environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Pofadder Wind Energy Facility 2, Northern Cape Province

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

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0001

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473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

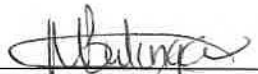
1. SPECIALIST INFORMATION

Specialist Company Name:	Savannah Environmental (Pty) Ltd			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	2	Percentage Procurement recognition	100%
Specialist name:	Nondumiso Bulunga			
Specialist Qualifications:	MSc & GIS			
Professional affiliation/registration:				
Physical address:	16 Meadway Kelvin Sandton 2090			
Postal address:	16 Meadway Kelvin Sandton 2090			
Postal code:	2090	Cell:	0794580862	
Telephone:		Fax:		
E-mail:	ndumibulunga@gmail.com			

2. DECLARATION BY THE SPECIALIST

I, __Nondumiso Bulunga_____, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the Specialist

Savannah Environmental

Name of Company:

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, ___Nondumiso Bulunga_____, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

Savannah Environmental

Name of Company

Date

Signature of the Commissioner of Oaths

Date

KARLA DE JAGER,
COMMISSIONER OF OATHS (RSA)
PRACTISING ATTORNEY
32 MOUTON STREET, HORIZON, ROODEPOORT

POFADDER WIND ENERGY FACILITY 2

Northern Cape Province

Scoping Social Impact Assessment

March 2022

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REPORT DETAILS

Title	:	Social Impact Assessment Report: Pofadder Wind Energy Facility 2
Authors	:	Savannah Environmental (Pty) Ltd Nondumiso Bulunga
External Reviewer	:	Dr Neville Bews
Client	:	Pofadder Wind Energy Facility 2 (Pty) Ltd
Report Revision	:	Revision 1
Date	:	March 2022

When used as a reference this report should be cited as: Savannah Environmental (2022) Social Impact Assessment for Pofadder Wind Energy Facility 2, Northern Cape.

SPECIALIST DECLARATION OF INTEREST

I, Nondumiso Bulunga, declare that –

- I act as the independent specialist in this application.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- I declare that there are no circumstances that may compromise my objectivity in performing such work.
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity.
- I will comply with the Act, Regulations and all other applicable legislation.
- I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the application by the competent authority, and – the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- All the particulars furnished by me in this form are true and correct.
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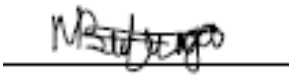

Nondumiso Bulunga
Name

Signature

17 March 2022
Date

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FIGURES

TABLES

ACRONYMS

B-BBEE	Broad-Based Black Economic Empowerment
CLO	Community Liaison Officer
DEDECT	Department of Economic Development, Environment and Tourism
DFFE	Department of Forestry Fisheries and the Environment
DoE	Department of Mineral Resources and Energy
DM	District Municipality
EA	Environmental Authorisation
EAP	Economically Active Population
ECA	Environment Conservation Act (No. 73 of 1989)
ECO	Environmental Control Officer
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EP	Equator Principles
EPC	Engineering, Procurement and Construction
GDP	Gross Domestic Product
GDP-R	Gross Domestic Product per Region
GGP	Gross Geographic Product
GHG	Greenhous Gas
GNP	Gross National Product
GNR	Government Notice
HDI	Historically Disadvantaged Individuals
I&AP	Interested and Affected Party
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IEP	Integrated Energy Plan
IFC	International Finance Corporation
IRP	Integrated Resource Plan
KGLM	Kai !Garib Local Municipality
km	Kilometre
kV	Kilovolt
LED	Local Economic Development
LM	Local Municipality
NEMA	National Environmental Management Act (No. 107 of 1998)
NDP	National Development Plan
PGDS	Provincial Growth and Development Strategy
PICC	Presidential Infrastructure Coordinating Committee
PSDF	Provincial Spatial Development Framework
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SIP	Strategic Infrastructure Project
ZFDM	ZF Mgcawu District Municipality

1. INTRODUCTION AND PROJECT DESCRIPTION

The applicant Pofadder Wind Energy Facility 2 (Pty) Ltd is proposing the development of a commercial Wind Energy Facility (WEF) and associated infrastructure on a site located approximately 20km South East of Pofadder within the Kai !Garib Local Municipality and the Z F Mgcawu District Municipality in the Northern Cape Province.

Two additional WEF's are concurrently being considered on the properties and are assessed by way of separate impact assessment processes contained in the 2014 Environmental Impact Assessment (EIA) Regulations (GN No. R982, as amended) for listed activities contained Listing Notices 1, 2 and 3 (GN R983, R984 and R985, as amended). These projects are known as Pofadder Wind Energy Facility 1 and Pofadder Wind Energy Facility 3.

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

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

1.1. Project Description

A preferred project site with an extent of approx. 3000ha has been identified as a technically suitable area for the development of the Pofadder WEF 2, which will comprise of up to 30 turbines with a combined contracted capacity of up to 200MW. The project site is located on the following properties:

- The Farm Ganna-Poort 202;
- The Farm Lovedale 201; and
- Portion 3 of the Farm Sand Gat 150.

Two additional WEF's are concurrently being considered on the properties and are assessed by way of separate impact assessment processes contained in the 2014 Environmental Impact Assessment Regulations (GN No. R982, as amended) for listed activities contained Listing Notices 1, 2 and 3 (GN R983, R984 and R985, as amended). These projects are known as Pofadder Wind Energy Facility 1 and Pofadder Wind Energy Facility 3.
The project site comprises the following farm portions:

- » Farm Ganna-Poort 202;
- » Farm Lovedale 201; and
- » Portion 3 of the Farm Sand Gat 150.

The Pofadder WEF 2 project site is proposed to accommodate the following infrastructure, which will enable the wind farm to supply a contracted capacity of up to 200MW:

- Up to 30 wind turbines with a maximum hub height of up to 200m;
- A transformer at the base of each turbine;
- Concrete turbine foundations and turbine hardstands;
- Temporary laydown areas which will accommodate the boom erection, storage and assembly area;
- Cabling between the turbines, to be laid underground where practical;
- An on-site substation of up to 1.25ha in extent to facilitate the connection between the wind farm and the electricity grid;
- An internal overhead 132kV power line, with a servitude of 32m, to connect the wind farm to the collector substation;
- Access roads to the site and between project components inclusive of stormwater infrastructure. A 12 m road corridor may be temporary impacted during construction and rehabilitated to 6m wide after construction;
- Pofadder WEF 2 will have a total road network of about 50 km.
- A temporary concrete batching plant; and
- Operation and Maintenance buildings including a gate house, security building, control centre, offices, warehouses, a workshop and visitors centre.

In order to evacuate the energy generated by the WEF's to supplement the national grid, Pofadder Grid (Pty) Ltd is proposing two grid connection alternatives which will be assessed in a separate Integrated Grid Basic Assessment Report:

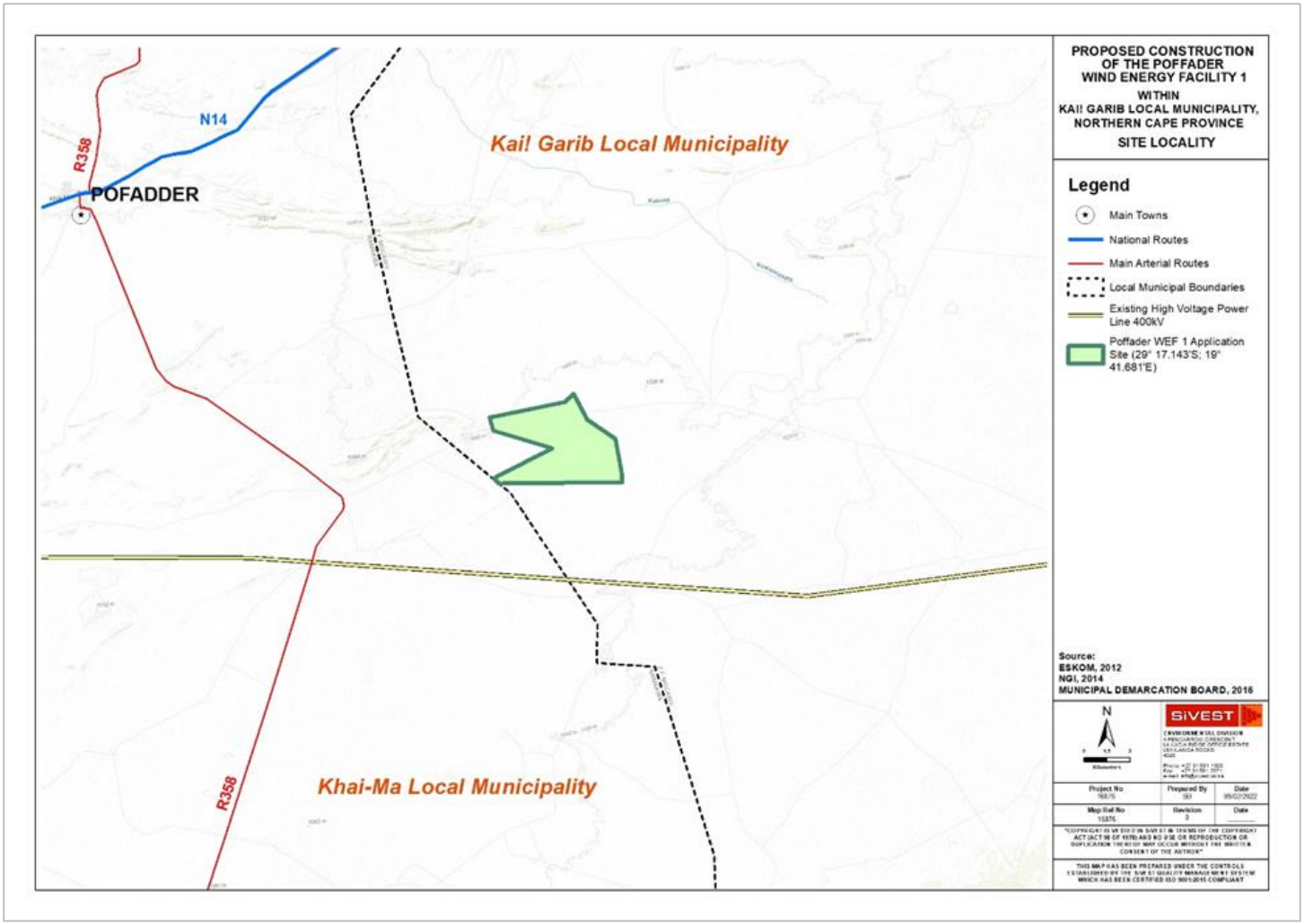

Figure 1-1: Locality map illustrating the locations of the Pofadder Wind Energy facility development areas.

1.2. Details of the Independent Specialist

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

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

» **Dr Neville Bews** is a Senior Social Scientist and Human Resource professional at Dr. Neville Bews & Associates. Dr. Bews has a Doctorate in Literature and Philosophy (D. Litt. et Phil) from the Rand Afrikaans University (RAU) (now the University of Johannesburg (UJ)), and 37 years of experience in the fields of Social Impact Assessment and Research, and Human Resource Management. Dr. Bews has worked on a number of large infrastructure, mining and water resource projects.

Dr Neville Bews has undertaken an external review of this SIA and has provided an external reviewer's letter. This letter is attached as **Appendix C.**

1.3. Structure of the SIA Report

This SIA Report has been prepared in accordance with the requirements of Appendix 6 of the 2014 EIA Regulations, as amended. An overview of the contents of this SIA Report, as prescribed by Appendix 6 of the 2014 EIA Regulations (GNR 326), and where the corresponding information can be found within the report is provided in **Table 1-1**.

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

	Requirement	Location in Report
(a)	Details of – (i) The specialist who prepared the report. (ii) The expertise of that specialist to compile a specialist report including a curriculum vitae.	Section 1
(b)	A declaration that the specialist is independent in a form as may be specified by the competent authority.	Specialist Declaration of Interest
(c)	An indication of the scope of, and the purpose for which, the report was prepared.	Section 2
(cA)	An indication of the quality and age of base data used for the specialist report.	Section 4
(cB)	A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change.	Section 5
(d)	The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment.	Section 2
(e)	A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used.	Section 2
(f)	Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives.	Section 4 Section 5
(g)	An identification of any areas to be avoided, including buffers.	N/A

	Requirement	Location in Report
(h)	A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	N/A
(i)	A description of any assumptions made and any uncertainties or gaps in knowledge.	Section 2
(j)	A description of the findings and potential implications of such findings on the impact of the proposed activity or activities.	Section 5
(k)	Any mitigation measures for inclusion in the EMPr.	Appendix A
(l)	Any conditions for inclusion in the environmental authorisation.	Section 6
(m)	Any monitoring requirements for inclusion in the EMPr or environmental authorisation.	Appendix A
(n)	A reasoned opinion – (i) Whether the proposed activity, activities or portions thereof should be authorised. (iA) Regarding the acceptability of the proposed activity or activities. (ii) If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures.	Section 6
(o)	A description of any consultation process that was undertaken during the course of preparing the specialist report.	Section 2
(p)	A summary and copies of any comments received during any consultation process and where applicable all responses thereto.	N/A
(q)	Any other information requested by the competent authority.	N/A
2.	Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	N/A

2. METHODOLOGY AND APPROACH

2.1. Purpose of the Study

The International Principles for Social Impact Assessment define SIA as:

"*The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions*".

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

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

The purpose of this SIA Process is therefore to:

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

2.2. Approach to the Study

This SIA Report provides a snapshot of the current social setting within which the Pofadder WEF 2 is proposed. It provides an overview of the manner and degree to which the current status quo is likely to change or be impacted by the construction, operation and decommissioning of the project, as well as the way the social environment is likely to impact on the development itself.

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

The SIA process comprised the following:

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

2.2.1. Collection and Review of Existing Information

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

» Project maps and layouts.
» Google Earth imagery.
» A description of the project (as provided by the project proponent).
» Responses to questions posed to the project proponent regarding employment and social upliftment and local economic development opportunities (as provided by the project proponent).
» Census Data (2011), and the Local Government Handbook (2019).
» Planning documentation such as Provincial Growth and Development Strategies (PGDSs), Local and District Municipality Integrated Development Plans (IDPs), Spatial Development Frameworks (SDFs), and development goals and objectives.
» Relevant legislation, guidelines, policies, plans, and frameworks.
» Available literature pertaining to social issues associated with the development and operation of Wind Energy facility and associated infrastructure.

2.2.2. Limitations and Assumptions

» Data derived from the 2011 Census, Northern Cape Provincial Growth and Development Strategy 2004-2014), Northern Cape Climate Change Response Strategy; Kai !Garib Local Municipality Integrated Development Plan; ZF Mgcawu District Municipality Integrated Development Plan (2017 – 2022 was used to generate most of the information provided in the baseline profile of the study area. The possibility therefore exists that the data utilised may be out of date and may not provide an accurate reflection of the current status quo.
» This SIA Report is intended to provide an overview of the current social environmental and assist in the identification of potential social impacts
» As a result, no consultation has been conducted with key stakeholders as part of the Scoping process to date.
» This SIA Report was prepared based on information which was available to the specialist at the time of preparing the report. The sources consulted are not exhaustive, and the possibility exists that additional information which might strengthen arguments, contradict information in this report, and / or identify additional information might exist.

- Some of the project projections reflected in this SIA Report (i.e., with regards to job creation and local content) may be subject to change, and therefore may be higher or lower than those estimated by the project proponent.
- It is assumed that the motivation for, and planning and feasibility study of the project were undertaken with integrity; and that information provided by the project proponent was accurate and true at the time of preparing this SIA Report.

3. LEGISLATION AND POLICY REVIEW

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

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

National Policy and Planning Context:
- Constitution of the Republic of South Africa, 1996
- National Environmental Management Act (No. 107 of 1998) (NEMA)
- White Paper on the Energy Policy of the Republic of South Africa (1998)
- National Energy Act (No. 34 of 2008)
- Integrated Energy Plan (IEP) (2016)
- National Development Plan (NDP) 2030 (2012)
- Integrated Resource Plan for Electricity (IRP) 2010 – 2030 (2011) (and subsequent updates thereto)
- Strategic Infrastructure Projects (SIPs)

Provincial Policy and Planning Context:
- Northern Cape Provincial Growth and Development Strategy (2004-2014)
- Northern Cape Province Twenty Year Review (2014)
- Northern Cape Spatial Development Framework (2012)
- Northern Cape Department of Environment & Nature Conservation Annual Report (2016/17)
- Northern Cape Department of Economic Development & Tourism Annual Report (2017)
- Northern Cape State of Province Address (2018)
- Northern Cape Climate Change Response Strategy

Local Policy and Planning Context:
- ZF Mgcawu District Municipality Integrated Development Plan (IDP) (2017 – 2022)
- Kai !Garib Local Municipality Integrated Development Plan (IDP) (2021 -2022)

3.1. National Policy and Planning Context

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

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

Table 3.1: Relevant national legislation and policies for the Pofadder WEF 2

Relevant legislation or policy	Relevance to the proposed project
Constitution of the Republic of South Africa, 1996	Section 24 of the Constitution pertains specifically to the environment. It states that Everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. The Constitution outlines the need to promote social and economic development. Section 24 of the Constitution therefore requires that development be conducted in such a manner that it does not infringe on an individual's environmental rights, health, or well-being. This is especially significant for previously disadvantaged individuals who are most at risk to environmental impacts.
National Environmental Management Act (No. 107 of 1998) (NEMA)	This piece of legislation is South Africa's key piece of environmental legislation and sets the framework for environmental management in South Africa. NEMA is founded on the principle that everyone has the right to an environment that is not harmful to their health or well-being as contained within the Bill of Rights. The national environmental management principles state that the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment. The need for responsible and informed decision-making by government on the acceptability of environmental impacts is therefore enshrined within NEMA.
White Paper on the Energy Policy of the Republic of South Africa (1998)	The White Paper on Energy Policy places emphasis on the expansion of energy supply options to enhance South Africa's energy security. This can be achieved through increased use of RE and encouraging new entries into the generation market. South Africa has an attractive range of cost-effective renewable resources, taking into consideration social and environmental costs. Government policy RE is thus concerned with meeting the following challenges: » Ensuring that economically feasible technologies and applications are implemented. » Ensuring that an equitable level of national resources is invested in renewable technologies, given their potential and compared to investments in other energy supply options. » Addressing constraints on the development of the renewable industry. The policy states that the advantages of RE include minimal environmental impacts during operation in comparison with traditional supply technologies, generally lower running costs, and high labour intensities. Disadvantages include higher capital costs in some cases; lower energy densities; and lower levels of availability, depending on specific conditions, especially with sun and wind-based systems. Nonetheless, renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future. The White Paper on Energy Policy therefore supports the advancement of RE sources and ensuring energy security through the diversification of supply.
National Energy Act (No.34 of 2008)	The purpose of the National Energy Act (No. 34 of 2008) is to ensure that diverse energy resources are available, in sustainable quantities and at affordable prices, to the South African economy in support of economic growth and poverty alleviation, while taking environmental

Relevant legislation or policy	Relevance to the proposed project
	management requirements into account. In addition, the Act also provides for energy planning, and increased generation and consumption of Renewable Energies (REs). The objectives of the Act, are to amongst other things, to: » Ensure uninterrupted supply of energy to the Republic. » Promote diversity of supply of energy and its sources. » Facilitate energy access for improvement of the quality of life of the people of the Republic. » Contribute to the sustainable development of South Africa's economy. The National Energy Act therefore recognises the significant role which electricity plays growing the economy while improving citizens' quality of life. The Act provides the legal framework which supports the development of RE facilities for the greater environmental and social good and provides the backdrop against which South Africa's strategic planning regarding future electricity provision and supply takes place. It also provides the legal framework which supports the development of RE facilities for the greater environmental and social good.
Integrated Energy Plan (IEP) (2016)	The Integrated Energy Plan (IEP) (which was developed under the National Energy Act (No. 34 of 2008)), recognises that energy is essential to many human activities, and is critical to the social and economic development of a country. The purpose of the IEP is essentially to ensure the availability of energy resources, and access to energy services in an affordable and sustainable manner, while minimising associated adverse environmental impacts. Energy planning therefore needs to balance the need for continued economic growth with social needs, and the need to protect the natural environment. The IEP is a multi-faceted, long-term energy framework which has multiple aims, some of which include: » To guide the development of energy policies and, where relevant, set the framework for regulations in the energy sector. » To guide the selection of appropriate technologies to meet energy demand (i.e., the types and sizes of new power plants and refineries to be built and the prices that should be charged for fuels). » To guide investment in and the development of energy infrastructure in South Africa. » To propose alternative energy strategies which are informed by testing the potential impacts of various factors such as proposed policies, introduction of new technologies, and effects of exogenous macro- economic factors.
National Development Plan 2030 (2012)	The National Development Plan (NDP) 2030 is a plan prepared by the National Planning Commission in consultation with the South African public which is aimed at eliminating poverty and reducing inequality by 2030. In terms of the Energy Sector's role in empowering South Africa, the NDP envisages that, by 2030, South Africa will have an energy sector that promotes: » Economic growth and development through adequate investment in energy infrastructure. The sector should provide reliable and efficient energy service at competitive rates, while supporting economic growth through job creation. » Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households.

Relevant legislation or policy	Relevance to the proposed project
	» Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy. The development of the grid connection infrastructure is considered to be relevant to the plan due to the need of the infrastructure for economic growth within the Kai !Garib Local Municipality municipal area.
Integrated Resource Plan for Electricity (IRP) 2010-2030 (2011) and subsequent updates	The Integrated Resource Plan for Electricity (IRP) 2010 – 2030 is a subset of the IEP and constitutes South Africa's national electricity plan. The primary objective of the IRP is to determine the long-term electricity demand and detail how this demand should be met in terms of generating capacity, type, timing and cost. The IRP also serves as input to other planning functions, including amongst others, economic development and funding, and environmental and social policy formulation. The current iteration of the IRP, led to the Revised Balanced Scenario (RBS) that was published in October 2010. Following a round of public participation which was conducted in November / December 2010, several changes were made to the IRP model assumptions. The document outlines the proposed generation new-build fleet for South Africa for the period 2010 to 2030. This scenario was derived based on a cost- optimal solution for new-build options (considering the direct costs of new build power plants), which was then "balanced" in accordance with qualitative measures such as local job creation. The Policy-Adjusted IRP reflects recent developments with respect to prices for renewables. In addition to all existing and committed power plants, the plan includes 9.6GW of nuclear; 6.25GW of coal; 17.8GW of renewables; and approximately 8.9GW of other generation sources such as hydro, and gas.
Strategic Infrastructure Projects (SIPs)	The Presidential Infrastructure Coordinating Committee (PICC) are integrating and phasing investment plans across 18 Strategic Infrastructure Projects (SIPs) which have the following 5 core functions: » To unlock opportunity. » Transform the economic landscape. » Create new jobs. » Strengthen the delivery of basic services. » Support the integration of African economies. A balanced approach is being fostered through greening of the economy, boosting energy security, promoting integrated municipal infrastructure investment, facilitating integrated urban development, accelerating skills development, investing in rural development, and enabling regional integration. SIP 8 of the energy SIPs supports the development of RE projects as follow: » SIP 8: Green energy in support of the South African economy: Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP 2010) and supports bio-fuel production facilities.

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

3.2. Provincial Policies

This section provides a brief review of the most relevant provincial policies. The Pofadder WEF 2 and associated infrastructure is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant provincial policies is provided in table format (**Table 3.2**) below.

Table 3.2: Relevant provincial policies for the Pofadder WEF 2

Relevant policy	Relevance to the proposed project
Northern Cape Provincial Growth and Development Strategy (2004 - 2014)	The Northern Cape Provincial Growth and Development Strategy (NCPGDS) identifies poverty reduction as the most significant challenges facing the government and its partners. All other societal challenges that the province faces emanate predominately from the effects of poverty. The NCPGDS notes that the only effective way to reduce poverty is through long-term sustainable economic growth and development, The sectors where economic growth and development can be promoted include: » Agriculture and Agro-processing; » Fishing and Mariculture » Mining and mineral processing » Transport » Manufacturing » Tourism However, the NCPGDS also notes that economic development in these sectors also requires: » Creating opportunities for lifelong learning » Improving the skills of the labour force to increase productivity » Increasing accessibility to knowledge and information The achievement of these primary development objectives depends on the achievement of a number of related objectives that, at a macro-level, describe necessary conditions for growth and development. These are: » Developing requisite levels of human and social capital » Improving the efficiency and effectiveness of governance and other development institutions » Enhancing infrastructure for economic growth and social development Of specific relevance to the SIA the NCPGDS refers to the need to ensure the availability of inexpensive energy. The section notes that to promote economic growth in the Northern Cape the availability of electricity to key industrial users at critical localities at rates that enhance the competitiveness of their industries must be ensured, At the same time, the development of new sources of energy through the promotion of the adoption of energy applications that display a synergy with the province's natural resource endowments must be encouraged. In this regard the NCPGDS notes "the development of energy sources such as solar energy, the natural gas fields, bio-fuels etc., could be some of the means by which new economic opportunity and activity is generated in the Northern Cape". The NCPGDS also highlights the importance of close co-operation between the public and private sectors for the economic development potential of the Northern Cape to be realised.

Relevant policy	Relevance to the proposed project
	The NCPGDS also highlights the importance of enterprise development, and notes that the current levels of private sector development and investment in the Northern Cape are low. In addition, the province also lags in the key policy priority areas of SMME Development and Black Economic Empowerment. The proposed solar energy facility therefore has the potential to create opportunities to promote private sector investment and the development of SMMEs in the Northern Cape Province. In this regard care will need to be taken to ensure that the proposed STPs and other renewable energy facilities do not negatively impact on the regions natural environment, in this regard the NCPGDS notes that the sustainable utilisation of the natural base on which agriculture depends is critical in the Northern Cape with its fragile eco-systems and vulnerability to climatic variation. The document also indicates that due to the provinces exceptional natural and cultural attributes, it has the potential to become the preferred adventure and ecotourism destination in South Africa. Care therefore needs to be undertaken to ensure that the development of large renewable energy project, such as the proposed solar energy facility, do not affect the tourism potential of the province.
Northern Cape Provincial Spatial Development Framework	Northern Cape Provincial Spatial Development Framework (NCSDF) (2012) lists a number of sectoral strategies and plans are to be read and treated as key components of the PSDF. Of these there are a number that are relevant to the proposed STPs. These includes: **Sectoral Strategy 1**: Provincial Growth and Development Strategy of the Provincial Government; **Sectoral Strategy 2**: Comprehensive Growth and Development Programme of the Department of Agriculture, Land Reform and Rural Development **Sectoral Strategy 5**: Local Economic Development (LED) Strategy of the Department of Economic Development and Tourism **Sectoral Strategy 11**: Small Micro Medium Enterprises (SMME) Development Strategy of the Department of Economic Development and Tourism; **Sectoral Strategy 12**: Tourism Strategy of the Department of Economic Development and Tourism **Sectoral Strategy 19**: Provincial renewable energy strategy (to be facilitated by the Department of Economic Development and Tourism) Under Section B14.4, Energy Sector the NCSDF (2012), notes the total area of high radiation in South Africa amounts to approximately 194 000 km² of which the majority falls within the Northern Cape. It is estimated that, if the electricity production per km² of mirror surface in a solar thermal power station were 30.2 MW and only 1% of the area of high radiation were available for solar power generation, the generation potential would equate to approximately 64 GW. A mere 1.25% of the area of high radiation could thus meet projected South African electricity demand in 2025 (80 MW) (NCPSDF, 2012). However, the SDF does indicate that this would require large investments in transmission lines from the areas of high radiation to the main electricity consumer centres. The SDF also notes that the implementation of large concentrating solar power (CSP) plants has been proposed as one of the main contributors to greenhouse gas emission reductions in South Africa. In this regard various solar parks and CSP plants have been proposed in the province with Upington being the hub of such developments (NCPSDF,2012). Section C8.23, Energy Objectives, set out the energy objectives for the Northern Cape Province. The section makes specific reference to renewable energy, The objectives are listed below. » Promote the development of renewable energy supply schemes. Large-scale renewable energy supply schemes are strategically important for increasing the

Relevant policy	Relevance to the proposed project
	diversity of domestic energy supplies and avoiding energy imports while minimizing detrimental environmental impacts » Enhance the efficiency of Eskom's power station at the Vanderkloof power station » To reinforce the existing transmission network and to ensure a reliable electricity supply in the Northern Cape, construct a 400 IV transmission power line from Ferrum Substation (near Kathu/Sishen) to Garona Substation (near Groblershoop). There is a national electricity supply shortage and the country is now in a position where it needs to commission additional plants urgently. Consequently, renewable energy project is a high priority » Develop and institute innovative new energy technologies to improve access to reliable, sustainable and affordable energy services with the objectives to realize sustainable economic growth and development. The goals of service in supplying and providing energy services, tackling climate change, avoiding air pollution and reaching sustainable development in the province offer both opportunities and synergies which require joint planning between local and provincial government as well as the private sector » Develop and institute energy supply schemes with the aim to contribute to the achievement of the targets set by the White Paper on Renewable Energy (2003). This target relates to the delivery of 10 000 GWh of energy from renewable energy sources (mainly biomass, wind, solar, and small-scale hydro) by 2013. Section C8.3.3, Energy Policy, sets out the policy guidelines for the development of energy sector, with specific refence to the renewable energy sector. » The construction of telecommunication infrastructure must be strictly regulated in terms of the spatial plans and guidelines put forward in the PSDF. They must be carefully places to avoid visual impacts on landscapes of significant symbolic, aesthetic, cultural or historic value and should blend in with the surrounding environment to the extent possible » EIAs undertaken for such construction must assess the impacts of such activities against the directives above » Renewable energy sources such as wind, solar thermal, biomass and domestic hydroelectricity are to constitute 25% of the province's energy generation capacity by 2020. The following key policy principles for renewable energy apply: » Full cost accounting: Pricing policies will be based on an assessment of the full economic, social and environmental costs and benefits of energy production and utilisation » Equity: There should be equitable access to basic services to meet human needs and ensure human well-being. Each generation has a duty to avoid impairing the ability of future generation to ensure their own well-being » Global and international cooperation and responsibilities: Government recognises its share responsibility for global and regional issues and act with due regard to the principles contained in relevant policies and applicable regional and international agreements » Allocation of functions: Government will allocate functions within the framework of the Constitution to competent institutions and spheres of government that can mostly effectively achieve the objectives of the energy policy » The implementation of sustainable renewable energy is to be promoted through appropriate financial and fiscal instruments » An effective legislative system to promote the implementation of reenable energy is to be developed, implemented, and continuously improved

Relevant policy	Relevance to the proposed project
	» Public awareness of the benefits and opportunities of renewable energy must be promoted » The development of renewable energy systems is to be harnessed as a mechanism for economic development throughout the province in accordance with the Sustainable Development Initiative (SDI)an approach » Renewable energy must, first and foremost, be used to address the needs of the province before being exported
Northern Cape Climate Change Response Strategy	The key aspects of the PCCRS Report are summarised in the MEC's (NCPG Environment and Nature Conservation) 2011 budget speech "The Provincial Climate Change Response Strategy will be underpinned by specific critical sector climate change adaptation and mitigation strategies that include the Water, Agriculture and Human Health sectors as the 3 key Adaptation Sectors, the Industry and Transport alongside the Energy sector as the 3 key Mitigation Sectors with the Disaster Management, Natural Resources and Human Society, livelihoods and Services sectors as 3 remaining key sectors to ensure proactive long term responses to the frequency and intensity of extreme weather events such as flooding and wild fore, with heightened requirements for effective disaster management Key points from the MEC's address include the NCPG's commitment to develop and implement policy in accord with the National Green Paper for the National Climate Change Response Strategy (2010) and an acknowledgment of the NCP's extreme vulnerability to climate-change driven desertification. The development and promotion of a provincial green economy, including green jobs, and environmental leadership is indented as an important provincial intervention in addressing climate change. The renewable energy sector, including solar and wind energy (but also biofuels and energy from waste), is explicitly indicated as important element to the Provincial Climate Change Response Strategy. The MEC also indicated that the NCP was involved in the processing several WEF and Solar Energy Facility EIA applications.
Northern Cape Province Green Document	The NCP Green Document (2017-2018) was prepared by the Northern Cape Department of Economic Development and Tourism and provides an impact assessment of IPPs on the communities in the province located within a 50 km radius from existing facilities. The document notes that the NCP is nationally a leader in commercial-scale renewable energy projects. By 2018 a total of 23 IPP projects in the province had been integrated into the national grid. These projects include Solar PV, Concentrated Solar and WEFs. The document notes that through their economic development obligations these projects have already made a significant positive contribution to affected communities. Much of the effort has been directed at supporting local education. The document also notes that, as these projects are committed to 20-year minimum lifespans, the collectively hold a tremendous potential for socio-economic upliftment. Key issues identified about improving the potential beneficial impact of IPPs in the NCP include: » Local community members abusing project benefits for personal gain. » Difficulty in outreach to local community beneficiaries due to high local illiteracy levels. » A lack of business skills generally hampers the successful establishment of local small enterprises which could benefit from projects. » Community benefit obligations are currently met in a piecemeal and uncoordinated fashion. » Anticipated community benefits are often frustrated by inadequate engagement and insufficient ongoing consultation.

Relevant policy	Relevance to the proposed project
	» The scarcity of people skilled in maths and sciences in local communities hampers meaningful higher-level local skills development and employment. » Insufficient support from local municipalities for IPP development.

3.3. District and Local Municipalities Policies

The strategic policies at a district and local level have similar objectives for the respective areas, namely, to accelerate economic growth, create jobs, and uplift communities. The proposed Pofadder WEF 2 and associated infrastructure is considered to align with the aims of these policies, even if contributions to achieving the goals therein are only minor.

A brief review of the most relevant district and local municipal policies is provided in table format (**Table 3.3**) below.

Table 3.3: Relevant district and local municipal policies for the Pofadder WEF 2

Relevant policy	Relevance to the proposed project
ZF Mgcawu District Municipality Integrated Development Plan	The vision set out in the ZFMDM is "Quality support to deliver quality services". The mission is a "Centre of excellence in providing quality basic services through support to local municipalities". In terms of the National Spatial Development Perspective, the ZF Mgcawu District area has been classified as a 'medium' importance area which means that no significant investment is concentrated in the region, in terms of the National Spatial Development Perspective, the ZF Mgcawu District area has been classified as a 'medium' importance area which means that no significant investment is concentrated in the region. The IDP lists a number of strategic objectives and development objectives. The relevant objectives include **Strategic objective** To Facilitate the Development of Sustainable regional land use, economic, spatial and environmental planning frameworks that will support and guide the development of a diversified, resilient and sustainable district economy, the associated development objective is to: » Establish a vehicle to ensure all businesses are co-operating (i.e. District LED Forum) » Create investment opportunities in sectorial development (i.e. investment activities; Entrepreneurial business support programme) » Enable an environment for business establishment and support initiatives (i.e. increase the number of businesses; entrepreneurial support) **Strategic objective** To market, develop and co-ordinate tourism in the ZFMDM. The associated development objective is to: » Promote the Green Kalahari tourism brand in the ZF Mgcawu district The IDP identifies several key challenges. The following are relevant to the proposed development » High rate of unemployment » Inadequate human capital » Youth development » Access to health care facilities

Relevant policy	Relevance to the proposed project
	The IDP also notes that the ZF Mgcawu District Municipality acknowledged that climate change poses a threat to the environment, its residents, and future development. Actions are required to reduce carbon emissions (mitigation), and prepare for the changes that are projected to take place (adaptation in the District, ZF Mgcawu District Municipality has therefore prioritised the development of a Climate Change Vulnerability Assessment and Climate Change Response Report
Kai !Garib Local Municipality Integrated Development Plan 2019/2020 (June 2019	The Kai !Garib LM has identified that there is potential for further IPP projects to become operational in the LM, with several already in the planning stages. Kai !Garib LM is also a participant in the ZF Mgcawu Development Forum, an initiative coordinated by the Industrial Development Corporation (IDC) which aims to ensure that integrated development planning and implementation of regional projects take place. This includes the renewable energy and mining plants, together with other industry stakeholders such as agricultural, business and civil society stakeholders. Kai !Garib LM recognises the importance of participating in this forum to provide a platform for partnerships for regional socio-economic growth.

The implementation of Pofadder WEF 2 would contribute towards addressing the Kai !Garib local municipality key issue regarding high levels of poverty and unemployment, skills shortage, and inequalities through the creation of employment opportunities, the provision of skills training opportunities, and local economic growth, including growth in personal income levels of those community members who would be employed on the project.

3.4. Conclusion

The main findings of the review of the policy documents on all spheres of Government indicated that strong support was given towards renewable energy, specifically wind energy. The White Paper on the Energy Policy of the Republic of South Africa of 1998 stated that due to the fact that renewable energy resources operate from an unlimited resource base, for example the wind, renewable energy can increasingly contribute towards a long-term sustainable energy for future generations. This policy further highlighted that due to the unlimited resources base of renewable energy in South Africa, renewable energy applications like wind energy is considered as having lowest water consumption, lowest relative greenhouse gas emission, and most favourable social impacts. It is considered as one of the most sustainable renewable energy sources. The Integrated Resource Planning for Electricity for South Africa of 2010 – 2030, the National Infrastructure Plan of South Africa and the New Growth Path Framework all support the development of the renewable energy sector.

In particular, the IRP also indicated that 43% of the energy generations in South Africa is allocated to renewable energy applications. On District and Local level not, much attention is given particularly to renewable sources like wind energy, however the documents reviewed do make provision for energy efficiency in improving the quality of lives in terms of efficient physical infrastructure. At Provincial, District and Local level the policy documents support the applications of renewables. The Northern Cape Provincial Development and Resource Management Plan/ Provincial Spatial Development Framework (PSDF) of 2012 indicated that the development of renewable energy applications such as WEFs, could be some of the means in which the Northern Cape can benefit from economically. The review of the relevant policies and documents related to the energy section, indicate that renewables like wind energy and the establishment of WEFs are supported on all spheres of Government.

4. SOCIAL PROFILE

Pofadder WEF 2 is proposed on the following farm Ganna-Poort 202; farm Lovedale 201; and portion 3 of the Farm Sand Gat 150; within Kai! Garib Local Municipality and the ZF Mgcawu District Municipality in the Northern Cape Province (refer to **Table 4-1**).

Table 4-1: Spatial Context of the study area for the development of the Pofadder Wind Energy Facility 2 and associated infrastructure

Province	Northern Cape Province
District Municipality	ZF Mgcawu District Municipality
Local Municipality	Kai! Garib Local Municipality
Ward number(s)	4 & 10
Nearest town(s)	20km South East of Pofadder
Preferred access	The project site is accessible via an existing gravel farm road from an existing main gravel road off the N14 which is located on the project site.

This Chapter provides an overview of the social environment of the province, DM, and LM within which the Pofadder WEF 2 is proposed and provides the social basis against which potential issues can be identified.

4.1. Northern Cape Province

The Northern Cape Province, is the largest province in South Africa and covers an area of 361 830 km2 and, constitutes approximately 30% of South Africa. The province is divided into five district municipalities (DM), namely, Frances Baard, Karoo, Namakwa, Pixley Ka Seme and ZF Mgcawu District Municipality (known before 1 July 2013 as Siyanda DM). Despite having the largest surface area, the Northern Cape has the smallest population of 1 193 780 (Community Household Survey, 2016) or 2.2% of the population of South Africa. Of the five districts, Frances Baard has the largest population (32.5%), followed by ZF Mgcawu District Municipality (21.2%), John Taola Gaetsewe (20.3%), Pixley ka Seme (16.4%) and Namakwa (9.7%). The majority of the population in the Northern Cape Province are Black African (48.1%), followed by Coloureds (43.7%) and Whites (7.7%).

In terms of age, 36.5% of the Northern Cape population is between 15 and 34 years old, which is the highest age distribution, followed by 29.2% of those aged 35–64 years, while only 6.6% comprised those aged 65 years and older. Similarly, this pattern is also seen across all districts in the province. The district profile shows that the highest proportions of persons aged 15–34 years were recorded in Pixley Ka Seme, ZF Mgcawu and John Taolo Gaetsewe districts. The figures for these three districts were also above the provincial average of 36.5%. The proportion of persons aged 65 years and older was higher in Namakwa (9.5%) and Frances Baard (8.2%).

The Northern Cape offers unique tourism opportunities including wildlife conservation destinations, natural features, historic sites, festivals, cultural sites, star gazing, adventure tourism, agricultural tourism, ecotourism, game farms, and hunting areas, etc. The province is home to the Richtersveld Botanical and Landscape World Heritage Site, which comprises a United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Site under the World Heritage Convention. The Northern Cape is also home to two (2) Transfrontier National Parks, namely the Kgalagadi Transfrontier Park, and the Richtersveld /Ai-Ais Transfrontier Park, as well as five (5) national parks, and six (6) provincial reserves.

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

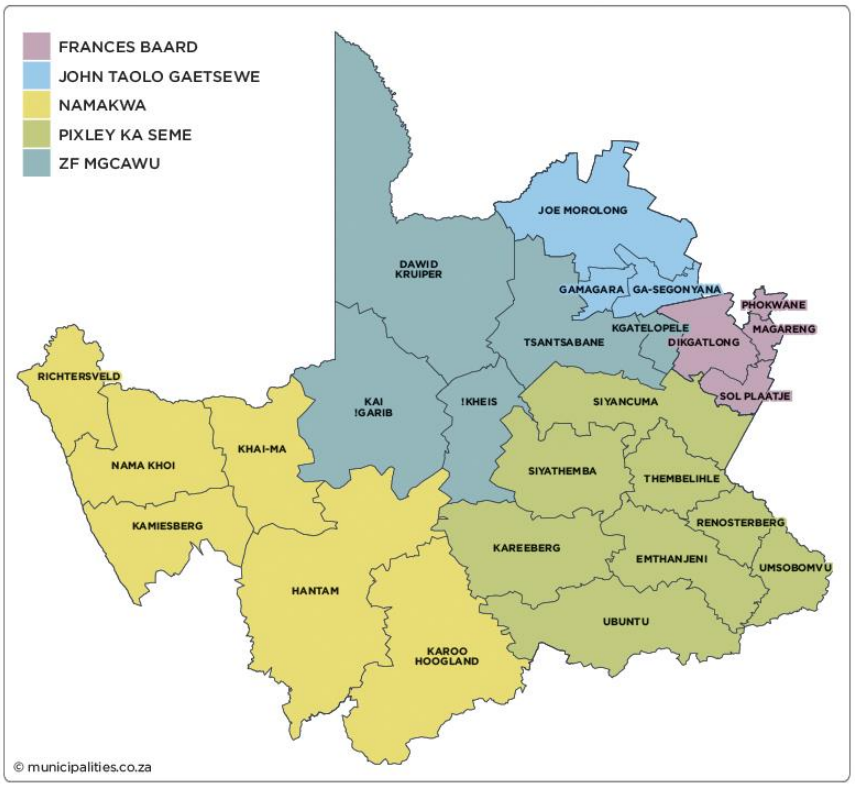

Figure 4-1: Map showing the district municipalities of the Northern Cape (Source www.municiaplities.co.za)

4.2. ZF Mgcawu District Municipality

The ZF Mgcawu District Municipality (ZFMDM) consists of five local Municipalities namely, Dawid Kruiper, Kai ! Garib, Tsantsabane, ! Kheis and Kgatelopeleand covers an area of more than 100 000km² (almost 30 % of the Northern Cape Province). Of this total, 65% (65 000km²) is made up of the Kalahari Desert, Kgalagadi Transfrntier Park and the former Bushman Land. The largest town in the region is Upington, which also functions as the district municipal capital. Following the municipal elections in 2011, Riemvasmaak (Sending and Vredesvallei) were included within the KGLM. The Riemvasmaak Community is located approximately 60 km west of Kakamas. Based on the Household Community Survey data the population of the ZFMDM was 252 692 in 2016 compared to 236 763 in 2011, The DLKM and KGLM are home to approximately 70% of the ZFMDM population.

The ZFMDM accounts for approximately 30% of the Northern Cape economy. Agriculture plays a role in the local economy and is strongly linked to irrigation along the Gariep River (Orange River). The Orange River is perennial with a flow which varies between 50 and 1800 cubic meter per second (cum/s) depending on the season. The flow of the river is largely controlled by the releases of the dams upstream, like the Bloemhof,Gariep and van der Kloof dams. Agriculture in the ZFMDM is dominated by grape production for table grapes, which is mainly exported to Europe, as well as livestock and game farming.
Tourism represents one of the most important economic sectors in the Northern Cape as well as within the ZFMDM. In this regards the ZFMDM IDP indicates that tourism is the fastest growing component of the

economy. Key tourism assets include the world renowned Kgalagadi Transfrontei Park, Augrabies National Park and Pitskop Nature Reserve near Upington.

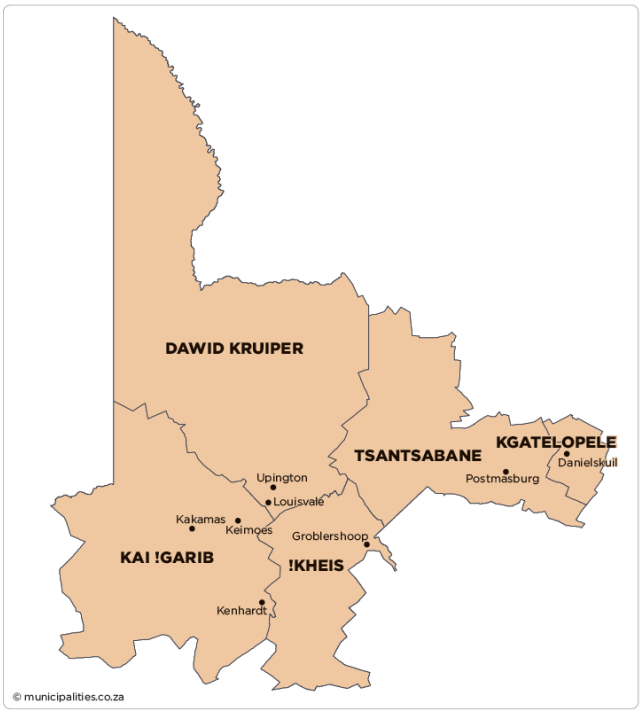

Figure 4-2: Map showing the local municipalities of the ZF Mgcawu DM (Source: www,municiaplities.co.za)

4.3. Kai !Garib LM

The Kai !Garib LM is located in the south-western extent of the ZF Mgcawu DM. It is bordered by the Dawid Kruiper LM to the north, and north-east, the! Kheis LM to the east, the Hantam LM and Khai-Ma LM of the Namakwa DM to the south and south-west respectively, and Namibia to the north-west. The Kai !Garib LM is approximately 26 377km² in extent, and is the second-largest LM in the ZF Mgcawu DM, accounting for approximately one quarter (25.7%) of the DM's geographical area. The Kai !Garib LM is characterised by its unique landscape, which includes the Kalahari Desert on one side, and the Orange River on the other.

The Kai !Garib LM is characterised by three main towns, namely: Kakamas, Keimoes, and Kenhardt. The main economic sectors within the LM include agriculture (51.8%), community and government services (15.9%), wholesale and retail trade (11.3%), finance services (7.6%), and manufacturing (5.1%)

The Orange River is the life vein of the area and forms the largest economic base of this area with large tracts of cultivated land occurring on both sides of the river. The Orange River is the biggest driving force behind the area, causing economic activities to have expanded greatly along the river over the last two decades. The main towns of Kakamas and Keimoes are situated in the midst of an intensive irrigation farming community stretching from Groblershoop in the east to Blouputs in the west. Farming includes crops like vineyards, pecan-nut, and citrus plantations. Local areas where these types of farming flourish include: Blouputs, Eksteenskuil, Riemvasmaak and Cannon Island, while Kenhardt is known for livestock farming.

4.4. Demographic and Economic Context

In this section the demographic and economic context of the respective Province, District and Local municipalities will be discussed. The information below was obtained from the Northern Cape Provincial Development and Resource Management Plan/Provincial Spatial Framework (PSDF) of 2021, the ZF Mgcawu District Municipality Draft Integrated Development Plan 2018/2019 for 2017-2022, and the Kai ! Garib Local Municipality Draft Integrated Development Plan of 2018/2019.

4.5. Project Site

Pofadder Wind Energy Facility 2 is proposed on the following farm portions Ganna-Poort 202; farm De Neus 149; farm Lovedale 201; and portion 3 of the Farm Sand Gat 150 within Ward 4 and 10 of Kai !Garib Local Municipality and the Z F Mgcawu District Municipality in the Northern Cape Province. The closest major town to the project site is Pofadder, which is 20km southeast of the project site.

The town of Pofadder is very small town situated on the N14 national road from Upington to Springbok, it also lies within 50km from the Namibian border. This town is therefore more considered as a stop-over town for travelling tourists. The proposed Pofadder WEF 2 is in an area prone to strong and continuous winds, which is a good motivation for the placement of the Pofadder WEF 2.

4.6. Baseline Description of the Social Environment

Table 4.2 provides a baseline summary of the social profile of the Kai !Garib Local Municipality within which Pofadder Wind Energy Facility 2 is proposed. To provide context against which the Local Municipality's social profile can be compared, the social profiles of the ZF Mgcawu District, Northern Cape Province, and South Africa as a whole have also been provided where applicable. The data presented in this section have been derived from the 2011 Census, the Northern Cape Provincial Spatial Development Framework (PSDF), and the ZF Mgcawu DM and Kai !Garib LM IDPs.

Table 4.2: Baseline description of the social characteristics of the Pofadder Wind Energy Facility 2

Location characteristics
» The project is proposed within the Northern Cape Province, located in the North western corner of South Africa. » The project is proposed within the Kai !Garib LM of the ZF Mgcawu DM. » The Kai !Garib LM is approximately 26 377km² in extent, equivalent to approximately one quarter (25.7%) of the ZF Mgcawu DM.
Population characteristics
» Between 2001 and 2011 the Kai !Garib LM experienced a population growth rate of 1.2% per year. » The Kai !Garib LM is male dominated, with males comprising approximately 52.0% of the LM population. The ZF Mgcawu DM is also male dominated, with males comprising approximately 50.8% of the DM population. » Coloureds comprise the predominant population group within the Kai !Garib LM and ZF Mgcawu DM. » The Kai !Garib LM, ZF Mgcawu DM, and Northern Cape provincial, and South African national population age structures are all youth dominated. A considerable proportion of the respective populations therefore comprise individuals within the economically active population between the ages of 15 and 64 years of age.
Economic, education and household characteristics
» The Kai !Garib LM has a dependency ratio of 29.5, which is lower than the ZF Mgcawu DM (33.6), Northern Cape Province (35.8), and South Africa (34.5). » Education levels within the Kai !Garib LM are low with approximately 70.6% of the population aged 20 years and older who have received some form of schooling not having completed Grade 12 / Matric. This implies that much of the population can be expected to have a relatively low-skill level and would either require employment in low-skill sectors, or skills development opportunities in order to improve the skills level of the area.

- The unemployment rate of the Kai !Garib LM (6.7%) is lower than that of the ZF Mgcawu DM (11.3%), and the percentage of economically inactive individuals within the Kai !Garib LM (31.3%) is also lower than that of the ZF Mgcawu DM (38.3%).
- Household income levels within the Kai !Garib LM are very low, with approximately 84% falling within the poverty level (i.e. R0 – R38 400 per annum). The area can therefore be expected to have a high poverty level with associated social consequences such as not being able to pay for basic needs and services and poor living conditions.
- The main economic sectors within the Kai !Garib LM include agriculture (51.8%), community and government services (15.9%), wholesale and retail trade (11.3%), finance services (7.6%), and manufacturing (5.1%).
- As of 2011 there were a total of 22 260 households within the Kai !Garib LM. This is equivalent to 32.9% of the total number of households within the ZF Mgcawu DM (67 468), and 7.1% of the total number of households within Northern Cape Province (313 402).
- The majority of households (56.3%) within the Kai !Garib LM comprise formal brick dwellings, while 1.7% comprise traditional dwellings, 4.3% comprise informal dwellings not in a backyard, and 0.4% comprise informal dwellings in a back yard.

Services

- The Kai !Garib LM is poorly serviced in terms of public sector health facilities with one hospital located in Kakamas, and a number of clinics, satellite clinics, mobile facilities and community health centres throughout the LM.
- The majority of households within the Kai !Garib LM are adequately serviced with regards to water, sanitation, electricity, and refuse removal, however there is significant room for improvement in terms of service delivery within the LM, with the LM often exhibiting lower levels of service provision than that of the ZF Mgcawu DM, Northern Cape Province, and South Africa as a whole.

5. KEY CONSIDERATIONS/IMPACTS FOR WIND ENERGY FACILITIES

This section of the social impact report provides a brief overview of the different components associated with a wind turbine generator. The main components included in a wind turbine according to Manwell *et al*, (2002:283) are, the rotor, the drive train, the main frame, the yaw system; and the tower.

Wind turbines use the energy from the wind to generate electricity. A wind turbine consists of four large main components (**Figure 1**):

» The rotor
» The nacelle
» The tower
» The foundation unit

The mechanical power generated by the rotation of the blades is transmitted to the generator within the nacelle via a gearbox and drive train. The wind turns the blades, which in turn spin a shaft which connects to a generator and generates electricity. The use of wind for electricity generation is essentially a non-consumptive use of a natural resource and produces zero greenhouse gas emissions.

Turbines can operate at varying speeds. The amount of energy a turbine can harness depends on both the wind velocity and the length of the rotor blades. The turbines being considered for use at the six wind farms will range between 5.6MW - 9MW in capacity.

Various wind turbine designs and layouts on the project sites are being considered by the project developer in order to maximise the generating capacity of the sites while minimising environmental impacts. The final facility layouts, turbine capacities and models will be dependent on what is deemed suitable for the project sites in relation to, among other things, further studies of the wind regime, terrain, and environmental constraints and social sensitivities.

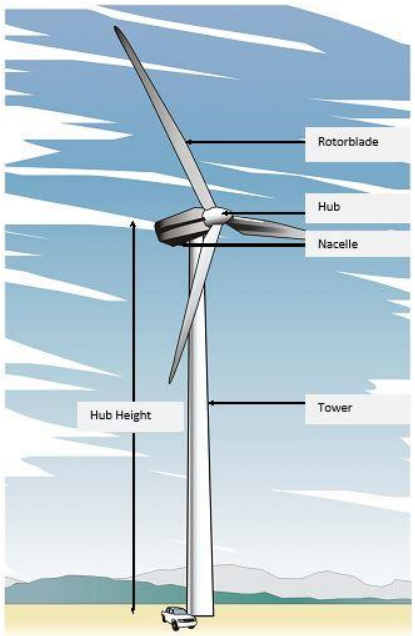

Figure 1: Main components of a wind turbine

The length of the construction period for each of the wind farms is estimated to be approximately 30 months. A turbine is designed to operate continuously, with low maintenance for 20 to 25 years.

5.1. Identification of potential impacts

According to Vanclay's list of social impact variable there are various social impact variables that need to be considered across the project and need to be clustered under the flowing main categories:

1. Health and social well-being
2. Quality of the living environment (liveability)
3. Economic
4. Cultural

According to Hamed & Alshare, 2021 it is important to note the multi – and interdisciplinary nature towards a better understanding and management of the environmental effects of certain renewable energy installations.

5.1.1. Health and social wellbeing

The health and social wellbeing impacts related to the project include air quality, noise, shadow flicker, blade glint, electromagnetic field and RF interference, increase in crime, increased risk of HIV infections, influx of construction workers and hazard exposure. Each of these impacts are addressed separately below.

Regarding **air quality**, construction activities are likely to result in the generation of dust and exhaust emissions. Although air quality is subject to a separate specialist study, it should be noted as a factor that may have health consequences.

With the impacts on **noise,** the operation of the wind turbines has the potential to result in the generation of noise levels that could have nuisance and health impacts for surrounding communities (Michaud, et al., 2016).

Potential impacts from **shadow flicker** which could be experienced during the operation phase could result in the blades momentarily casting shadows that create a strobe effect which can be seen as annoying and regarded a health hazard by some people. Whilst **blade glint** referring to light reflected off the turbine blades that may result in a flickering sensation which can affect residents in their homes and distract motorists travelling along nearby roads such as the N14.

Electromagnetic fields (EMF's) and radio frequency interference (RFI) have been associated with grid connection power lines and wind turbine generators; although the exact extent of this risk remains unclear according to Krogh & Harrington, 2019.

The issues around **crime** will mostly form part of the construction phase if at all. It is often opportunistic crime, stock theft, abuse of alcohol and relationship related crime that is associated with construction activities. Considering the relative remoteness of the project it is unlikely that the project will lead to any significant increase in crime levels in the area, however, it would be pertinent for the developers to ensure that processes are put in place through which any suspected criminal activities associated with the project can be easily communicated and swiftly addressed.

The increased risk of **HIV infections** is likely to be at its highest during the construction phase of the project as the construction workforce increases and material and equipment is delivered to the site and it is likely to subside during the operational phase. It is important that this issue be given serious attention and that the mitigation measures are implemented, and that the situation is closely monitored throughout the construction and operational phases of the project.

The **influx of workers** has a possibility of leading to the disruption of social networks with the formation of temporary relationships and an increase in pregnancy which may place pressures on local family units. The arrival of construction workers may result in a formation of a subculture that could manifest in antisocial behaviour, which conflicts with xpectations of local communities. This could be as a result of the community accustomed to be quiet, rural environment, becoming dissatisfied with the neighbourhood.

Aylin, Colak & Dagdeviren, 2018, reported that the highest risks associated with wind energy facilities occur during transportation and construction. Over the construction period, the use of heavy equipment and vehicles and an increase in vehicle traffic along the N14 and within the vicinity of all construction sites will result in increased risk to the personal safety of people and animals. Excavation work and trenches also pose a hazard to the safety of people, particularly children and animals.

5.1.2. Quality of living environment

There are three components that need to be observed as part of the investigation for the quality of life:

1. Disruption of daily living patterns
2. Disruptions to social and community infrastructure
3. Transformation of the sense of place

If there are any **disruptions to daily living patterns**, these are minimal and are likely to take place during the construction phase. This impact will be associated with the site and the main access roads. With **disruption to social and community infrastructure** impacts the are most likely to occur during the construction phase. In addition, considering the cumulative basis, the activities taking place in, and being planned for the area, it is unlikely there would be a significant impact in this regard. The wind energy facility will be highly visible and will result in the **landscape being transformed** from that of a rural setting to what would be considered by some to have more of an industrial aura. The visual environment and noise are both important elements through which a sense of place is constructed.

5.1.3. Economic

The economic impacts are related to the following:

1. Job creation and skills development
2. Socio-economic stimulation

The development of this project will **create both direct and indirect jobs** which will have a positive economic benefit within the region. Job opportunities will be available and many of the low and semi-skilled employment opportunities will probably be available to residents in the area. Many of the beneficiaries are likely to be historically disadvantaged members of the community and the project will provide opportunities to develop skills for the local people. Even more the project will stimulate the local economy, which is likely to be most significant at a cumulative level. The **socio-economic stimulation** will contribute

in the form of disposable salaries and the purchases of services and supplies from the local communities in and around the towns of Pofadder. The developer would need to ensure that there is a corporate social responsibility plan in place, the intention is ensure that it falls in line with the Renewable Energy Independent Power Producer Procurement (REIPPP) BID guidelines or to put an equivalent plan in place.

The **socio-economic values** associated with the proposed Pofadder WEF 2 are based on review of previously similar projects in the proposed area as well as similar projects in different areas of the country that have been conducted. The construction phase for similar WEF's like the Pofadder WEF 2 will extend over a period of 24 to 36 months (2-3 years), where the duration of the construction will be 24-30 months. The total estimated wage bill for the construction phase is ± 54 million, where total capital expenditure estimate for construction phase is ±2.4 billion. The construction phase will employ 300-400 employees. The number of employment opportunities in terms of low skilled, semi-skilled and skilled is Low skilled: ± 165 - 220 (± 55%); Semi-skilled: ± 90 - 120 (± 30%) and Skilled: ± 45 - 60 (± 15%).

The typical lifespan of WEFs is 20 to 25 years, during the operational phase there will be a significant decrease in employment opportunities, hence the potential socio-economic benefits will be limited. The total number of people employed in the operational phase is ± 40 – 50. Typical employees that might be required include Technicians, electricians, engineers, IT specialists, environmental specialists, health and safety managers, and administrators (skilled); drivers and equipment operators (semi-skilled); construction workers and security staff (low-skilled). It should be noted that the majority of the semi- and low-skilled employment opportunities are likely to be available to the local communities of Pofadder and Kakamas, which will present a positive social benefit to these communities due to the low availability of employment opportunities in these areas.

5.1.4. Cultural

At a social level, it is likely that any cultural impact would be associated with sensitive archaeological and/or heritage sites that may be found, In this regards, recommendation:

> *"The main heritage concerns for this project are archaeological sites and the cultural landscape. Some archaeological sites are within the current layout but none of these are highly significant sites and none require in situ conservation. It is, of course, always best to avoid any sites that have some research value and hence cultural significance, but excavation within a commercial mitigation context would be completely acceptable for all of the sites concerned here."*

6. APPROACH TO ASSESSING POTENTIAL IMPACTS

6.1. Definition of social impacts

Social change is recognised as a natural and on-going process; however, it is important to recognize and understand that projects have the potential to influence and alter both the rate and direction of social change. It's important to recognize and understand that the development and implementation of projects can result in specific social changes (both positive and negative) as opposed to merely being aware that development *per se* will be accompanied by social change**.**

Social impacts can be defined as the consequences to human populations of any public or private actions (these include policies, programs, plans and or projects) that alter the way in which people live, work, play relate to one another, organise to meet their needs and generally live and cope as members of society, These impacts are felt at various levels, including, individual, family or household, community and organisation or society level (Vanclay, 2002).

6.2. Categories of social impacts

- **People's way of life –** how people live, work, play and relate to other people in a day-to-day basis
- **Their culture** – shared beliefs, customs, values, and language or dialect
- **Their community** – its cohesion, stability, character, services and facilities;
- **Their political system** – extent to which people are able to participate in decisions affecting their lives, the level of democratization and the resources available
- **Their environment** – quality of the natural environment in which people live, including the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety and their access and control over resources
- **Their health and wellbeing** – health is defined as a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of diseases or infirmity;
- **Their personal and property rights** – particularly in cases where people are economically affected, or experience personal disadvantage, which may include a violation of their civil liberties
- **Their fears and aspirations** – fears and perceptions about their safety and well being and the future of their community, and their hopes for their future and the future of their children and the community

The identification and assessment of social impacts will be guided by the Guidelines for specialist SIA input into EIAs adopted by DEA&DP in the Western Cape in 2007. The Guidelines are based on accepted international best practice guidelines, including the Guidelines and Principles for Social Impact Assessment (Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment, 1994). The guidelines have also been endorsed by the national Department of Forestry, Fisheries and the Environment.

The public participation consultation process will be undertaken during the EIA phase of the project. The identification and assessment of social impacts will be guided by the Guidelines for specialist SIA input into EIAs adopted by DEA&DP in the Western Cape. These guidelines are based on international best practice for SIA's. This will include:

- Identification of key interested and affected parties, specifically landowners.
- Meetings and interview with interested and affected parties.

- Identification and assessment of key social issues based on feedback from key interested and affected parties
- Recommendations regarding mitigation/optimisation and management measures to be implemented.

7. ASSESSMENT OF POTENTIAL SOCIAL IMPACTS

This section provides an overview of the potential social impacts that have been identified, which may be associated with the development of Pofadder WEF 2. Potential impacts have been identified based on the current understanding of the project and the social environment within which it is proposed.

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

7.1. Construction Phase Impacts associated with Pofadder Wind Energy Facility 2

Most social impacts associated with the project are anticipated to occur during the construction phase of the development and are typical of the type of social impacts generally associated with construction activities. These impacts will be temporary and short-term (~48 months) but could have long-term effects on the surrounding social environment if not planned or managed appropriately. It is therefore necessary that the detailed design phase be conducted in such a manner so as not to result in permanent social impacts associated with the ill-placement of project components or associated infrastructure or result in the mismanagement of the construction phase activities.

The positive and negative social impacts identified at this stage and will be assessed for the construction phase includes:

- Air quality
- Noise
- Increase in crime
- Increased risk of HIV infections
- Influx of construction workers
- Hazard exposure
- Disruption of daily living patterns
- Disruptions to social and community infrastructure
- Job creation and skills development
- Socio-economic stimulation

7.2. Operational Phase Impacts associated with Pofadder Wind Energy Facility 2

The impacts below are associated with the operational phase of the project, includes:

- Noise (associated with the energy facility and not the grid infrastructure)
- Shadow flicker (associated with the energy facility and not the grid infrastructure)
- Blade glint (associated with the energy facility and not the grid infrastructure)
- Electromagnetic field and RF interference
- Hazard exposure
- Transformation of the sense of place
- Job creation and skills development

7.3. No Go Option

The option of not having this project go ahead means that the social environment is not affected as the status quo remains. On a negative basis, it also means that all positive aspects associated with the project would not materialise. This would mean that there is no job creation, no revenue streams into the local economy and no opportunity to enhance the National Grid with renewable source of energy,

7.4. Decommissioning

It is estimated that the project will have a lifespan of approximately 25 years and that there is a possibility that after this period the facility could be replace with more up-to-date technology, extending the project lifespan even further. Considering this period, and that between commissioning and decommissioning a great deal of social change is certain to occur, it will be meaningless to assess the social impact of decommissioning as the social variables that are likely to be in play at the point of decommissioning are rather uncertain. Loss of jobs would be likely to result in permanent consequences. It is important that mitigation measures are taken into consideration with ensuring that retracement package is in place. Ensure that staff are trained to provide them with saleable skills within the job market and lastly ensuring that the site is cleared responsibly and left in safe condition.

Table 7-1: Construction: Rating of Impacts & Mitigation/ Optimisation Measures

ENVIRONMENTAL PARAMETER	ISSUE / IMPACT / ENVIRONMENTAL EFFECT/ NATURE	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION									RECOMMENDEDMITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCEAFTER MITIGATION								
		E	P	R	L	D	I / M	TOTAL	STATUS (+ OR -)	S		E	P	R	L	D	I / M	TOTAL	STATUS (+ OR -)	S
Construction Phase/Decommissioning Phase																				
	Noise	1	1	1	1	3	1	6	-	Low	Refer to mitigation measures suggested by noise specialist	1	1	1	1	1	1	6	-	Low
	Increased in crime	2	2	3	2	2	2	18	-	Low	Ensure that construction workers are clearly identifiable. All workers should carry identification cards and wear identifiable clothing. Fence off the construction sites and control access to these sites. Appoint an independent security company to monitor the site; Encourage local people to report any suspicious activity associated with the construction sites through the establishment of a community liaison forum. Prevent loitering within the vicinity of the construction camp as well as construction sites	2	2	3	2	2	2	18	-	Low
	Increased risk of HIV infections	3	4	3	3	3	3	48	-	High	Ensure that an onsite HIV Infections Policy is in place and that construction workers have easy access to condoms. Expose workers to a health and HIV/AIDS awareness educational program. Extend the HIV/AIDS program into the community with a specific focus on schools and youth clubs.	3	3	2	2	3	2	16	-	Medium
	Influx of construction workers	1	4	1	1	1	2	16	-	Low	Communicate the limitation of opportunities created by the project through Community Leaders and Ward Councillors. Draw up a recruitment policy in consultation with the Community Leaders and Ward Councillors of the area and ensure compliance with this policy.	1	4	1	1	1	2	16	-	Low
	Hazard exposure	2	4	2	2	1	2	22	-	Low	Ensure that all construction equipment and vehicles are properly maintained at all times. Ensure that operators and drivers are properly trained and make them aware, through regular toolbox talks, of any risk they may pose to the community. Place specific emphasis on the vulnerable sector of the population such as children and the elderly. Ensure that fires lit by construction staff are only ignited in designated areas and that the appropriate safety precautions, such as not lighting fires in strong winds and completely extinguishing fires before leaving them unattended, are strictly adhered to. Make staff aware of the dangers of fire during regular toolbox talks.	2	2	2	2	1	2	18	-	Low
Quality of the living environment	Disruption of daily living patterns	2	4	2	2	1	2	22	-	Low	Ensure that, at all times, people have access to their properties as well as to social facilities	2	3	2	2	1	2	20	-	Low
	Disruptions to social and community infrastructure	2	4	2	2	1	2	22	-	Low	Regularly monitor the effect that construction is having on infrastructure and immediately report any damage to infrastructure to the appropriate authority. Ensure that where communities' access is obstructed that this access is restored to an acceptable state	2	3	2	2	1	2	20	-	Low

Economic	Job creation and skills development	2	4	2	3	1	2	24	+	Medium	Wherever feasible, local residents should be recruited to fill semi and unskilled jobs. Women should be given equal employment opportunities and encouraged to apply for positions. A skills transfer plan should be put in place at an early stage and workers should be given the opportunity to develop skills which they can use to secure jobs elsewhere postconstruction.	2	4	2	3	1	2	24	+	Medium
	Socio-economic stimulation	3	4	2	3	1	2	26	+	Medium	A procurement policy promoting the use of local business should, where possible, be put in place to be applied throughout the construction phase.	3	4	2	3	1	2	26	+	Medium

7-2: Operational: Rating of Impacts & Mitigation/ Optimisation Measures

ENVIRONMENTAL PARAMETER	ISSUE / IMPACT / ENVIRONMENTAL EFFECT/ NATURE	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION									RECOMMENDEDMITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCEAFTER MITIGATION								
		E	P	R	L	D	I / M	TOTAL	STATUS (+ OR -)	S		E	P	R	L	D	I / M	TOTAL	STATUS (+ OR -)	S
Operation Phase																				
	Shadow flicker WEF only	1	2	1	2	3	2	18	-	Low	Refer to mitigation measures suggested by visual specialist	1	2	1	2	3	2	18	-	Low
	Blade glint WEF only	2	2	1	2	3	2	20	-	Low	Ensure that construction workers are clearly identifiable. All workers should carry identification cards and wear identifiable clothing. Fence off the construction sites and control access to these sites. Appoint an independent security company to monitor the site; Encourage local people to report any suspicious activity associated with the construction sites through the establishment of a community liaison forum. Prevent loitering within the vicinity of the construction camp as well as construction sites	2	2	1	2	1	2	16	-	Low
	Electromagnetic field and RF interference	2	2	1	2	2	2	18	-	Low	Wind turbine mechanisms will be elevated and the risk of EMFs will be minimal. Notwithstanding this, it would be pertinent to regularly monitor the levels of EMFs emitted by the turbines and, if necessary, make the appropriate adjustments to ensure that these levels remain within acceptable parameters. Ensure that power lines are not routed in close proximity (with 300 meters) of residential areas to limit the effect off EMFs. Consult with the appropriate telecommunication authorities to ensure that the telecommunication installations identified within the vicinity of the project are not comprised through RFI	2	2	1	2	2	2	18	-	Low
	Hazard exposre	1	2	2	2	3	2	22	-	Low	Install early detection techniques to avoid or reduce structural damage Install lighting protection systems Install five prevention and control measures	1	2	2	2	3	2	22	-	Low
Quality of Living environment	Transformation of sense of place	3	4	3	3	3	3	48	-	High	Apply the mitigation measures suggested in the Visual Impact Assessment Report. Communicate the benefits associated with renewable energy to the broader community. Ensure that all affected landowners and tourist associations are regularly consulted. A Grievance Mechanism should be put in place and all grievances should be dealt with transparently. The mitigation measures recommended in the Heritage and Palaeontology Impact Assessment should be followed	3	4	3	3	3	3	48	-	High
Economic	Job creation and skills development	2	4	2	2	3	2	26	+	Medium	Implement a training and skills development programme for locals. Work closely with the appropriate municipal structures regarding establishing a social responsibility programme.	2	4	2	2	3	2	26	+	Medium
	Socio-economic stimulation	4	4	2	3	3	2	32	+	Medium	Ensure that the procurement policy supports local enterprises.	4	4	2	3	3	2	32	+	Medium

										Establish a social responsibility programme either in line with the REIPPP BID guidelines or equivalent. Work closely with the appropriate municipal structures regarding establishing a social responsibility programme. Ensure that any trusts or funds are strictly managed in respect of outcomes and funds.									

7-3: No Go: Rating of Impacts & Mitigation/Optimisation Measures

ENVIRONMENTAL PARAMETER	ISSUE / IMPACT / ENVIRONMENTAL EFFECT/ NATURE	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION									RECOMMENDEDMITIGATION MEASURES
		E	P	R	L	D	I / M	TOTAL	STATUS (+ OR -)	S	
The project does not proceed	The status quo remains in place No positive or negative impacts occur	4	4	2	4	3	3	51	-	High	The only mitigation measure would be to proceed with the project which would revise the negative impact to positive

8. KEY FINDINGS AND RECOMMENDATION

8.1. Key findings and Recommendations

The social impacts identified (including all positive and negative impacts) will be either of a low or medium significance. No negative impacts with a high significance rating have been identified to be associated with the development of the Pofadder WEF 2. All negative social impacts are within acceptable limits with no impacts considered as unacceptable from a social perspective. The recommendations proposed for the project are appropriate and suitable for the mitigation of the negative impacts and the enhancement of the positive impacts.

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

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

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08 February 2022

Attention: Nondumiso Bulunga
Savannah Environmental Pty Ltd
5 Woodlands Drive Office Park
Cnr Woodlands Drive and Western Service Road
Woodmead

Re: Peer review of the Socio-economic Impact Assessment Scoping Report: Pofadder Wind Energy Facility 1, Located Near Pofadder, Northern Cape Province

Having reviewed the above report I find that it provides a good description of the project and the social environment within which the project will unfold. It also provides a good indication of the social impacts that are likely to arise as a result of the proposed project. The review was concluded on 08 February 2022 and the following comments are made:

1. The terms of reference are acceptable.
2. The methodology is clearly explained and acceptable.
3. The findings are based on acceptable evidence.
4. The recommendations are appropriate.
5. The reference literature is appropriate.
6. No site-inspection was carried out as part of this peer review.
7. The report is well-written and easy to understand.
8. No shortcomings have been identified.

DECLARATION OF INDEPENDENCE

I, Neville Bews, as authorised representative of Dr Neville Bews & Associates hereby confirm my independence as a specialist and declare that neither I nor Dr Neville Bews & Associates have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which Dr Neville Bews & Associates was appointed as social impact assessment specialists in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), other than fair remuneration for work performed. This declaration is specifically in connection with the review of the Socio-economic Impact Assessment Report: Pofadder Wind Energy Facility 1, located near Pofadder, Northern Cape Province.

Signed: 

Neville Bews Date: 08 February 2022

SOCIAL impact assessors

Scoping Report, Proposed Pofadder Wind Energy Facility

Appendix 6: Specialist reports	Section	Comment
A specialist report prepared in terms of these Regulations must contain-		
(a) details of- (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae;	Section 1.2 page 4	
(b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	Specialist Declaration of Interest, page ii	
(c) an indication of the scope of, and the purpose for which, the report was prepared;	Section 1.2 page 6	
cA) An indication of the quality and age of base data used for the specialist report.	Section 2.2.2 page 7	
cB) A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change.	Section 5 pages 24-27	At scoping report level
(d) the date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Not applicable	
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process;	Section 2.2 pages 7-8	
(f) the specific identified sensitivity of the site related to the activity and its associated structures and infrastructure;	Sections 4 & 5 pages 19-27	At scoping report level
(g) an identification of any areas to be avoided, including buffers;	None = N/A	
(h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	No	At scoping report level
(i) a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 2.4 page 13	
(j) a description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives on the environment;	Sections 5 & 7 pages 24-27 & 30-31	
(k) any mitigation measures for inclusion in the EMPr;	Appendix A	
(l) any conditions for inclusion in the environmental authorisation;	Section 5 & 6 pages 27-47	
(m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	No	At scoping report level
(n) a reasoned opinion- (i) as to whether the proposed activity or portions thereof should be authorised; and (ii)if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Sections & pages 30-31	At scoping report level
(o) a description of any consultation process that was undertaken during the course of preparing the specialist report;	No	Undertaken under state of emergence Covid-19 and at scoping report level
(p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto	Not applicable	
(q) any other information requested by the competent authority.	Not applicable	
2. Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	Not applicable	

Reviewer: Neville Bews

Date: 08 February, 2022