2011	Households 2016	Average household size 2011	Average household size 2016	Growth in households (%)
Northern Cape Province	301,405	353,709	3.80	3.38	17.35
Pixley Ka Seme DM	49,193	56,309	3.79	3.47	14.47
Emthanjeni LM	10,457	11,923	4.05	3.81	14.02

The total dependency ratio is used to measure the pressure on the productive population and refer to the proportion of dependents per 100 working-age population. As the ratio increases, there may be an increased burden on the productive part of the population to maintain the upbringing and pensions of the economically dependent. A high dependency ratio can cause serious problems for a country as the largest proportion of a government's expenditure is on health, social grants and education that are most used by the old and young population.

The total dependency ratio for Ward 6 is lower than on local level, but higher than on provincial level (Table 4). The same trend applies to the youth and aged dependency ratios, but not to the employed dependency ratio. Employed dependency ratio refers to the proportion of people dependent on the people who are employed, and not only those of working age. The employed dependency ratio for Ward 6 is much lower than on provincial level. This is most likely to the high incidence of farms in the ward where people reside at their place of employment.

Table 4: Dependency ratios (source: Census 2011).

Area	Total dependency	Youth dependency	Aged dependency	Employed dependency
Northern Cape Province	55.75	46.94	8.80	75.32
Pixley Ka Seme DM	60.36	50.64	9.71	76.57
Emthanjeni LM	60.07	50.73	9.34	76.71
Ward 6	58.84	49.56	9.28	71.46



Poverty is a complex issue that manifests itself on economic, social and political ways and to define poverty by a uni-dimensional measure such as income or expenditure would be an oversimplification of the matter. Poor people themselves describe their experience of poverty as multi-dimensional. The South African Multi-dimensional Poverty Index (SAMPI) (Statistics South Africa, 2014) assess poverty on the dimensions of health, education, standard of living and economic activity using the indicators child mortality, years of schooling, school attendance, fuel for heating, lighting and cooking, water access, sanitation, dwelling type, asset ownership and unemployment.

The poverty headcount refers to the proportion of households that can be defined as multi-dimensionally poor by using the SAMPI's poverty cut-offs (Statistics South Africa, 2014). The poverty headcount has decreased on provincial and district level since 2011 but have increased on local level (Table 5).

The intensity of poverty experienced refers to the average proportion of indicators in which poor households are deprived (Statistics South Africa, 2014). The intensity of poverty has decreased on all levels. The intensity of poverty and the poverty headcount is used to calculate the SAMPI score. A higher score indicates a very poor community that is deprived on many indicators. On local level households have become more deprived since 2011.

Table 5: Poverty and SAMPI scores (sources: Census 2011 and Community Survey 2016).

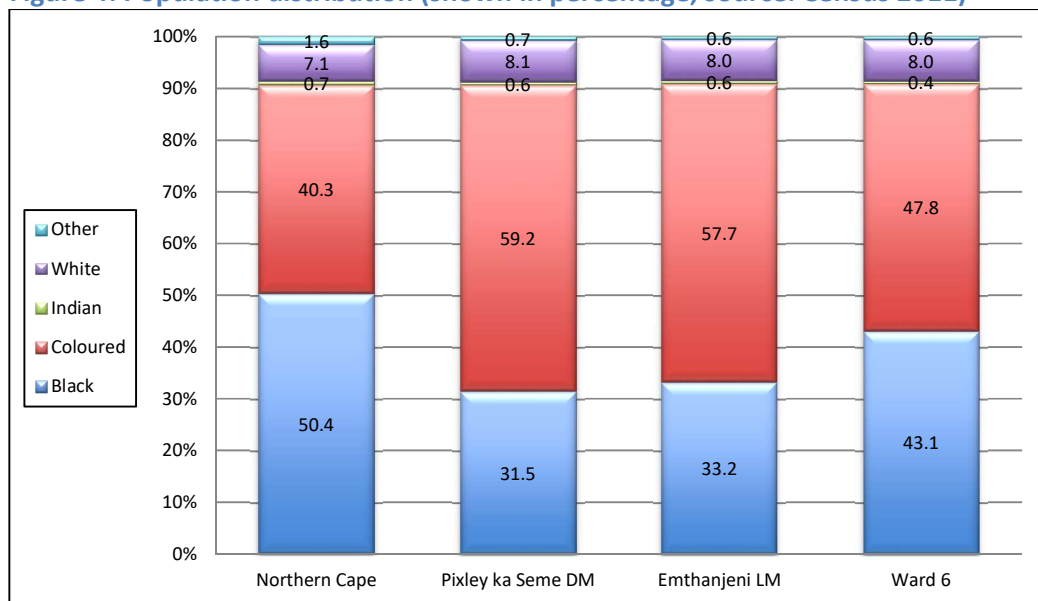
Area	Poverty headcount 2011 (%)	Poverty intensity 2011 (%)	SAMPI 2011	Poverty headcount 2016 (%)	Poverty intensity 2016 (%)	SAMPI 2016
Northern Cape Province	7.1	42.1	0.03	6.6	42.0	0.03
Pixley Ka Seme DM	7.2	42.7	0.03	6.0	41.7	0.03
Emthanjeni LM	3.3	41.1	0.01	4.2	40.2	0.02



5.2.2 Population composition, age, gender and home language

In Ward 6 almost half of the population belongs to the Coloured population group (Figure 4), with just over two fifths of the population belonging to the Black population group. Ward 6 has a higher proportion of people belonging to the Black population group than on local or district level.

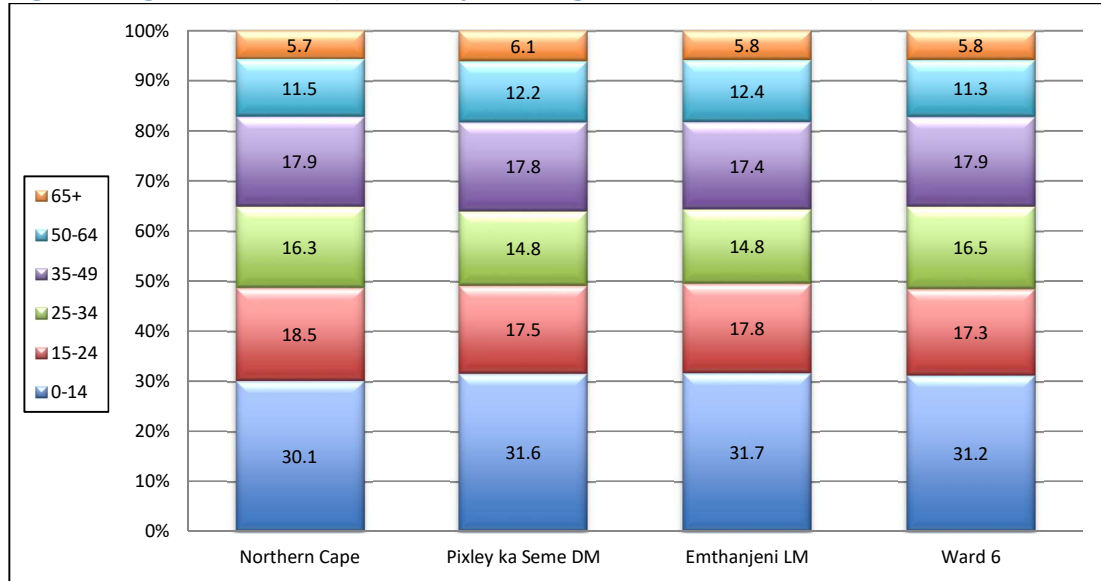
Figure 4: Population distribution (shown in percentage, source: Census 2011)



The average age in all the municipal areas are around 28 years, with the lowest average age (28.24) in Ward 6. Just below a third of the population in Ward 6 is aged 14 years or younger, with almost half aged 24 years or younger (Figure 5). Such a young population places a lot of pressure on resources and infrastructure of the area, and a great demand for future infrastructure and creation of livelihoods can be expected.



Figure 5: Age distribution (shown in percentage, source: Census 2011)



The gender distribution is more or less equal on all levels (Figure 6).

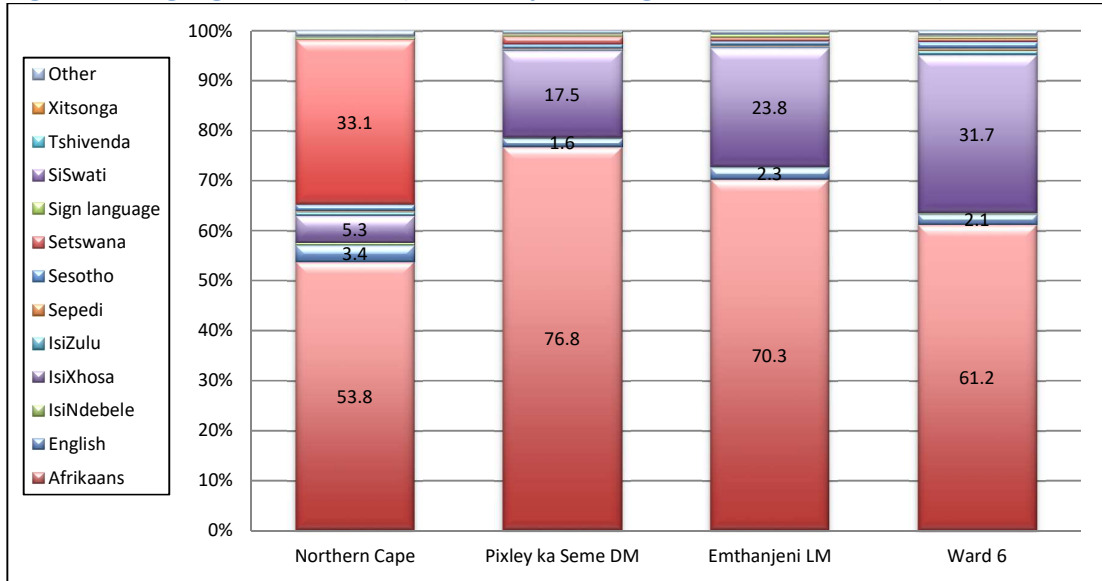
Figure 6: Gender distribution (shown in percentage, source: Census 2011)



Afrikaans is the home language of almost two thirds of the residents in Ward 6 (Figure 7), followed by almost a third with IsiXhosa as home language.



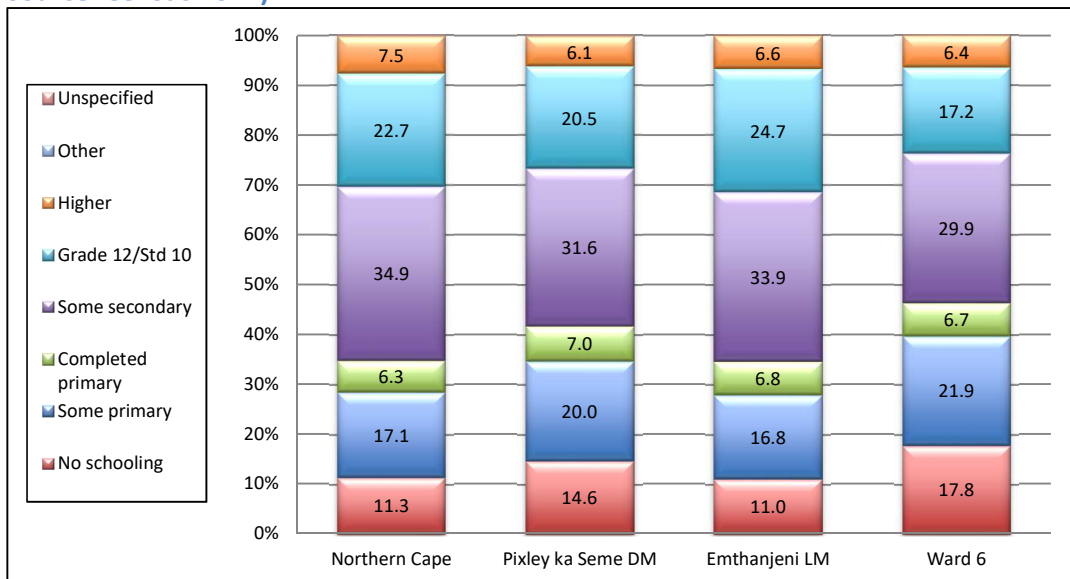
Figure 7: Language distribution (shown in percentage, source: Census 2011)



5.2.3 Education

About two fifths of the people in Ward 6 aged 20 years or older have no schooling or only some primary education (Figure 8). This is higher than on local, district or provincial level. These high levels of illiteracy should be taken into consideration when consulting with farmworkers or communities on the project.

Figure 8: Education profiles (those aged 20 years or older, shown in percentage, source: Census 2011)





5.2.4 Employment, livelihoods and economic activities

Ward 6 has the highest proportion of people aged between 15 – 65 years that are employed (Figure 9). Just over half of the people who are employed in Ward 6, are employed in the formal sector (Figure 10). This is much lower than on local or district level. About a quarter of the employed work in the informal sector, which is proportionately higher than on local or district level.

Figure 9: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011)

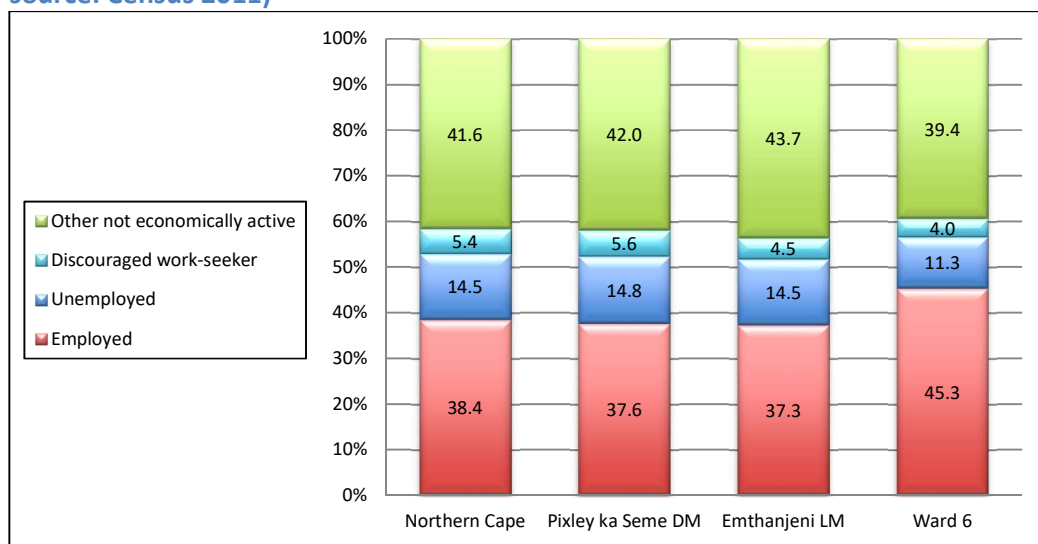
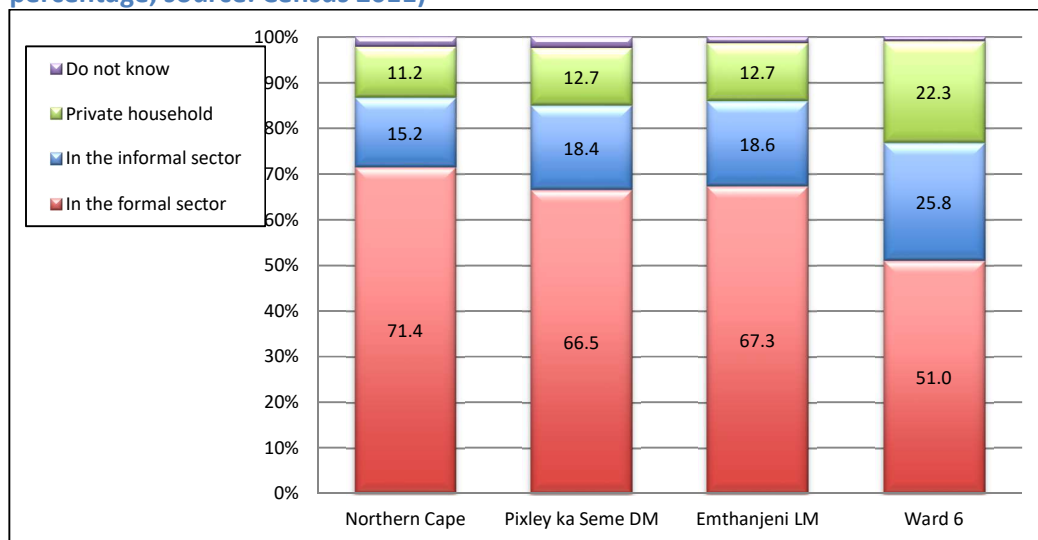


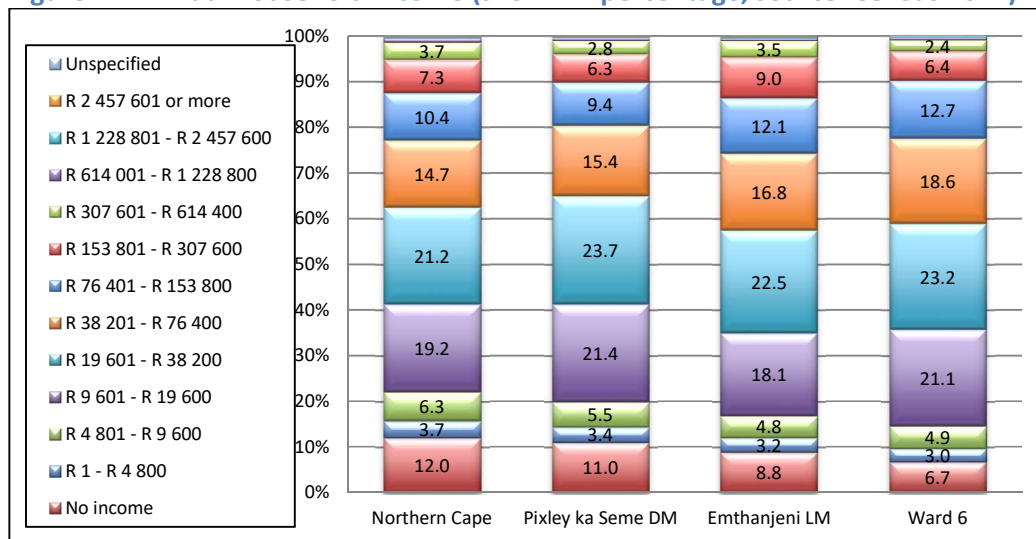
Figure 10: Employment sector (those aged between 15 - 65 years, shown in percentage, source: Census 2011)





The lowest proportion of people with no annual household income is on ward level (Figure 11). Almost 60% of the households in Ward 6 had an annual household income of below R38 201 in 2011.

Figure 11: Annual household income (shown in percentage, source: Census 2011)



Agriculture forms the backbone of the economy of the Emthanjeni LM (Emthanjeni LM IDP, 2016/2021) with mutton and wool being the main produce. Besides sheep farming, cattle, goat, pig and game are also being farmed. The manufacturing sector shows potential for growth through the introduction of renewable energy projects in De Aar and the surrounding areas. There are also stone crushers in the area that specialise in the manufacturing of sand, bricks cement and rocks. Other economic activities include services, retail, transport and tourism.

Statistics South Africa (2015) has calculated the Food Poverty Line (FPL) for the Northern Cape Province as R310 per capita per month for 2011 where the FPL is the Rand value below which individuals are unable to purchase or consume enough food to supply them with the minimum per-capita-per-day energy requirement for good health. The FPL is one of three poverty lines, the others being the upper bound poverty line (UBPL) and the lower bound poverty line (LBPL). The LBPL and UBPL both include a non-food component. Individuals at the LBPL do not have enough resources to consumer or purchase both adequate food and non-food items and are forced to sacrifice food to obtain essential non-food items, while individuals at the



UBPL can purchase both adequate food and non-food items. The LBPL for the Northern Cape Province was R457 per capita per month in 2011 and the UBPL R705 per capita per month respectively. More recent poverty lines than the rebased poverty lines for 2011 are not available. Based on this, a household with four members needed an annual household income of approximately R17 000 in 2011 to be just above the FPL. When comparing this with the SAMPI data it seems as if there are more households below the poverty lines in the area than who are multi-dimensionally poor. This is due to the poverty lines using a financial measure and do not take into consideration payment in kind and livelihood strategies such as subsistence farming. If there were to be converted into a Rand value, the poverty line picture may have a closer resemblance to the SAMPI data.

5.2.5 Housing

Almost three quarters of the population of Ward 6 live in areas classified as formal residential, while just over a quarter live in areas classified as farms (Figure 12). More than 90% of households in Ward 6 live in houses or brick structures on separate stands or yards (Figure 13), with caravans or tents the second most used dwelling type. This can most likely be ascribed to construction activities in the area.

Figure 12: Enumeration area types (shown in percentage, source: Census 2011)

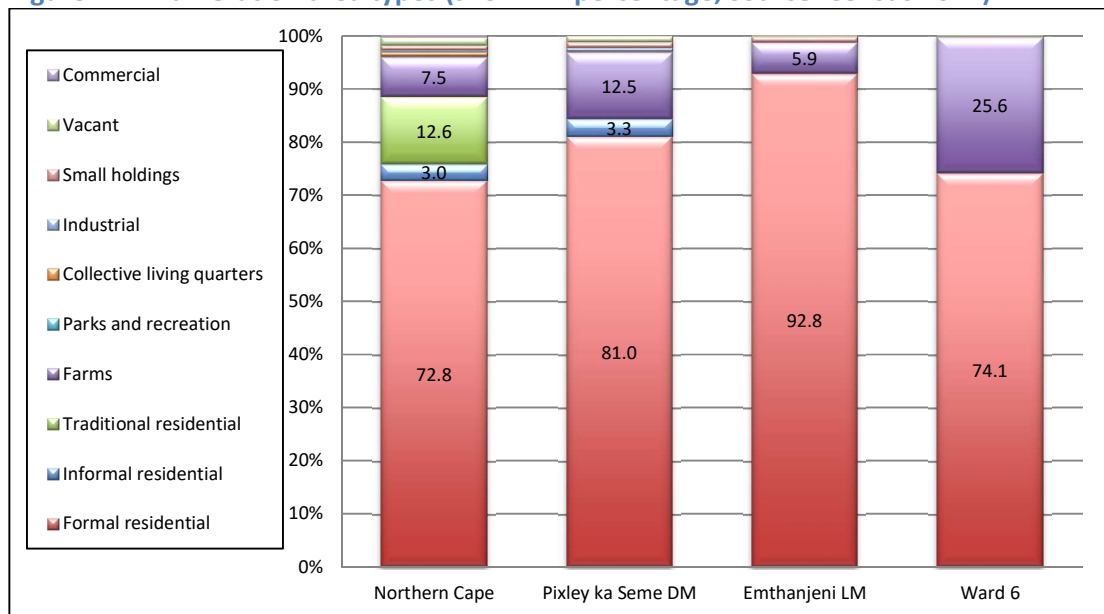
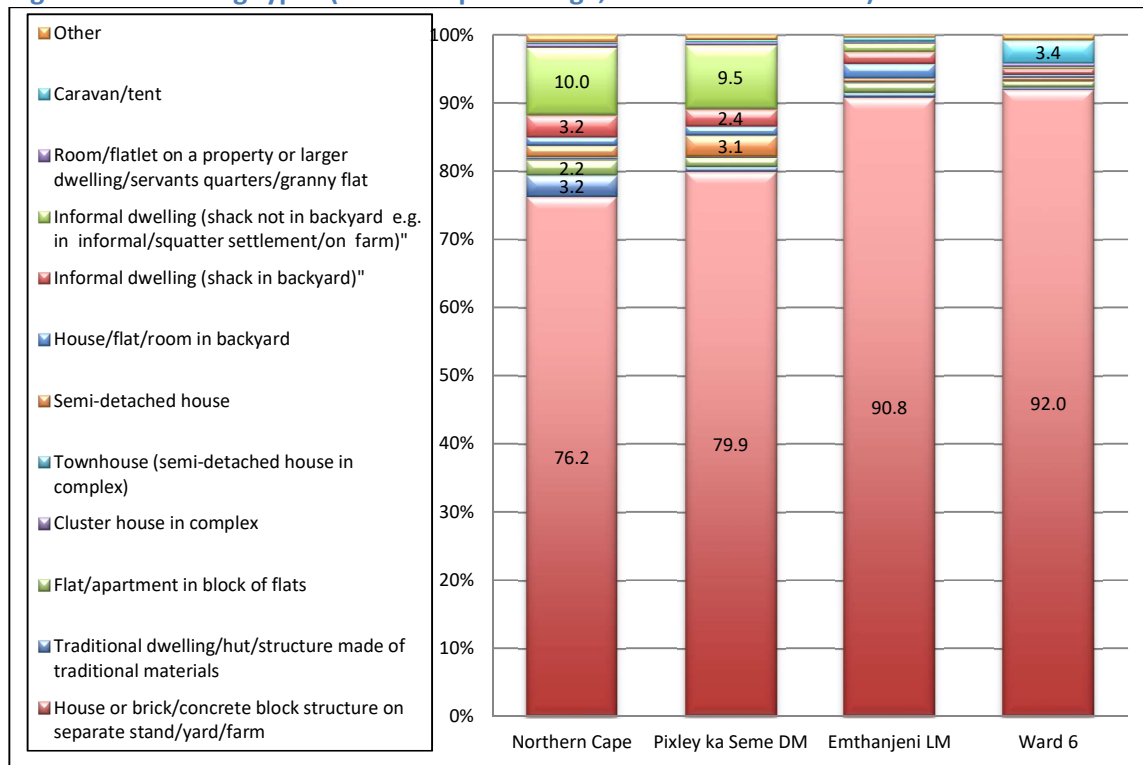




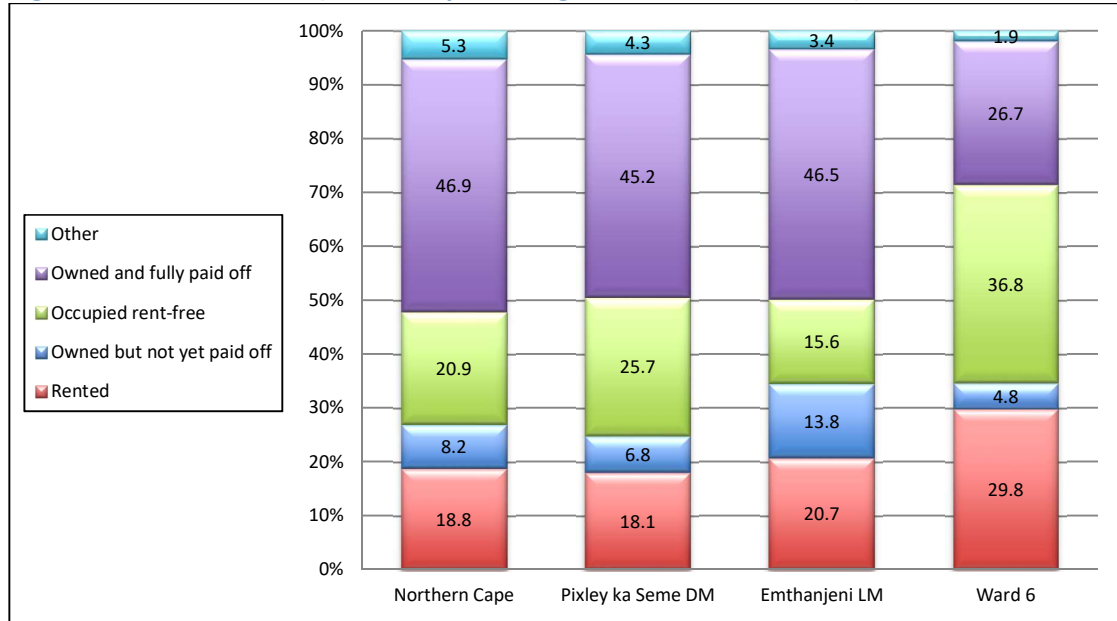
Figure 13: Dwelling types (shown in percentage, source: Census 2011)



The incidence of households renting their dwellings is much higher on ward level than on local, district or provincial level (Figure 14). This might be as a result of construction activities in the area. The incidence of households occupying their dwellings rent-free is much higher on ward level than on local, district or provincial level, and this is most likely due to farm workers that receive housing for their employers.

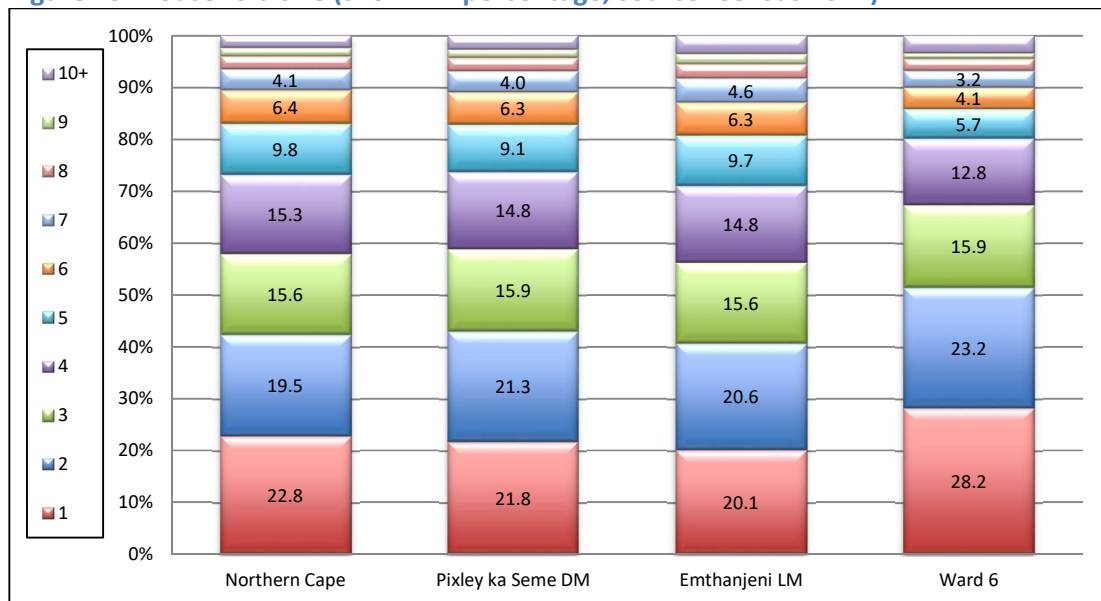


Figure 14: Tenure status (shown in percentage, source: Census 2011)



Households in ward level tend to consist of fewer members than on local, district or provincial level (Figure 15), with just over half the households consisting of only one or two members.

Figure 15: Household size (shown in percentage, source: Census 2011)



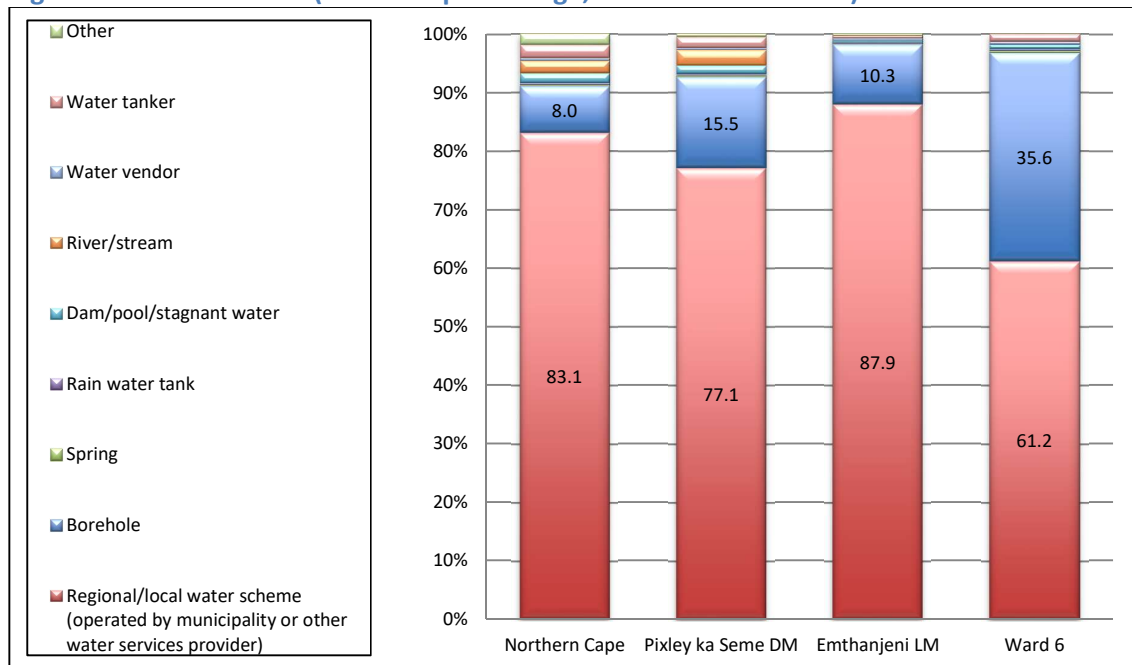


5.2.6 Access to basic services

Access to basic services such as water, sanitation and electricity relate to standard of living according to SAMPI (Statistics South Africa, 2014). Households that use paraffin, candles or nothing for lighting; or fuels such as paraffin, wood, coal, dung or nothing for cooking or heating; have no piped water in the dwelling or on the stand and do not have flush toilets can be described as deprived in terms of these basic services.

Almost a third of the households in Ward 6 get their water from a borehole (Figure 16), a much higher proportion than on local, district or provincial level, while just over 60% get their water from a regional or local water scheme, much lower than on local, district or provincial level.

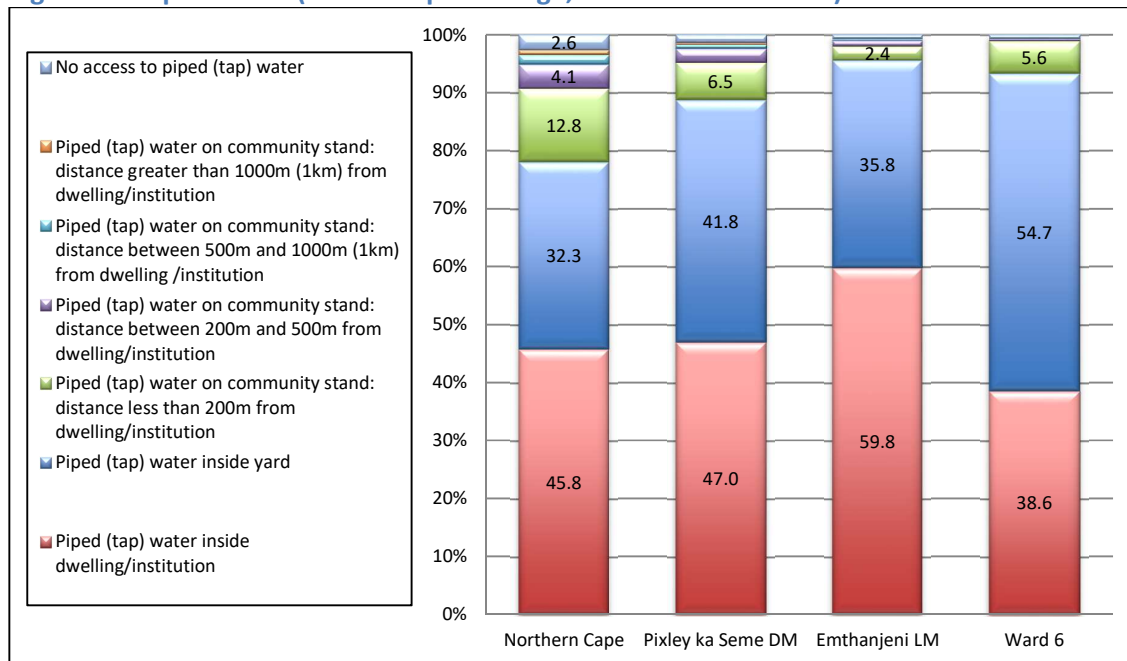
Figure 16: Water source (shown in percentage, source: Census 2011)



Just over a third of households in Ward 6 have access to piped water inside their dwellings (Figure 17), a lower proportion than on local, district or provincial level, while just over half of the households have access to piped water inside their yards.



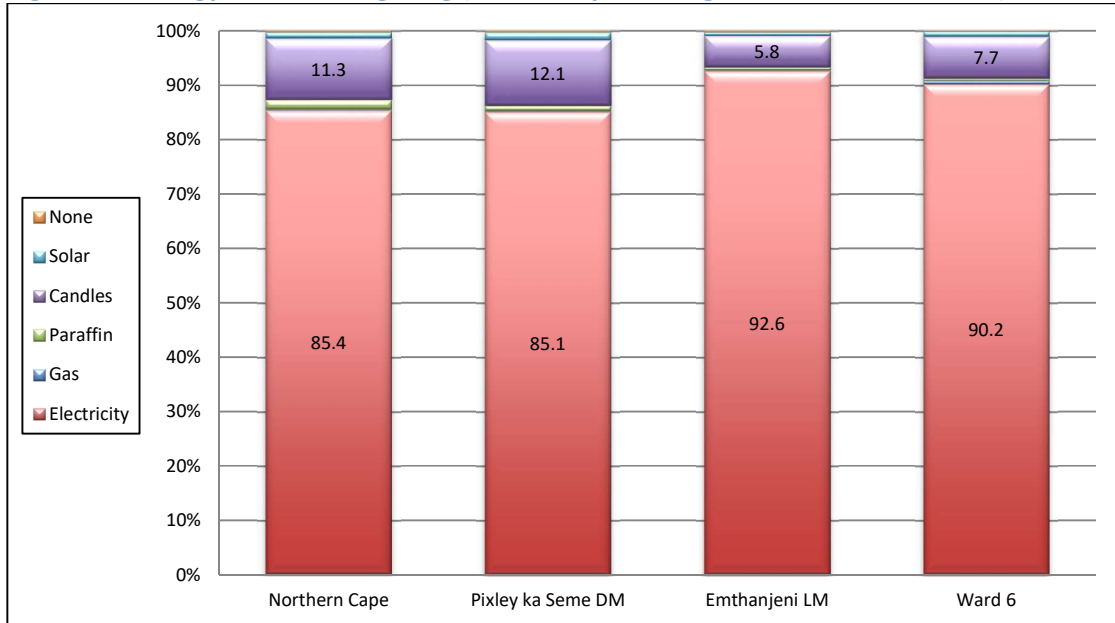
Figure 17: Piped water (shown in percentage, source: Census 2011)



Access to electricity for lighting purposes give an indication of whether a household has access to electricity, as poor households sometimes only use electricity for lighting, but use other sources of energy for heat and cooking. The incidence of households with access to electricity on ward level is higher than on district or provincial level (Figure 18), with more than 90% of households having access to electricity for lighting purposes.

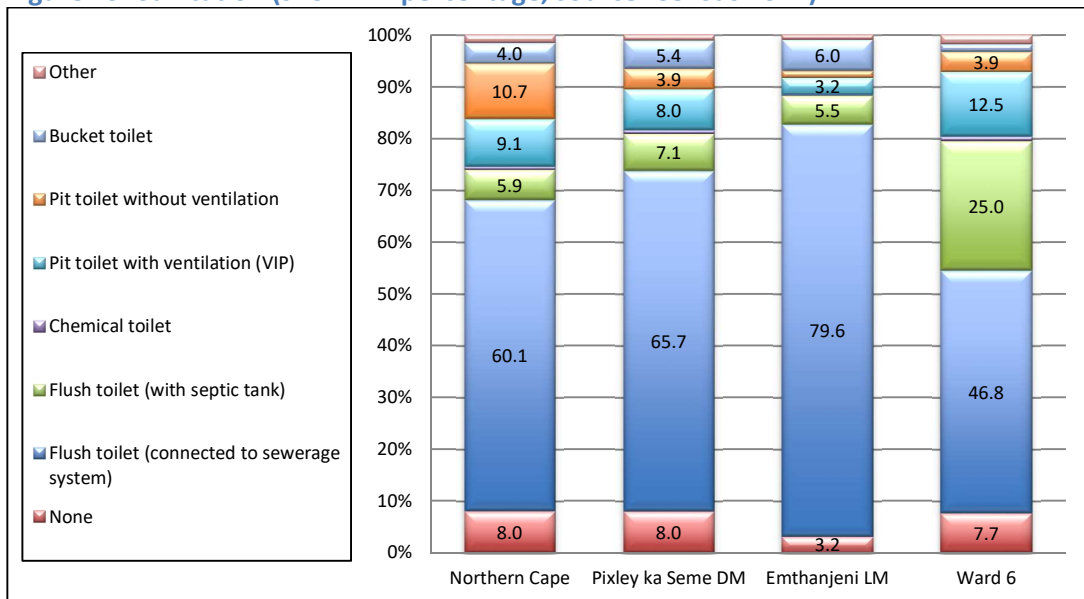


Figure 18: Energy source for lighting (shown in percentage, source: Census 2011)



More than 70% of households on ward level have access to flush toilets that is either connected to a sewerage system or with a septic tank (Figure 19). The highest proportion of flush toilets with a septic tank is found on ward level, as can be expected in an area with a high incidence of farms. The highest proportion of pit toilets with ventilation is also found on ward level.

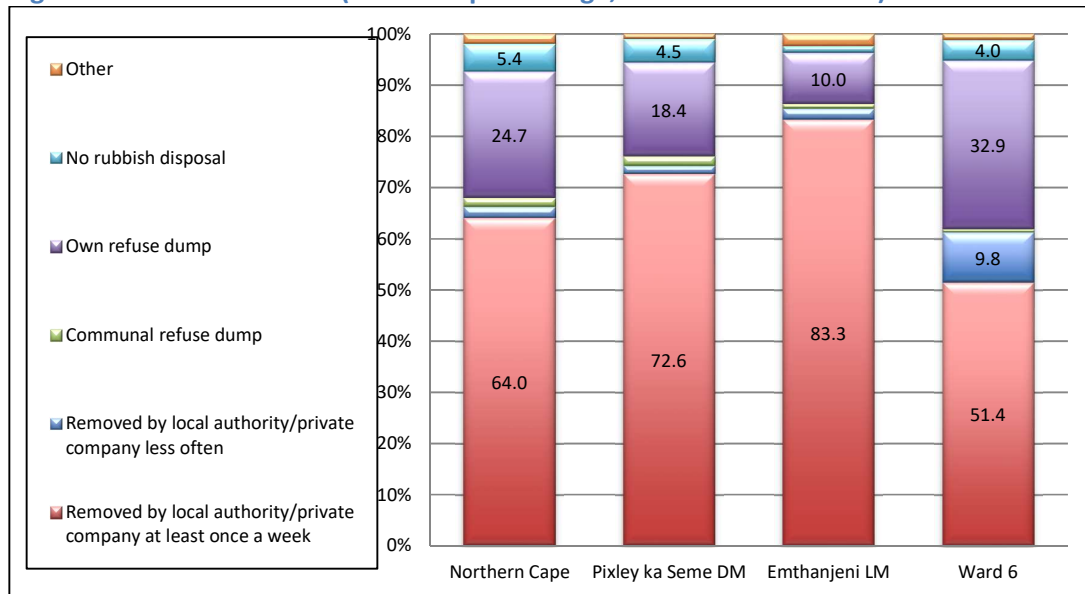
Figure 19: Sanitation (shown in percentage, source: Census 2011)





Almost a third of households on a ward level have their own refuse dumps (Figure 20) with just over half of the households having their refuse removed by a local authority at least once a week. This is due to the high incidence of farms in the ward.

Figure 20: Refuse removal (shown in percentage, source: Census 2011)



5.3 Discussion of receiving environment

The receiving environment is located in Ward 6 of the Emthanjeni Local Municipality that is located in the Pixley Ka Seme District Municipality in the Northern Cape province. The towns in the area are small and the proposed site is located between the towns of Hanover and De Aar on a farm. There are no areas under traditional leadership in the district and commercial farms surround the site.

The area showed an increase in population as well as the number of households since 2011, with the increase in the number of households greater than the increase in population. The household sizes have shown a decrease since 2011. This can be due to children leaving their parents' house to stay on their own and start families of their own.

In Ward 6, the proportion of households that are multi-dimensionally poor has increased, compared to a decrease on local level. This means that the households



are deprived on a number of dimensions, which mostly relate to access to basic services. Education levels are low and there are very few employment opportunities. Agriculture forms the backbone of the economy.

The detailed description of the area highlights the following important aspects:

- Documentation used for communicating about the project should be available in English and Afrikaans. During the stakeholder engagement process it transpired that many of the directly affected stakeholders would prefer communication in Afrikaans or non-technical English;
- High levels of illiteracy among certain groups means that written word will not in all cases be the best way to communicate with some of the communities. Additional ways to communicate with the communities that are culturally appropriate must be found. One of the stakeholder groups that is challenging to reach is the farm workers, and special effort must be made to include them in the process;
- Finding the required skills in the area might be a challenge and using local labour might be a challenge. This must be taken into consideration when planning the project and it may be necessary to include a skills development component. However, it must also be considered that there have been a number of similar developments in the area in the last couple of years, and that this has not been reflected in the 2011 statistics.

6 Stakeholder Identification and Analysis

6.1 Approach

Stakeholders include all individuals and groups who are affected by, or can affect, a given operation. Stakeholders consist of individuals, interest groups and organizations (Vanclay, Esteves, Aucamp & Franks, 2015). Stakeholder analysis is a deliberate process of identifying all stakeholders of a project - the individuals and groups that are likely to impact or be impacted by it - and understanding their concerns about the project and/or relationship with it (Vanclay et al, 2015).



Stakeholder analysis assists the proponent with understanding the local cultural and political context. It is acknowledged that different stakeholder groups have different interests, and that there are individual differences within stakeholder groups. The purpose of this section of the report is to introduce the stakeholder groups that will be affected by the proposed project. The following stakeholder groups were identified and their interest in the project will be discussed briefly in the section below.

6.2 Stakeholder groups

6.2.1 Government and Parastatal groups

The project falls within the **Northern Cape Province**, and the provincial government is a key stakeholder. There are several solar energy projects (17 in 2016) in the province, and the province contributes 72.5% of the solar power in the country (<http://www.sanews.gov.za/south-africa/commercial-operation-solar-de-aar-achievement-sa>). The provincial government need to ensure that these projects are aligned and be cognisant of the potential cumulative impacts of the project.

The **Pixley Ka Seme District Municipality** is also a stakeholder. There are several solar and renewable energy projects in the municipality, and these projects contribute to the socio-economic development in the area through stimulating the economy and social development projects. Similar to the provincial government, the district municipality must also ensure that projects are aligned, that cumulative impacts are considered and that social development initiatives are coordinated.

The governmental body the closest to the project area is the **Emthanjeni Local Municipality**. As such it would be crucial for Soventix to liaise closely with the municipality at the time of project planning and implementation. There are already four solar projects surrounding De Aar, and one wind energy project. The construction of these projects contributed positively to the local economy. The municipality indicated that there are skilled people available in the area and that there would be limited needs to import labour. The municipality pointed out that it would be important for Soventix to assist them to understand the labour requirements, since the labour will use the local infrastructure. The municipality also



expect Soventix to use local service providers for as many primary and secondary economic opportunities as possible. In line with the local municipality's need for socio-economic development, it would also be important for Soventix to empower local Small, Medium and Micro-sized Enterprises (SMMEs). There is a shortage of guidance and mentorship in the field of enterprise development. Some of the biggest social challenges in the area are alcohol and subsistence abuse, foetal alcohol syndrome, gender-based violence, and high unemployment levels. Many people in the municipality depend on social grants.

Eskom is a Parastatal organisation and the South African electricity public utility. It generates approximately 95% of the electricity used in South Africa (http://www.eskom.co.za/OurCompany/CompanyInformation/Pages/Company_Information.aspx). In 2008 South Africa initiated a process to introduce renewable energy feed-in-tariffs (REFIT) in order to facilitate the introduction of renewable energy in the power system (Department of Energy, 2015). The actual implementation of introducing renewable energy into the electricity grid was done through a competitive tendering system named the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). The proposed project will form part of the REIPPPP, making Eskom a key stakeholder in the project.

6.2.2 Civil society

The proposed project site is between the towns of **De Aar** and **Hanover**. In De Aar Wards 3 and 8 are affected, and in Hanover Ward 6 is affected. Given the fact that there have been similar projects in the area in the past, it can be anticipated that some semi-skilled local labour will be available. These labourers will live in one of the affected towns, since labour will be bussed in from town and there will be no permanent construction camp on site. Any new labourers that come and work on the project will also need to live in either Hanover or De Aar. De Aar is the bigger of the two towns, thus it is most likely that the labour will concentrate there. Benefits of the project should be shared between the two towns. Any social impacts, positive or negative, on a community level will be felt in these two towns.



A number of **private landowners** will be affected by the project. The physical footprint of the project affects only one landowner, the rest of the landowners have properties adjacent to the site. The prevailing land use is agricultural, specifically farming with livestock (sheep). It is not only farmers and their families that live on the farms, but in some instances also **farm workers** and their families. Farm workers are seen as a vulnerable and marginalised group. The farmers also use seasonal labour, and during these times there are more people residing on the farms.

6.2.3 Businesses

There are a number of **small businesses** in the area that can provide services to the client. These services include accommodation, fencing, earth works, transport and the hospitality industry amongst others. The proposed project will bring direct benefits to the local service providers, but only if Soventix make use of these services.

6.2.4 Internal stakeholders

Soventix is the project proponent, and as such a key stakeholder. The focus of this report is on external stakeholders, but it is important to acknowledge that the project will have a positive impact on Soventix and all its employees and shareholders.



7 Social impact assessment

“Almost all projects almost always cause almost all impacts. Therefore more important than predicting impacts is having on-going monitoring and adaptive management.” Frank Vanclay.

7.1 Impact assessment criteria

It must be stated that the impact tables and ratings have been adapted from the environmental sciences and that it is not always possible to compartmentalise the social impacts. For the sake of consistency with the EIA report, this has been attempted, but it is not innate to social sciences. Allowance for the changing and adaptive nature of social impacts should be made when interpreting the impact tables.

7.1.1 Impact Assessment Methodology

Social impacts were assessed using the approach outlined below. Social impacts were identified systematically by considering how the site-specific activities for each phase of development will interact with all elements of the receiving social environment. All impacts were measured against the current land-use activity (the no-go option/option of not implementing the activity) and systematically assessed by rating a suite of generic criteria established by the Department of Environmental Affairs and Tourism (DEAT 2002). The criteria are:

- Extent or spatial scale,
- Intensity or severity of the impact,
- Duration of the impact,
- Mitigation potential,
- Social acceptability,
- Degree of certainty,



- Status of the impact, and
- Legal requirements.

The magnitude and significance of impacts were determined by describing the impacts in terms of the above criteria. The criteria provide a consistent and systematic basis for the comparison and application of judgements.

The suite of criteria was sought for its applicability to EIA, specifically by making provision for the variety of perspectives. Significance is an anthropocentric concept that makes use of value judgements and science-based criteria. Judgement and values are used to greater extent in EIA than science-based criteria and standards (DEAT 2002). Considering value judgements can vary greatly amongst different stakeholders, professional judgement, such as that of the specialist, should ideally be used in conjunction with the different value judgements expressed by various stakeholders. In other words, significance should be communicated from a variety of perspectives other than the professional opinion of a multidisciplinary study team, and include environmental, socio-economic or cultural attributes perceived by society to be significant. Despite the potential variety of perspectives, they can be categorized into three broad forms of recognition for determination of impact significance, namely institutional (laws, plans or policy statements), public and technical (scientific or technical knowledge or judgement of critical resource characteristics) recognition (DEAT 2002). Consequently, the magnitude and significance of impacts were as far as possible determined by reference to legal requirements, accepted scientific standards and/or social acceptability.

Significance is relative and must always be set in a context to show whose values they represent. The selected criterion provides such a context, taking all three forms of recognition into account by asking whether impacts are legally, publically and professionally recognized as important. The thresholds, against which significance of a given environmental effect was measured or determined, were provided by a set of ratings for each criterion. Thresholds of significance were as far as possible based on/determined by reference to legal requirements, accepted scientific standards or



social acceptability. Ratings are High (H- 4), Moderate (M-3), Low (L-2) or No Impact (N-1) and determined according to clearly defined descriptors. The 'No Impact' rating includes reference to 'no impacts beyond prescribed thresholds'. In other words, mitigations that change the ratings of any particular criteria to 'N' do not necessarily infer zero impact, but rather that the impact is restricted to prescribed thresholds as defined in the goal and objective(s) of the proposed mitigation(s). The significance of the impacts of the proposed project was assessed both with and without mitigation action.

Table 6: Impact Evaluation Criteria, Ratings and Descriptors.

Criteria	Ratings and Descriptors			
	High (4)	Moderate (3)	Low (2)	No Impact (1)
Spatial Scale/ Extent	Provincial, National, or International. Far beyond the site boundaries. Widespread. Impact affect closest towns.	Local (within the farm boundary) to Regional (beyond the farm boundary, impact affects neighbours).	Development footprint to within the site boundary.	No area is affected.
Intensity/ Magnitude	Functioning of processes will cease. Magnitude of impact exceeds legal limits, scientific standards or social acceptability.	Modified processes will continue. Disturbance of potential social systems or livelihood resources.	Social or economic processes are affected, but not modified. Disturbance of degraded areas.	Social or economic processes are not affected.
Duration	Permanent. Beyond decommissioning. Long term (>2yr).	Temporary. Lifespan of the operational phase. Medium term (>1<2yr).	Immediate, once-off. Lifespan of the construction phase. Short term (<1yr).	
Mitigation Potential	High potential to mitigate and achieve objectives.	There is a moderate potential to mitigate, and	There is a potential to mitigate, but there remains a	No mechanism for mitigation and achieving the objectives.



		achieve objectives.	risk of the objectives not being met.	
Acceptability	Unacceptable Abandon project or design.	Manageable with expensive regulatory controls and the project proponent's commitments.	Some risk to public health/ environment, but it is easily averted using simple controls/ mitigations.	Acceptable No risk to public health/ environment.
	Definite (D- 4)	Probable (P -3)	Improbable (I-2)	No Impact (N-1)
Degree of Certainty/Probability of the impact occurring	Substantial supportive data. Impact will occur regardless of preventive measures. High probability. >95%.	There is a chance/risk of the impact occurring. Moderate probability. 5-95%.	It is unlikely that the impact will occur. Low probability. <5%.	The impact will not occur. 0%.
	Negative	Neutral	Positive	
Status	Net loss of resource. Adverse.	No net loss or gain.	Net gain of resource. Beneficial.	

7.2 Impacts identified, mitigation and management plan

This section describes and assesses the specific social impacts that will be associated with the proposed solar electricity generation facility and associated infrastructure. When the mitigation and management of social impacts are considered, one must take into consideration that social impacts occur in communities surrounding the proposed project, and although the project proponent may be the catalyst for some impacts, there may be a number of external factors contributing to the impact. Many of these factors are outside the control of the project proponent. Many of the social impacts the proponent cannot mitigate alone, and partnerships with local government and Non Profit Organisations are often required. Social impacts must be managed in the long term. This complex process requires insight in the social environment and community dynamics. The social environment adapts to change quickly, and social impacts therefore evolve and change throughout the project cycle.



7.2.1 Planning and design phase impacts

The planning and design phase of the project occurs before any physical activities commence on site. The EIA process forms part of this phase, and the EIA is usually the means of introducing the affected communities to the proposed project. Unlike environmental impacts, social impacts can occur before any physical work on site is done, and rumours of development is enough to set off some social change processes and social impacts. The following impacts are expected in this phase of the project:

7.2.1.1 Expectations

Description of impact:

There are currently four operational solar projects around De Aar alone, and more in the region. These projects resulted in certain economic benefits and opportunities for the affected communities. There is an expectation from the affected communities and municipalities that the Soventix project will result in similar benefits and opportunities. Although this is not an entirely unrealistic expectation, given the previous experiences, it is important that the expectations about the magnitude of the positive impacts must be kept realistic. If Soventix does not manage stakeholder expectations from the beginning of the project, it can result in reputational damage for the company, bad stakeholder relationships and in the worst-case scenario violent protests.

Impact mitigation:

Soventix must put a communication strategy in place that will communicate in an open and honest way what kind of jobs will be created, who will qualify and how the recruitment process will work. The communication strategy must be used for the life of the project, and adapted as required. To reach a wide audience, it is recommended that different media must be used, including social media, printed media, meetings and a stakeholder liaison person. It is important that Soventix liaise with the local municipality about the project opportunities, as the municipality is often the first port of call for the community. The municipality can be an important ally for Soventix if the relationship is based on mutual trust and respect.



7.2.1.2 Uncertainty

Description of impact:

There is still a level of uncertainty amongst the directly affected landowners. Some would like to know how the sites were selected, and why their properties have not been chosen as potential sites. Other landowners have technical questions about practicalities and the implementation of the project. The farming community is close-knit and people discuss the project amongst themselves. There is a risk that incorrect information can be distributed if the proponent does not ensure that sufficient and correct information is in the public domain.

Impact mitigation:

This impact can be addressed by means of the communication strategy discussed on 7.2.1.1 above. It is also important that a direct meeting must be conducted with the affected landowners where the relevant specialists can address their technical questions in detail, and all parties receive the same information at the same time. A public meeting as part of the EIA process can address this aspect in the short term. In the long term a community liaison person must be appointed for the project. This person will be the interface between Soventix and the landowners and build trust relationships with them for the duration of the project. It is important that this person must be bilingual with a solid knowledge of Afrikaans, as it is the language that most stakeholders are comfortable with (excluding the local government, where English would be sufficient).

Table 7: Planning and design impacts

Phase	Aspect	Mitigation Action	Extent	Magnitude	Duration	Probability	Significance	Social Acceptability	Status	Mitigation potential (to meet objectives)
Planning & Design	Expectations	Without	4	3	2	4	36	3	Negative	H
		With	3	2	1	3	18	2	Neutral	
	Uncertainty	Without	3	3	2	4	32	2	Negative	H
		With	2	2	1	3	15	1	Neutral	
	Overall	Without	4	3	2	4	34	3	Negative	H
		With	3	2	1	3	17	2	Neutral	
High Significance: 30 - 40			Medium Significance: 20 - 29				Low Significance: 1 - 19			



7.2.2 Construction phase impacts

The construction phase of the project is estimated to be approximately 18 months. Soventix indicated that there would be no construction camp housing the labour force, but that they will be transported to site from the nearest towns on a daily basis. The most severe social impacts usually occur during this phase of the project, since it is the phase when the most activities on site take place and where the most people are involved. Some of the construction phase social impacts will take place on site or in close vicinity of the site, whilst others will occur in the communities around the site.

7.2.2.1 Change of land use/Livelihoods

Description of impact:

The proposed site is situated in a rural area on a sheep farm. The site is currently used for grazing purposes. The construction of a solar electricity generating facility and its associated infrastructure will lead to a change of land use, and this change of land use can potentially impact negatively on the livelihood of the affected farmer, which is sheep farming. The areas available for grazing will be significantly less if the project is implemented, and this could mean that the farmer would need to cut down on his production rates, which would impact negatively on his livelihood. In addition, changing the land use may have tax implications for the farmer, as industrial land uses are taxed higher than agricultural land uses. Stakeholders indicated that property taxes in the area are currently very high, and on par with a tourism destination like Hermanus in the Western Cape. It is not anticipated that the livelihoods of any of the adjacent landowners will be impacted negatively by the project.

Impact mitigation:

While it is true that the landowner will lose productive grazing areas, it must be considered that he will be compensated for the use of the land through a commercial transaction with Soventix. This should allow him to find an alternative source of grazing, either by buying or renting additional land. In addition, the design of the solar farm is such that the land will still be used for grazing purposes. The panels will be 3.5 to 4 meters apart, and the panel arrays will be mounted higher to



allow for unrestricted grazing around the panels. The sheep will be used as a vegetation control measure, and a grazing assessment to calculate sustainable grazing pressure within the plant has been commissioned as part of the EIA study. Mixed land use should result in lower tax rates.

7.2.2.2 Traffic and roads

Description of impact:

Access to the site is off the N10 via an un-tarred road. During the dry season the area is very dry and dusty. During the wet season, the roads can become muddy and vehicles can get stuck easily. The access road is used by a number of farmers in the area to access their properties. It also traverses or is adjacent to some of the neighbouring properties. Stakeholders are concerned about the quality of the roads, especially if heavy construction vehicles are used. The construction phase will generate significant additional traffic on the roads – just the transport of the workers will mean two trips per day, and then the delivery of construction material and management activities must also be considered. At the moment the local farmers do a lot of the road maintenance. Another concern is the generation of dust. Although the proposed site is far from any communities, it is relatively close to some of the farmers, but the biggest concern is the impact that the dust will have on the quality of the grazing. Farmers acknowledge that the dust will be washed off by rain, but it is an arid area with relatively low rainfall in general.

Impact mitigation:

It is acknowledged that Soventix will not be the only road user, but it must be considered that their presence will add significant wear and tear to the road. Soventix must contribute to the maintenance of the roads for the life of the project. This is especially important in the construction phase, where the most severe impacts are expected. This agreement must be formalised between Soventix and the parties currently responsible for road maintenance. Dust suppression measures must be implemented in line with the recommendations from the EIA. These measures must consider the arid nature of the area and the scarcity of water. If possible, local service providers must be used for road maintenance and dust suppression activities. Vehicles must be clearly marked, and the necessary road signage must be



erected on the affected roads to warn road users about the construction activities and traffic. Soventix must have a Traffic Management Plan to address the flow of traffic and road safety. Aspects such as speeding, driving while tired, transport of passengers, driving on un-tarred roads and general road safety must be included in the plan and in the induction of workers.

7.2.2.3 Damage to farm infrastructure

Description of impact:

The movement of workers and vehicles on the site could cause damage to farm infrastructure (e.g. fencing, water troughs and gates), during construction. There is also a risk of stock loss due to farm gates being left open, or not being closed properly by construction teams.

Impact mitigation:

If any damage to farm infrastructure or stock losses occurs, Soventix must compensate the affected landowner for his losses. Soventix must develop a grievance mechanism and a complaints procedure that allows the landowners to log their grievance and submit a claim for damages. The construction teams must be educated about the impact of damages to fences, water troughs and gates on the activities of the farmers through toolbox talks. Inspections of boundary fences and gates should be done on a daily basis in areas where there are activities.

7.2.2.4 Safety and security concerns due to more people in the area

Description of impact:

Farm safety is a concern in the rural areas of South Africa. There have been farm attacks in the area in the past. Due to the isolation on farms and distance from emergency services farmers and farm workers are soft targets. More people moving around in the area will make it easier for opportunistic criminals to enter the area without being noticed. Stock theft is a problem in the area, but it is mostly done on a small scale. Farmers are concerned that the presence of the construction workers in the area will cause an increase in stock theft, due to people becoming aware of where the stock are kept. There are concerns that poaching incidents may increase. There is also a possibility that petty theft or opportunistic crimes can take place.

**Impact mitigation:**

Soventix should work with existing farmers' security groups and farmers' associations to create a farm access protocol for everybody that need to access the properties, and a safety plan. Soventix should also become a member of these forums. Soventix should give a roster to the directly affected landowners stating dates and approximate times that contractors will be on the farms. Farmers emphasised that they need to know of people accessing the farm ahead of time. It is too late to inform them when entering the property. All access arrangements should be made at least 24 hours before access is required. Soventix must meet with the landowners before the construction phase commences and formalise security arrangements.

All contractors and employees need to wear photo identification cards. Soventix and its contractors must develop an induction programme that includes a Code of Conduct for all workers (including sub-contractors). Any person that does any work on site must sign the Code of Conduct and be presented with a copy. The Code of Conduct must include the following aspects:

- Respect for local residents, their customs and property;
- Respect for farm infrastructure and agricultural activities;
- No hunting or un-authorized taking of products or livestock;
- Zero tolerance of illegal activities by construction personnel including: prostitution; illegal sale or purchase of alcohol; sale, purchase or consumption of drugs; illegal gambling or fighting;
- Compliance with the Traffic Management Plan and all road regulations; and
- Description of disciplinary measures for violation of the Code of Conduct and company rules.

If workers are found to be in contravention of the Code of Conduct, which they will be required to sign at the beginning of their contract, they will face disciplinary procedures that could result in dismissal. Stock theft should be noted as a dismissible offence.



Vehicles should be marked as construction vehicles and should have Soventix or the contractor's logo clearly exhibited. Entry and exit points of the site should be controlled. Areas where materials are stockpiled must be fenced. If a security company is used, their schedules should be communicated to the landowners.

7.2.2.5 Concerns about social disturbance and community safety

Description of impact:

The safety concerns in the towns closest to the construction site include social ills such as prostitution, relationships with minors, alcohol and drug abuse, gambling and fighting due to the presence of people from outside the area. Many of the people in town are poor and depend on social grants to survive, and the project will introduce people who have more money available. While there are definite benefits, which will be discussed under the economic impacts, there are also potential threats and social disturbance. It must be noted that there are some people in the urban areas that keep livestock for subsistence purposes, and it has been reported that they are especially vulnerable to theft during times when there are more people moving around the area.

The municipality indicated that people coming from outside the area to work in the existing solar projects had a definite impact on the community. Different value systems lead to changes in behaviour, such as taverns being open on Sundays, sexual assaults and an increase in the HIV rates. This may be a perception, as these aspects probably have been present in the community for a long time, but it must be acknowledged that these social ills are typically associated with an influx of people because of development. A massive influx of people is not expected, since there should be some skilled labour in the area as a result of the other four solar projects that have been established in the last few years. It is not expected that there will be a significant impact on basic services such as schools, health care, sanitation and other municipal services, due to the fact that a small number of temporary workers will enter the area for a limited period.

Impact mitigation:

Mitigation for this impact is similar to mitigation for the impact on safety and security due to more people in the area in some aspects. Soventix and its contractors



must develop an induction programme that includes a Code of Conduct for all workers (including sub-contractors). The induction programme must include HIV/AIDS awareness programmes. Any person that does work on site must sign the Code of Conduct and presented with a copy. The Code of Conduct must include the following aspects:

- Respect for local residents, their customs and property;
- Respect for farm infrastructure and agricultural activities;
- No hunting or un-authorized taking of products or livestock;
- Zero tolerance of illegal activities by construction personnel including: relationships with minors; prostitution; illegal sale or purchase of alcohol; sale, purchase or consumption of drugs; illegal gambling or fighting;
- Compliance with the Traffic Management Plan and all road regulations; and
- Description of disciplinary measures for violation of the Code of Conduct and company rules.

If workers are found to be in contravention of the Code of Conduct, which they will be required to sign at the beginning of their contract, they will face disciplinary procedures that could result in dismissal. Stock theft should be noted as a dismissible offence. Soventix must also establish a grievance mechanism and appoint a community liaison person that the community can access easily. The grievance mechanism must be communicated to the affected communities.

7.2.2.6 Economic opportunities

Description of impact:

The proposed project will create positive economic impacts in the area. The most direct impact on a community level is job creation. Each 75MW unit will create approximately 124 jobs, of which 22 will be semi-skilled, 67 unskilled and the rest skilled. The full 225MW plant will be built in three phases of 75MW each with some overlap activities between phases. Although the construction phase jobs are temporary and will not contribute to the unemployment levels in the long term, it would have a significant positive impact on the short term. The increase in



disposable income (via the project workers) will result in increased demand for goods and services, and greater spending within the local community. It can be anticipated that there are semi-skilled and unskilled labour present in the area that has experience of construction work during the establishment of the existing solar farms in the area.

Apart from the direct employment opportunities, there will also be significant indirect economic opportunities for local entrepreneurs. Opportunities include transport, fencing, road maintenance, accommodation, meals and laundry services. The highly skilled technical people will need accommodation and other hospitality services while they reside in the area during the construction period. Some of the adjacent farms offer accommodation, which may be a viable option for some of the workers. Whilst some of the technical jobs need highly skilled people that may not be available locally, service providers must make use of the secondary opportunities that should be available locally.

Impact mitigation/enhancement:

As far as possible local labour must be used for the project. This will minimise the potential negative social impacts on the community and optimise the positive impacts. Soventix need to liaise with the Local Economic Development section of the municipality, local leaders and NGO's about their recruitment policy to ensure it is in line with the local practices and tap into existing knowledge. The recruitment policy must set reasonable targets for the employment of local people and women. Soventix and the municipality should identify these targets before recruitment commences. The definition of "local" must be clarified with the affected stakeholders. Soventix must provide the local municipality with a list of skills required before the construction period commences, and the municipality must distribute the list to all stakeholders to allow them to prepare for the opportunities. All labour opportunities must be accessed through a labour desk in town, and no recruitment must be allowed on site.

The specialised equipment needed for the project will not be available locally, but as far as possible everything else must be procured locally. Soventix must develop a



policy about local procurement. Workers from outside the area must be provided with a list of local service providers for their accommodation and other social needs. People that provided services to other solar farms in the area should be offered an opportunity to put their names on a list at the municipality to ensure that Soventix is aware of the available resources.

7.2.2.7 Sense of place

Description of impact:

Sense of place is defined as an individual's personal relationship with their local environment, both social and natural, which the individual experiences in their everyday daily life (Vanclay et al., 2015). Many things can impact on a person's perception of sense of place. Farms are generally noisy places if one considers animal-sounds and farming activities. From the receptors' perspective, this kind of noise is acceptable and even attractive, because this is what living on a farm is all about. Noises such as alarms and reverse hooters are not "normal" and disturb the sense of place and the value that people place on the auditory environment. Although lights are used as a security measure on farms, one of the things people value is the absence of bright lights and that they can see the stars. Lights for any other use than lightening up their direct environment is seen as invasive and disturbs the sense of place. Visual aspects are an important consideration in the experience of sense of place. If people are used to unspoiled vistas, or seeing open fields, the establishment of any buildings or infrastructure that they feel do not belong there can alter their sense of place. The project will permanently alter the sense of place. Especially in the beginning this impact will be expressed in a severe manner, but as time goes on people will get used to the changing environment and adapt to it.

Impact mitigation:

It is difficult to mitigate the impact on sense of place as it is experienced on a personal level. In general, the mitigation measures suggested in the other relevant specialist studies such as visual, terrestrial ecology and heritage should be adhered to. The relevant specialists will provide scientific mitigation measures for the aspects relevant to their studies. From a social perspective it is important to create a



community liaison forum (CLF) that communicates the mitigation and monitoring measures to the affected parties. This forum can also act as a platform to discuss environmental issues. The CLF can meet twice a year to discuss all the concerns about the project and to share new project information. It can be an important aspect assisting Soventix with obtaining a social licence to operate. Sense of place is a personal experience, but successful rehabilitation will go a long way in recreating a rural sense of place. The public perception would be negative or positive depending on the successful implementation of the rehabilitation after construction.

Table 8: Construction phase impacts

Phase	Aspect	Mitigation Action	Extent	Magnitude	Duration	Probability	Significance	Social Acceptability	Status	Mitigation potential (to meet objectives)		
Construction	Change of land use/livelihoods	Without	2	4	3	4	36	3	Negative	H		
		With	2	3	3	3	24	2	Neutral			
	Traffic and roads	Without	4	3	3	4	40	3	Negative	H		
		With	3	2	3	3	24	2	Neutral			
	Damage to farm infrastructure	Without	3	3	1	4	28	3	Negative	H		
		With	3	2	1	3	18	2	Neutral			
	Safety and security concerns due to more people in the area	Without	3	4	3	4	40	3	Negative	H		
		With	3	3	3	3	27	2	Negative			
	Concern about social disturbance and community safety	Without	4	3	3	4	40	3	Negative	H		
		With	4	3	2	3	27	2	Negative			
	Economic impacts	Without	4	4	3	3	33	2	Positive	H		
		With	4	4	3	4	44	1	Positive			
	Sense of place	Without	3	4	3	4	40	2	Negative	H		
		With	3	3	3	4	36	1	Negative			
	Overall	Without	3	4	3	4	37	3	Negative	H		
		With	3	3	3	3	26	2	Neutral			
	High Significance: 30 - 40		Medium Significance: 20 - 29					Low Significance: 1 - 19				



7.2.3 Operational phase impacts

The operational phase of the project is estimated to be approximately 20 years. During this phase there will be less activities on site, and the focus would be on maintaining the grounds, cleaning the modules, cleaning the offices, keeping the site secure and ensuring that the technology runs smoothly. Impacts in this phase will mostly be associated with these activities.

7.2.3.1 Community relations

Description of impact:

This impact can be positive or negative, depending on the conduct of contractors/representatives of Soventix. Good community relations are an essential contributor the successful implementation of any project. It would be in the interest of Soventix to ensure that they establish and maintain good relations with all the affected stakeholders.

Impact mitigation:

A protocol must be put in place that stipulates how contractors/Soventix representatives should conduct themselves when they move around in the area, especially when they need to perform tasks on private property. This can form part of the Code of Conduct described in Section 7.2.2.5. Enhancing this impact would include finding out what the community expect of them, for example making appointments, being clearly identifiable, maintaining fire breaks, conduct on roads etc. The protocol should also state the consequences of not adhering to the rules.

7.2.3.2 Economic benefits

Description of impact:

The operational phase will have less direct economic opportunities in the form of job creation. It will create 42 permanent positions, of which 24 will be semi-skilled and six unskilled. This will have a permanent positive impact on the people that will be employed. In addition, there may be limited secondary economic opportunities. It is estimated that the lifespan of the solar electricity generation plant is 20 years, however, this lifespan can be increased through on-going maintenance and refurbishment.



The Department of Energy (DoE), through the RFP document, requires that all renewable energy bidders must illustrate how the Project will benefit the local community. At present, the DoE is stipulating that one percent of revenue generated by the project must be contributed towards socio-economic development. In accordance with the relevant BBBEE legislation and guidelines, up to four percent of profit after tax could be used for community development over and above that associated with expenditure in the area. The BBBEE Scorecard specifies the following contributions (totalling four percent):

- Enterprise development – maximum of 15 points awarded for the contribution of three percent of profit after tax, or more; and
- Socio-economic development – maximum of five points awarded for the contribution of one percent of profit after tax, or more.

If these contributions are realised, the project has the opportunity to make a real difference in the local community. There are currently NGOs that serve the interest of the community as a whole, such as the Karoo Eisteddfod Trust that can assist Soventix with identifying worthwhile projects that will be sustainable and lead to direct local benefits in the communities that will be affected by the project.

Impact mitigation/enhancement:

The use of local labour as recommended in the construction phase should also be implemented in the operational phase. Soventix should continue to procure as many services as possible locally.

Benefits to local communities are required to be real and tangible. It is recommended that Soventix should achieve this through the establishment of a community trust. The final percentage contribution to the trust could only be calculated upon finalisation of the feed-in tariff as part of the Power Purchase Agreement, which is assumed not to be calculated at the time of writing of this report. The trust should be administered by a board that should comprise of a range of representatives including representatives from the local community. The structure and operational objectives of the Community Trust should be determined at the time. It is envisaged that the development objectives/ projects identified and



supported by the trust will be identified in collaboration with the local municipality, community representatives and NPOs in the area such as the Karoo Eisteddfod Trust. Projects should be aligned with key needs as identified in the municipal Integrated Development Plan (IDP) and with input from local NPOs to ensure benefits are locally relevant. Another recommendation is that the renewable facilities in the area combine their efforts and contributions to socio-economic and enterprise development to make a bigger positive impact instead of diluting the impact with small, unrelated projects. As the latest facility in the area, Soventix should take the lead and approach the other facilities with a request for cooperative investment. Given the fact that social development is a process and takes a long time, these facilities, which all have a life-span in excess of 20 years can potentially make a significant contribution in this arena if they combine forces.

7.2.3.3 Safety and security

Description of impact:

There will be less people in the area during the operational phase. During the operation phase, there will be fewer permanent workers onsite. As such, it is likely that the safety and security impacts discussed in Section 7.2.2.4 will not be experienced to the same extent during the operational phase. However, farm safety should remain a priority. Theft or vandalism of the PV panels or associated infrastructure may be of some concern during the operation phase.

Impact mitigation:

Safety measures as discussed in Section 7.2.2. 4 should be continued and the Code of Conduct should remain in place.

7.2.3.4 Generation of renewable energy

Description of impact:

The proposed project will generate renewable energy that will feed into the national electricity grid. This is in line with the National Development Plan and sustainable development. As such it is a positive impact.



Impact mitigation/enhancement:

This is a positive impact and no mitigation is required. Local benefits will enhance the positive effects.

7.2.3.5 Sense of place

Description of impact:

The impacts on the sense of place described in Section 7.2.2.7 will continue in the operational phase of the project and will exist as long as the infrastructure exist.

Impact mitigation:

Impacts on sense of place are deeply personal and are difficult to mitigate. Mitigation measures suggested in Section 7.2.2.7 remains relevant in this project phase.

Table 9: Operation phase impacts

Phase	Aspect	Mitigation Action	Extent	Magnitude	Duration	Probability	Significance	Social Acceptability	Status	Mitigation potential (to meet objectives)	
Operation	Community relations	Without	3	3	3	4	36	2	Negative	H	
		With	3	3	3	4	36	1	Positive		
	Economic benefits	Without	4	3	3	4	40	2	Positive	H	
		With	4	4	4	4	48	1	Positive		
	Safety and security	Without	3	4	3	4	40	3	Negative	H	
		With	3	3	3	3	27	3	Negative		
	Generation of renewable energy	Without	4	4	3	4	44	3	Positive	H	
		With	4	4	3	4	44	3	Positive		
	Sense of place	Without	3	4	3	4	40	2	Negative	H	
		With	3	3	3	4	36	1	Negative		
	Overall	Without	3	4	3	4	40	2	Negative	H	
		With	3	3	3	4	38	2	Neutral		
	High Significance: 30 - 40			Medium Significance: 20 - 29				Low Significance: 1 - 19			



7.2.4 Decommissioning phase

The decommissioning phase is the final phase of the project. During this phase the solar electricity generation facility will be demolished and the area will be rehabilitated to its original state as far as possible. The life of the project is currently estimated to be 20 years. However, it must be considered that once operational, the facility can be upgraded and technology can be improved on, and this could possibly extend the life of the project.

Impacts in the decommissioning phase will be similar to impacts in the construction phase. Due to the dynamic nature of the social environment it is difficult to assess the potential impacts in this phase to a high level of accuracy and it is recommended that another SIA should be conducted at the time of closure of the facility. The most significant impacts associated with the closure phase would be loss of employment opportunities, loss of secondary economic opportunities and loss of contributions to social development initiatives.



7.2.5 Social impact management plan

The table below presents the social impact management plan that is suggested for the life of the project. The social impact management plan does not replace the social mitigation measures, but must be implemented in addition to the suggested mitigation measures.

Table X: Social impact management plan

SOCIAL IMPACT MANAGEMENT PLAN				
Phase	Management action	Timeframe for implementation	Responsible party for implementation (frequency)	Responsible party for monitor/audit/review (frequency)
Planning and Design Phase	Develop social impact management plan	As soon as project enters public domain	Applicant	CLO <i>Internal once appointed</i> Social expert <i>External but not legally required</i>
	Appoint appropriately qualified community liaison officer (CLO) (social science qualification) to deal with social aspects of the project throughout the life of the project	Before consultation with stakeholders start (excluding EIA consultation)	Applicant Appointment for the life of the project	Not required apart from usual HR processes
	Develop community relations strategy	Before consultation with stakeholders start (excluding EIA consultation)	Applicant Continued for the life of project	CLO <i>Internal</i> <i>No external review required</i>
	Develop safety plan, access	In consultation with stakeholders	Applicant	CLO



	protocols, grievance mechanism and compensation policy		Continued for the life of project	<i>Internal</i> <i>No external review required</i>
Construction Phase	Monitoring of social mitigation and management measures	Throughout construction	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
	Implementation of community relations strategy	Throughout construction	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
	Implement safety plan, access protocols, grievance mechanism and compensation policy	Throughout construction	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
Operation Phase	Monitoring of social mitigation and management measures	Throughout operation	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
	Implementation of community relations strategy	Throughout operation	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
	Implement safety plan, access protocols, grievance mechanism and compensation policy	Throughout operation	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
Decommissioning, Closure and Rehabilitation Phase	Implement safety plan, access protocols, grievance mechanism and compensation policy	Throughout decommissioning until all rehabilitation activities have ceased	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>



	Continue community relations strategy until all activities on site cease and rehabilitation is completed	Throughout decommissioning until all rehabilitation activities have ceased	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>
	Implement social mitigation for closure	Throughout decommissioning	Applicant (CLO) Continued for the life of project	Management <i>Once a year or as required</i>



8 Need and desirability

Government Notice 891 of 2014 is a Guidance Document that deals with the *Need and Desirability* in terms of the EIA regulations. This document presents certain questions to engage with to determine the need and desirability of a proposed project. The SIA deals with the need and desirability from a social perspective throughout the document, firstly by describing the socio-economic baseline environment and secondly through assessing impacts and suggesting mitigation measures. The questions posted in Government Notice 891 of 2014 guided the information presented in the SIA document.

The legislative and policy context relevant to the project is discussed in Section 4 of this report, and confirms that the project is in line with local legislation and policies. The project outcomes align with the national, local and regional planning objectives in terms of economic development and sustainability. The project will use a natural, renewable resource and assist with decreasing the country's reliance on coal as a source of energy. The project will not affect the environmental rights of any of the affected stakeholder groups and no-one's livelihoods will be affected in a negative manner. The project will contribute to livelihood strategies of stakeholders in the area – directly through job creation and secondary economic opportunities, and indirectly through enterprise and socio-economic development by means of a community trust. Should the mitigation measures be implemented as recommended, the contribution to long-term sustainable outcomes will be significant. The project will complement the socio-economic benefits in the area. Given the rural setting of the site there will be a need to transport goods and people over a distance, but the negative impact of this aspect can be mitigated by the secondary economic opportunities that the need for transport service providers will create.

There are vulnerable people that will be affected by the project. The vulnerable groups include the poor and unemployed people in the urban areas, and the farm workers in the rural areas. In terms of participation a non-technical background



information document aimed at these groups were produced and presented in Afrikaans, which is the dominant language in the area, and English. The project offers opportunities for semi- and unskilled labourers, which will ensure that the vulnerable groups are not excluded from economic opportunities. Mitigation measures on how to enhance these opportunities are suggested in the report. The mitigation measures include aspects such as gender equality.

The project will not result in any unfair discrimination or affect the social and environmental rights of any of the stakeholder groups, should the mitigation measures be implemented as suggested. From a social perspective the positive impact that the project will have on the affected environment outweighs the negative impacts by far, and where there are negative impacts, it can be mitigated.

9 Recommendations regarding Corporate Social Responsibility Projects (CSR)

Corporate social responsibility (CSR) is a form of corporate self-regulation incorporated into a business model. CSR policy functions as a built-in, self-regulating mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards, and international norms. Through the RFP document the Department of Energy (DoE), requires that all renewable energy bidders must illustrate how the Project will benefit the local community. This must be done through:

- Enterprise development; and
- Socio-economic development.

When considering potential projects to invest in, Soventix should keep in mind that social development is a long-term process, and not something that can be achieved in a couple of years. The recommendation is therefore that Soventix identifies a sustainable project that they can be involved with and grow throughout the life of their project. Given that enterprise and socio-economic development are not the core business of Soventix, the best option is to liaise with a local NGO/NPO that have the expert knowledge on how to implement these kinds of projects. This will ensure



that money and resources are not wasted, but used optimally from the start of the project. The Karoo Eisteddfod Trust (www.karooeisteddfod.com) is a multidimensional educational and development NPO based in De Aar, but operating not only in De Aar, but across the Karoo in Hanover, Phillipstown and Victoria West. The organisation has a proven auditable track record of the successful implementation of projects. Their programmes aim to address the inequities of Apartheid and help disadvantaged young people to realise their potential. Their model supports children from infancy into adulthood. As such, the NPO has extensive knowledge about the socio-economic needs of people in the region. It is recommended that when Soventix is ready to investigate CSR projects that they should contact this NPO to assist them with identifying local needs and projects and link them with other NPOs in the region.

10 Stakeholder Engagement Plan

Social impacts already start in the planning phase of a project and as such it is imperative to start with stakeholder engagement as early in the process as possible. A stakeholder engagement plan will assist Soventix to outline their approach towards communicating in the most efficient way possible with stakeholders throughout the life of the project. Such a plan cannot be considered a once off activity and should be updated on a yearly basis to ensure that it stays relevant and to capture new information. Stakeholders must provide input in the Stakeholder Engagement Plan.

The Soventix Stakeholder Engagement Plan should have the following objectives:

- To identify and assess the processes and/or mechanisms that will improve the communication between local communities, the wider community and Soventix.
- To improve relations between Soventix staff and the people living in the local communities.



- To provide a guideline for the dissemination of information crucial to the local communities in a timely, respectful and efficient manner.
- To provide a format for the timely recollection of information from the local communities in such a way that the communities are included in the decision making process.

The Stakeholder Engagement Plan should be compiled in line with International Finance Corporation (IFC) Guidelines and should consist of the following components:

- Stakeholder Identification and Analysis – time should be invested in identifying and prioritising stakeholders and assessing their interests and concerns.
- Information Disclosure – information must be communicated to stakeholders early in the decision-making process in ways that are meaningful and accessible, and this communication should be continued throughout the life of the project.
- Stakeholder Consultation – each consultation process should be planned out, consultation should be inclusive, the process should be documented and follow-up should be communicated.
- Negotiation and Partnerships – add value to mitigation or project benefits by forming strategic partnerships and for controversial and complex issues, enter into good faith negotiations that satisfy the interest of all parties.
- Grievance Management – accessible and responsive means for stakeholders to raise concerns and grievances about the project must be established throughout the life of the project.
- Stakeholder Involvement in Project Monitoring – directly affected stakeholders must be involved in monitoring project impacts, mitigation and



benefits. External monitors must be involved where they can enhance transparency and credibility.

- Reporting to Stakeholders – report back to stakeholders on environmental, social and economic performance, both those consulted and those with more general interests in the project and parent company.
- Management Functions – sufficient capacity within the company must be built and maintained to manage processes of stakeholder engagement, track commitments and report on progress.

It is of critical importance that stakeholder engagement takes place in each phase of the project cycle and it must be noted that the approach will differ according to each phase. The stakeholder analysis done in Section 6 of this report must inform the stakeholder engagement strategy.

11 Proposed Grievance Mechanism

In accordance with international good practice Soventix should establish a specific mechanism for dealing with grievances. A grievance is a complaint or concern raised by an individual or organisation that judges that they have been adversely affected by the project during any stage of its development. Grievances may take the form of specific complaints for actual damages or injury, general concerns about project activities, incidents and impacts, or perceived impacts. The IFC standards require Grievance Mechanisms to provide a structured way of receiving and resolving grievances. Complaints should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, and is at no cost and without retribution. The mechanism should be appropriate to the scale of impacts and risks presented by a project and beneficial for both the company and stakeholders. The mechanism must not impede access to other judicial or administrative remedies.

The grievance mechanism should be based on the following principles:



- Transparency and fairness;
- Accessibility and cultural appropriateness;
- Openness and communication regularity;
- Written records;
- Dialogue and site visits; and
- Timely resolution.

Based on the principles described above, the grievance mechanism process involves four stages:

- Receiving and recording the grievance;
- Acknowledgement and registration;
- Site inspection and investigation; and
- Response.

The Grievance Mechanism should be communicated to all stakeholders.

12 Conclusions and recommendations

The aim of this report is to identify potential social impacts associated with the proposed establishment of a solar electricity generation facility and associated infrastructure. The project will have a positive economic impact in the rural area. None of the potential negative social impacts are severe, and all the impacts can be mitigated.

Based on the findings of this study, the following key recommendations are made:

- Mitigation about safety and security must be implemented as soon as construction commences. The process must involve local security groups and landowners;



- A community liaison officer that is trusted by the community and has the necessary skills and education must be appointed before construction commences;
- Protocols on farm access, compensation, communication and road maintenance must be agreed upon and be in place before construction commences;
- A grievance mechanism and claims procedure must be in place and shared with all the stakeholders before the construction commences; and
- Economic benefits must be enhanced and local labour and procurement should be prioritised.

None of the social impacts identified are so severe that the project should not continue. Based on the findings of this report, it is recommended that the project continues, on the conditions that the mitigation measures are implemented.



13 References

- Barnett, E. & Casper, M. 2001. **Research: A definition of “social environment”**. American Journal of Public Health. 91(3): 465.
- Bell, P.A., Fisher, J.D., Baum, A. & Greene, T.C. 1996. **Environmental Psychology – Fourth Edition**. Florida: Harcourt Brace College Publishers.
- Coetzee, M. 2002. Summary document on the IDP LA21 relationship. **Local pathway to sustainable development in South Africa**. Package presented to the World Summit on Sustainable Development, Department of Provincial and Local Government, Johannesburg.
- Constitution of the Republic of South Africa, 1996**
- Du Preez, M. & Perold, J. 2005. **Scoping/feasibility study for the development of a new landfill site for the Northern Areas of the Metropolitan Municipality of Johannesburg. Socio-Economic Assessment**. Mawatsan.
- Emthanjeni Municipality Integrated Development Plan 2016/2021**. May 2016. Emthanjeni Local Municipality.
- Esteves, A.M., Franks, D. & Vanclay, F. 2012. **Social impact assessment: The state of the art**, Impact Assessment & Project Appraisal 30(1): 35-44
- Global Reporting Initiative. [Sa] **Focal Point South Africa**. Available: <https://www.globalreporting.org/network/regional-networks/gri-focal-points/fp-southafrica/Pages/default.aspx>
- Government Notice 891 of 2014**. Guidance Document on the Need and Desirability in terms of the EIA regulations (2010). Republic of South Africa
- IFC. **Stakeholder Engagement: A Good Practice Handbook for companies doing business in Emerging Markets**. Washington.



International Association for Impact Assessment. 2003. **Social Impact Assessment: International Principles**. Special Publication Series no.2. IAIA; Fargo.

Interorganizational Committee on Principles and Guidelines for Social Impact Assessment. **US Principles and Guidelines – Principals and guidelines for social impact assessment in the USA**. Impact Assessment and Project Appraisal, 21(3):231-250.

International Finance Corporation, 2012. **Performance Standards on environmental and social sustainability**. Washington, DC: International Finance Corporation.

International Labour Organisation [Sa] **Ratifications for South Africa**. Available: http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTR Y_ID:102888

International Organisation for Standardisation, 2010. ISO 26000 **Guidance on Social Responsibility**. Geneva: International Organization for Standardization.

Northern Cape Provincial Growth and Development Strategy (NCPGDS). Abridged version. July 2012

National Heritage Resources Act 25 of 1999. Republic of South Africa.

National Planning Commission. 2012. **National Development Plan 2030: Our future—make it work**. Pretoria: National Planning Commission.

The National Energy Act 34 of 2008

National Environmental Management Act no 107 of 1998 (NEMA).

National Water Act 36 of 1998. Republic of South Africa.

Noble, M., Babita, M., Barnes, H., Dibben, C., Magasela, W., Noble, S., Ntshongwana, P., Phillips, H., Rama, S., Roberts, B., Wright, G. and Zungu, S. 2006. **The Provincial Indices of Multiple Deprivation for South Africa 2001**. UK: University of Oxford.

Pixley Ka Seme District Municipality Integrated Development Plan. 2015/2016 Review. Volume 1. Final. 18 May 2015. Pixley Ka Seme District Municipality.



Promotion of Administrative Justice Act 3 of 2000. Republic of South Africa

Republic of South Africa. 1998. Ministry for Provincial Affairs and Constitutional Development. **White Paper on Local Government.** Notice 423 of 1998. Government Gazette, 393(18739) Pretoria: Government Printer

Republic of South Africa. 2013. **South Africa Yearbook 2012/2013.** Pretoria: Government Communication and Information System.

South African Bureau of Standards [Sa]. **About the SABS.** Available: <https://www.sabs.co.za/About-SABS/index.asp>

Statistics South Africa. **Census 2011.**

Statistics South Africa. 2016. **Community Survey 2016 Provinces at glance.** Pretoria: Statistics South Africa. Pretoria: Statistics South Africa.

Statistics South Africa. 2015. **Methodological report on rebasing of national poverty lines and development on pilot provincial poverty lines – Technical Report.** Pretoria: Statistics South Africa.

Statistics South Africa. 2014. **The South African MPI: Creating a multidimensional poverty index using census data.**

UNEP, 2002. **EIA Training Resource Manual.** 2nd Ed. UNEP.

UNEP, 2002. **EIA Training Resource Manual.** 2nd Ed. UNEP.

United Nations. 2013a. **Overview of the UN Global Compact.** Available: <https://www.unglobalcompact.org/AboutTheGC/index.html>

Vanclay, F., Esteves, A.M., Aucamp, I. & Franks, D. 2015. **Social Impact Assessment: Guidance for assessing and managing the social impacts of projects.** Fargo ND: International Association for Impact Assessment.



Vanclay, F. 2003. **Conceptual and methodological advances in Social Impact Assessment.** In Vanclay, F. & Becker, H.A. 2003. *The International Handbook for Social Impact Assessment*. Cheltenham: Edward Elgar Publishing Limited.

White Paper on Energy Policy of the Republic of South Africa (1998)

White Paper on Renewable Energy of the Republic of South Africa (2003)

World Wide Web:

<http://www.municipalities.co.za> (accessed 23/11/2016)

<http://www.karooeisteddfod.com> (accessed 22/02/2017)