Appendix G.6

SOCIAL SCOPING REPORT

Phefumula Emoyeni One

PHEFUMULA EMOYENI ONE, UP TO 400KV GRID CONNECTION

Social Baseline – Scoping Report

JUNE 2024

CONFIDENTIAL

Phefumula Emoyeni One

PHEFUMULA EMOYENI ONE, UP TO 400KV GRID CONNECTION

Social Baseline – Scoping Report

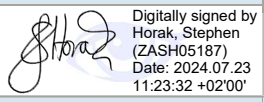
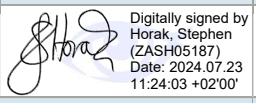
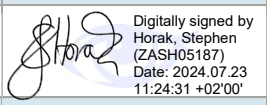
Scoping Report

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 41105236

DATE: JUNE 2024

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Social Baseline	Social Baseline	Social Baseline – Scoping Report Phefumula Emoyeni GRID	
Date	October 2023	February 2024	June 2024	
Prepared by	Yvette Mmanasoe	Yvette Mmanasoe	Yvette Mmanasoe	
Signature				
Checked by	Steve Horak	Steve Horak	Steve Horak	
Signature	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:21:44 +02'00'	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:23:32 +02'00'	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:23:47 +02'00'	
Authorised by	Steve Horak	Steve Horak	Steve Horak	
Signature	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:24:03 +02'00'	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:24:17 +02'00'	 Digitally signed by Horak, Stephen (ZASH05187) Date: 2024.07.23 11:24:31 +02'00'	
Project number	41105236	41105236	41105236	
Report number			03	
File reference	\\corp.pbwan.net\za\Central_Data\Projects\41100xxx\41105236 - Phefumela Emoyeni WEF\41 PA\01-Reports\03-Specialists\Social\Scoping\			

CONTENTS

TABLES

FIGURES

Acronyms

Abbreviation	Definition
BESS	Battery Energy Storage System
CBD	Central Business District
EGI	Electrical Grid Infrastructure
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESIA	Environmental and Social Impact Assessment
GVA	Gross Value Add
HV	High Voltage
IDP	Integrated Development Plans
IFC	International Finance Corporation
LED	Local Economic Development
MIDP	Msukwaligwa Integrated Development Plan
MLM	Msukaligwa Local Municipality
MSDF	Municipal Spatial Development Framework
PS	Performance Standards
SAPS	South African Police Services
SIA	Social Impact Assessment
STI	Sexually Transmitted Infections
WEF	Wind Energy Facility
WSP	WSP Africa Group Africa

1 INTRODUCTION

Phefumula Emoyeni One seeks to develop renewable energy projects as an integral part of Seriti's energy portfolio. Phefumula Emoyeni One (Pty) Ltd is applying for Environmental Authorisation (EA) to establish a grid connection on the outskirts of Ermelo, Mpumalanga Province, namely, the Phefumula Emoyeni Electrical Grid Infrastructure, referred to as the Project.

1.1 PROJECT BACKGROUND

Phefumula Emoyeni One (proponent) has commissioned WSP Group Africa (WSP) to apply for an Environmental Authorisation for the Project near Ermelo and Bethal in Mpumalanga Province.

1.2 PROJECT DESCRIPTION

The proposed Project consists of two sub-projects named the Phefumula Emoyeni One Electrical Grid Infrastructure (EGI) up to 400 kV Grid Connection and 400/132kV Main Transmission Substation (MTS) as well as 3 distribution substations/switching stations. The first distribution substation (Dx1) will be approximately 6.62 Ha in footprint, the second (Dx2) Ha will be 5.23 Ha in footprint, and (Dx3) approximately 6.13 Ha. Overhead lines (OHL) from each substation will cover a total of approximately 18.2 km. See **Figure 1-1**. A temporary construction compound will be established at the MTS. The compound will include site offices, a conservancy tank for ablutions, stores, a material laydown area, a generator, and fuel storage.

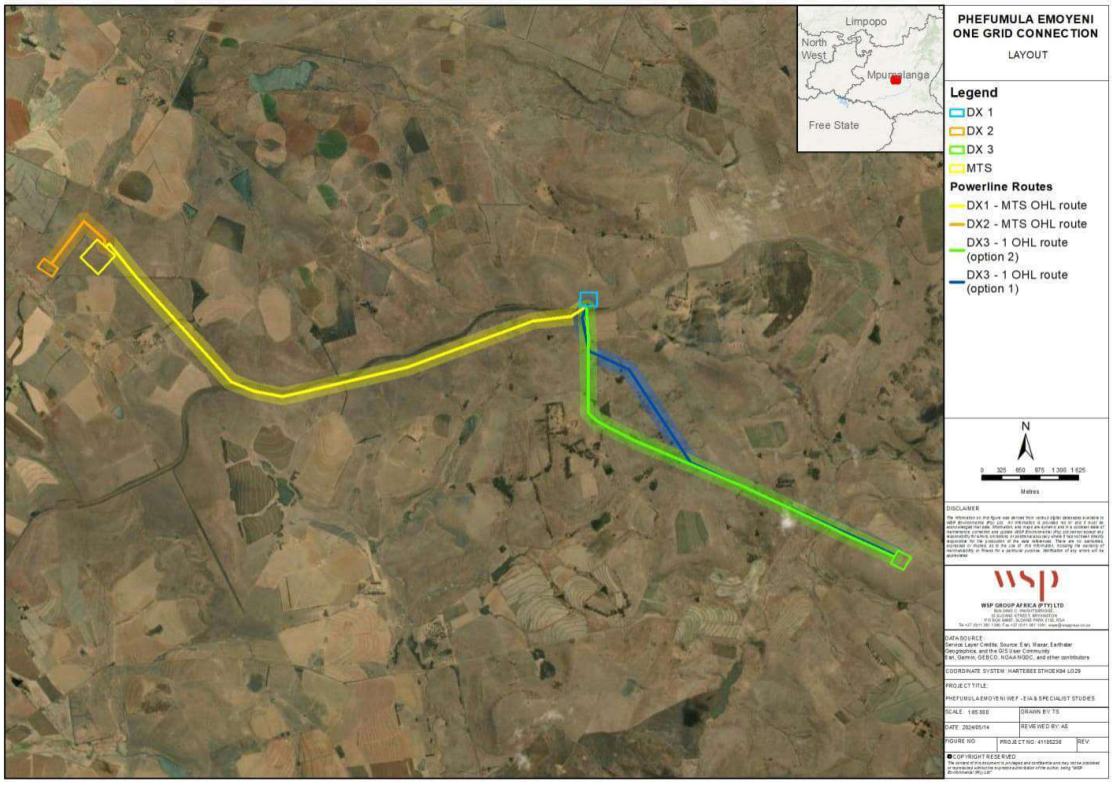


Figure 1-1 - Phefumula Emoyeni One Grid Connection Infrastructure Layout

1.3 PROJECT LOCATION

The grid will be located over 10 farm portions on a linear area extent of 18.5km. The Project located approximately 16km Northwest of Ermelo and 32km East of Bethal, located in Msukwaligwa Local Municipality, situated within the Gert Sibande District Municipality in Mpumalanga Province, see **Figure 1-2** for the locality map.

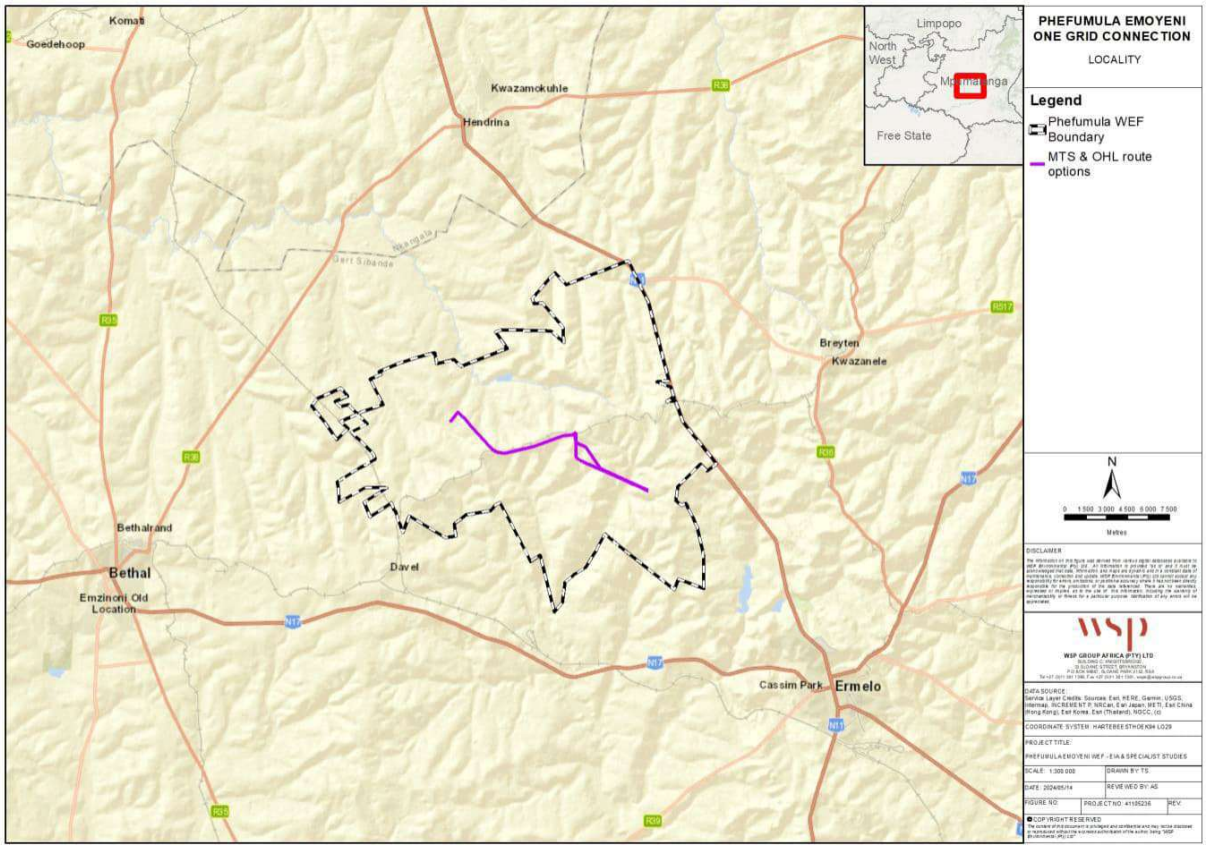


Figure 1-2 – Locality Map

2 SOCIAL IMPACT METHODOLOGY

The Social Impact Assessment (SIA) methodology will be integrated into the environmental assessment process. The SIA will combine primary qualitative data collection and secondary research. The SIA process will piggyback on the public participation events and interactions to source qualitative social information required for the impact assessment.

2.1 DATA COLLECTION

To understand the socio-economic baseline conditions of the project-affected areas and the socio-economic implications of the proposed Project to the receiving environment, WSP conducted secondary desktop data collection (desktop review) and will conduct primary data collection as part of the stakeholder consultation process.

DESKTOP REVIEW

WSP reviewed available documents to obtain information regarding the socio-economic conditions in the study area. The documents reviewed include the following:

- Recent Integrated Development Plans (IDPs) and Spatial Development Frameworks of the Msukaligwa Local Municipality and Gert Sibande Municipality.
- Socio-economic and demographic statistics sourced from Statistics South Africa, 2011, and the Statistics South Africa, Community Survey 2016
- Documents concerning the proposed Project, which included the project description document.
- Available maps and satellite imagery.

These documents were used to develop the social baseline for the Project.

PRIMARY DATA COLLECTION

Public participation will be a primary data collection tool. The comments and response reports from the Environmental Authorisation process will be essential input into the SIA. The social team will provide specific information requirements for inclusion in the public participation process. An online focus group meeting will be conducted when required, and the public meeting will be used to inform the SIA further.

2.2 SOCIO ECONOMIC ASSESSEMENT

The assessment will consider the social issues and aspects based on secondary and primary research. The results and recommendations of the various specialist studies will be used to identify potential impacts on sensitive social receptors. The alternatives will be assessed, probable social consequences will be forecast, and measures to avoid or mitigate adverse impacts and enhance any positive effects related to the Project will be provided. The mitigation measures will be included in the Environmental Management Programme (EMPr), which will be developed for the Project.

APPLICABLE POLICIES, LEGISLATION STANDARDS AND GUIDELINES

The social baseline study for this Project considers the relevant South African legislative requirements. **Table 2-1** summarises the appropriate guiding regulations, legislation, and best practices for the SIA.

Table 2-1 - Policy, Legislation, Guidelines or Standard

Policy, Legislation, Procedures, or Standard	Description	Relevance to Project
National Legislation		
Constitution of the Republic of South Africa, Act 108 of 1996, Chapter 2: Bill of Rights.	Bill of Rights, where every citizen is equal and has the right to human dignity, an environment that is not harmful, property, housing, healthcare, education, food, and water. Freedom of expression, association, movement, religion, belief, language, and culture.	The Project needs to consider human rights in every phase of the project life cycle and not infringe on any human rights.
National Environmental Management: Protected Areas Act, 57 of 2003	The Act protects and conserves ecologically viable areas representing South Africa's biological diversity, natural landscapes, and seascapes.	Phefumula Emoyeni One will undertake an ecological impact assessment to mitigate negative impacts and conserve the ecology within their operating area.
National Environmental Management Act, 107 of 1998 (NEMA).	The Act provides the legislative framework for integrating good environmental management practices into all development activities in South Africa. The National Environmental Management Act broadly states that the participation of all interested and affected parties in environmental governance must be promoted, achieving equitable and effective participation and ensuring the involvement of vulnerable and disadvantaged persons.	Phefumula Emoyeni One is applying for environmental authorisation in terms of this Act to practice good environmental management. A public participation process will form part of the environmental authorisation process.
National Water Act (Act 36 Of 1998).	The National Water Act ensures that projects and future interventions maintain water resources' capability to meet basic human needs. It seeks to support equitable water access and efficient, sustainable, and beneficial use. Future developments must reduce and prevent the pollution and degradation of water resources.	There are several water sources on and surrounding the proposed Project. Phefumula Emoyeni One will be applying for a Water Use License.
Promotion of Administrative Justice Act, Act 3 of 2000 (PAJA).	Under the provisions of the Public Administrative Justice Act, 3 of 2000 (PAJA), an administrative action also	Phefumula Emoyeni One will undertake a public participation process to ensure the affected public can access

Policy, Legislation, Procedures, or Standard	Description	Relevance to Project
	includes a decision made by an organ of the state or by a person or body exercising a public power or performing a public function that adversely affects the rights of any person. Therefore, the public has a right to a lawful, reasonable, and procedurally fair administrative process and to be given the reasons for administrative actions.	information regarding the proposed Project.
Protection of Personal Information Act, 4 of 2013 (POPI).	The Act promotes the protection of personal information and balances the right of privacy recognised by the Constitution with various needs and interests, like economic and social progress. POPI regulates how personal information may be processed and establishes voluntary and compulsory measures, including an Information Regulator. POPI is concerned with collecting, storing, using, and destroying personal information. Unless part of a regulatory process that requires the rightful notification of interested and affected parties or to protect the rights of third parties, personal information may be used only with stakeholders' expressed permission.	During the Public participation and stakeholder, the participant's information will not be published unless permitted by the participant.
Msukaligwa Local Municipality Integrated Development Plan 2022- 27 (MIDP).	The plan serves as a strategic plan document for the municipality. It details the municipality's short-term and long-term objectives and strategies aligned with the Provincial and National Development Plan.	Phefumula Emoyeni One will utilise the MIDP to identify the social profile of the municipality and align the project activities with the applicable municipal current and planned infrastructure and objectives.
Msukaligwa Spatial Development Framework 2019-2024 (Municipal Spatial Development Framework (MSDF),2019).	The MSDF is a required tool to address historically distorted, unviable, and unsustainable spatial patterns and challenges caused by apartheid planning.	Phefumula Emoyeni One will utilise MSDF to align the spatial planning of the municipality with its proposed activities.

3 SOCIAL BASELINE

The social baseline describes the social profile of the project-affected area based on desktop research. The regional, district and local context describes the geographical setting of the Project. The demography of the project-affected area is provided. The community health and safety forms part of the social baseline and describes the health and safety statistics within the municipality. The local governance arrangements are provided, as well as how the municipality is governed and its leadership structures.

3.1 REGIONAL CONTEXT

The proposed Project is in Mpumalanga Province, located in the Northeastern part of South Africa. Mpumalanga Province covers an area of 76 495km² and has a population of approximately 4 335 965. The capital city of Mpumalanga is Mbombela, and other major cities and towns include Emalahleni, Secunda, eMkhondo, Malelane, Middelburg, Barberton, and Ermelo which is the closest town to the proposed Project.

The province is divided into three district municipalities: Ehlanzeni, Nkangala Districts, and Gert Sibande, in which the proposed Project is located. These three districts are further subdivided into 17 Local Municipalities. The proposed development is situated in the Msukaligwa Local Municipality (MLM).

3.2 DISTRICT CONTEXT

Gert Sibande District Municipality is a Category C municipality in Mpumalanga Province. It is bordered by the Ehlanzeni and Nkangala District Municipalities to the north, KwaZulu-Natal and the Free State to the south, Swaziland to the east, and Gauteng to the west.

The district covers an area of 31 840km², making it the largest of the three districts in the province. It comprises seven local municipalities: Govan Mbeki, Chief Albert Luthuli, Dipaleseng, Mkhondo, Lekwa, Dr Pixley ka Isaka Seme and Msukaligwa. (Municipalities of South Africa, 2023).

3.3 LOCAL CONTEXT

Msukaligwa Local Municipality covers an area of 6 016 km². It is one of the seven local Municipalities within the Gert Sibande District Municipality. It has a population of 149,377 people. Msukwaligwa LM is the 3rd most populated municipality in the District of Gert Sibande.

The Msukaligwa Municipality is bounded by Govan Mbeki Municipality, Chief Albert Luthuli Local Municipality, Mkhondo Local Municipality and Lekwa Local Municipality. It is accessible through three National Roads and Provincial main roads, which are N2, N11, and N17, R33, R39, R65 and R542. **Figure 3-1** below depicts the local context.

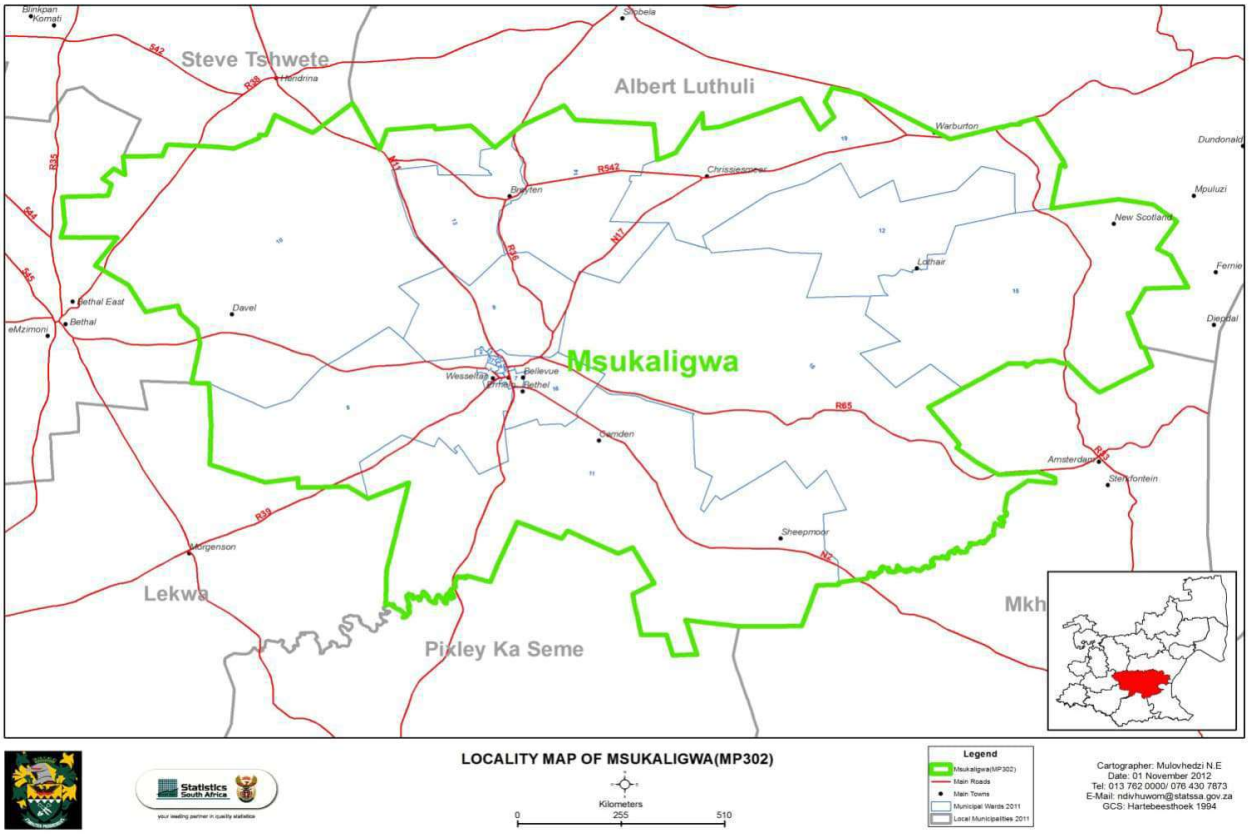


Figure 3-1 - Local Context

Msukaligwa Municipality comprises 19 Wards, with wards 1-9 and 17 clustered within Ermelo town and Wesselton Township (Msukaligwa Municipality, 2022).

3.4 DEMOGRAPHIC OVERVIEW

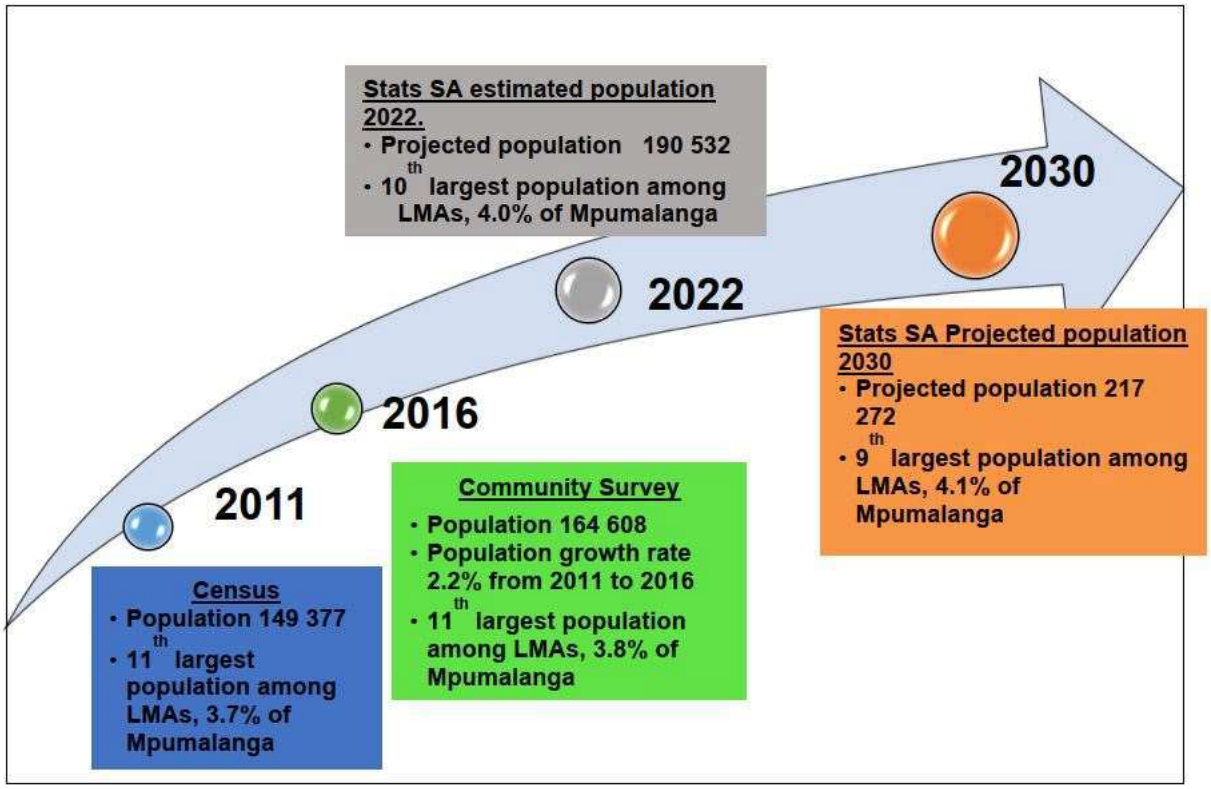
Trends in demography are fundamental driving forces for any development of an area in terms of housing, retail, engineering services, community and government services, safety, and security. The demographic profile influences the type of goods and services, their level of demand and the pressure on local services, infrastructure, and public transport.

3.4.1 POPULATION

According to Statistics South Africa Community Survey 2016, the municipality has a population of 164,608 persons with a population density of 27.3 persons per square kilometre.

According to Stats SA Mid-Year Population Estimates 2021, the estimated population number for 2022 is 190 532 people or 14.8% of the Gert Sibande District population and Stats SA projects that in 2030, the population will increase to 217 272 or 15.0% of the district. This increase will pressure infrastructure, service delivery and employment opportunities within the municipality.

The number of households in Msukaligwa increased from 40 932 to 51 089 between 2011 and 2016 (more than 10,000 households). According to Stats SA, the estimated number of households in 2022 is 63,050 and is projected to increase to 71,899 households by 2030 see **Figure 3-2.**



(Socio-economic profile by the Department of Economic Development and Tourism, 2022)

Figure 3-2 - Msukaligwa Population Data and Projection

3.4.1.1 GENDER AND AGE PROFILE

According to the Statistics South Africa Census 2022, most of the MLM has a young population (15-64 years), forming 69.0% of the total population. The general trend is a decrease in children between 1 and 14 years since 2011, with an increase in the working age group (15-64 years). This trend may indicate decreased birth rates however not reduced population growth. The population has increased by over 50 000 people from 2011 to 2022. The female population exceeds the male population by just over two percent (51.3%). See **Figure 3-3** for the population pyramid.

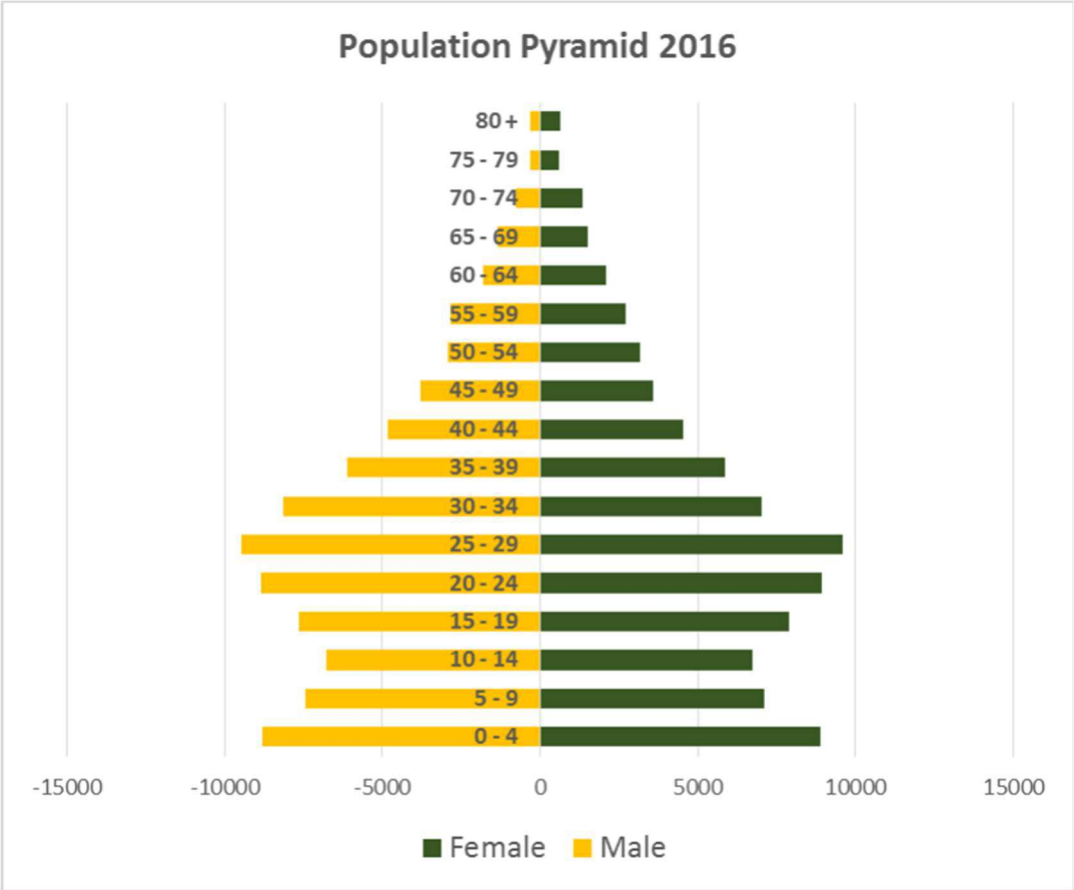


Figure 3-3 - Population Pyramid, 2016

3.4.2 EDUCATIONAL PROFILE

Table 3-1 indicates that 9.6% of persons without schooling decreased between 2011 and 2016. Despite this positive decrease, a population of children within the municipality remain uneducated. Msukaligwa's grade 12 pass rates decreased from 80.6% in 2014 to 76.4% in 2020. The pass rate decreased by 55.3% between 2020 and 2021, mainly due to Covid-19-related factors. The admission rate to university/degree studies deteriorated to 32.6% in 2021 regarding ranking in the province. In 2016, only 79.0% of students completed grade 7. However, there was a slight improvement in functional literacy within the municipality in 2020 when 85.6% of students over 15 years were recorded to have passed grade 7 (Msukaligwa Municipality, 2022).

There is also a challenge to accommodating the educated young people in the area as inadequate and inappropriate employment opportunities exist.

Table 3-1 – Educational Levels

Educational Indicators		
% Population 15+ with no schooling	**2011**	**2016**
	8.2 %	9.6 %
% Population 15+ with matric and	23.6 %	39.6%

Educational Indicators					
post matric qualification					
Grade 12 Pass Rate	2014	2020	2021	Admission to B degree studies	2021
	80.6 %	76.4 %	71.1 %		32.6 %
Functional Literacy rate					
Age 15yr+ and completed grade 7 or higher					
2011	2015			2016	2020
79.0 %	80.8 %			81.4 %	85.6 %

(Msukaligwa Municipality, 2022)

3.4.1.1 Educational Facilities

Msukaligwa Municipality has only one FET College. Considering the continuous population growth within the municipality and the shortage of skills within communities, there is a need for a tertiary institution within the district. MLM IDP indicates that with the development within the municipality comes a need for a high school at Ermelo Ext. 32, 33, 34 and New Ermelo area, Khayelihle, close to Emadamini and Thusi Ville, and additional Primary Schools, except for those mentioned in **Table 3-2**. The table also indicates an imbalance in the number of primary schools compared to the number of high schools (Statistics South Africa, 2011).

Table 3-2 – Educational Facilities

Educational Facility	Number
Primary Schools	71
High Schools	6
Combined Schools	12
Secondary Schools	11
Tertiary institutions	0
FET Colleges	1
Training Centres/Adults Education	9
No. of Private Schools	3
Day Care Centres	40

(Msukaligwa Municipality, 2022)

3.4.3 LABOUR PROFILE

Table 3-3 below indicates the labour force comparison within Msukaligwa Municipality from 2011 to 2016. The unemployment rate in the municipality stood at 23.6% in 2016, which decreased from 26.8 % in 2011. Furthermore, data from 2016 showed a reduction in economically active persons compared to 2011 figures. This reduction in unemployment figures indicates that the labour market was absorbing more people, or it could have resulted from retirement rates as figures showed an increase in economically active people.

According to the Provincial Department of Economic Development and Tourism, the unemployment rate for females and males is 31.4 % and 18.1 %, respectively, with the youth being the highest at 34.5 % in 2016. This information will assist when planning any developmental intervention within the municipality. The total unemployment rate in Mpumalanga was recorded at 36.2 % according to (Stats SA, 2024) which is an increased by 1.3 % from 2023.

Table 3-3 – Employment Status

Employment Status	2011	2016
Employed	41 698	43 751
Unemployed	15267	15 084
Economically active	56969	53208
Not Economically active	51476	52565
Total	149 377	164 608

Statistics South Africa, Census 2011 and Community Survey 2016

3.4.3.1 Employment Sector Contribution

The municipality comprises sectors that contribute to the regional economy and employ the people of Msukaligwa and surrounding areas.

Table 3-4 below depicts that in 2020, the industries contributing to the increment in employment over the years include trade (22.0%), Community services (15.3%), finance (12.5%), manufacturing (10.4%) and mining (9.5%). Though there is a slight decrease in trade and community services, this played a role in the employment increase.

Table 3-4 – Employment per sector & Contribution to Regional (Gert Sibande) GVA

	2015		2020	
Sector	Employment	Contribution to GVA	Employment	Contribution to GVA
Agriculture	11.5%	14.6%	6.3%	18.5%
Mining	7.7%	11.5%	9.5%	5.6%
Manufacturing	0.8%	9.5%	3.0%	19.2%

Sector	2015 Employment	2015 Contribution to GVA	2020 Employment	2020 Contribution to GVA
Utilities	0.8%	9.5%	3.0%	19.2%
Construction	3.9%	7.4%	7.5%	17.0 %
Trade	23.7%	20.4%	22.7%	23.3%
Transport	6.9%	28.7 %	5.2 %	31.0 %
Finance	9.6%	24.3%	12.5%	24.5%
Community	19.0%	21.4%	15.3%	23.0%
Private Households	9.1 %	-	7.6 %	
Total	**100%**	**13.4 %**	**100%**	**16.7 %**

(Msukaligwa Municipality, 2022)

3.4.3.2 Inequality and Poverty Levels

From 2011 to 2016, Msukaligwa experienced an increase in impoverished people. According to Statistics South Africa, the poverty rate (individuals living in South Africa with less than R945 a month) was 38.2 %. Municipalities can collaborate with private entities to alleviate poverty through economic development interventions. The Gini Co-efficiency has not improved from 2011 to 2016. This Gini Co-efficiency indicates high inequality in terms of income distribution. The total number of people living in poverty in 2011 was 56,823, slightly improving to 60,213 in 2016. The absolute poverty Gap is 137 Million Rands. This gap indicates that those living under the poverty line will have to collectively obtain a further R137 Million Rands to be over the threshold (Statistics South Africa, 2016).

Table 3-5 – Population and People below the minimum living standard

Indicators	2011	2016
The Gini Co-efficiency [1]	0.61	0.61
Poverty rate[2]	33.6%	38.2 %
People in Poverty	56,823	60.213

[1] The Gini coefficient is a statistical measure of economic inequality in a population.
[2] The poverty rate is the ratio of the number of people (in a given age group) whose income falls below the poverty line

Indicators	2011	2016
Poverty gap (R Million)[3]	R137	

Source: (Mpumalanga Province, Department of Economic Development & Tourism, 2017)

3.4.4 COMMUNITY HEALTH

According to the Msukaligwa municipality IDP, the Department of Health reported in 2013 that the HIV infection rate was 46.5% among the antenatal clients tested, which increased compared to the year 2012 with a rate of 34.4%. Msukaligwa IDP also indicates a shortage of health facilities, with only a single private hospital and one government hospital. See Table 3-6 below for health facilities available within the municipality (Msukaligwa Municipality, 2022).

Table 3-6 – Health Facilities

Facilities	Number
Private Hospitals	1
Primary Health Care Clinics	10
Mobile Clinics	4
Government Hospitals	1
Infectious Hospital (TB)	1
Dentists	4
Gynaecologist	1
Social Workers	12
Private Doctors	20

(Msukaligwa Municipality, 2022)

[3] The poverty gap index is a measure of the degree of poverty. It is defined as extent to which individuals on average fall below the poverty line, and expresses it as a percentage of the poverty line

4 SENSITIVE SOCIAL RECEPTORS

Sensitive social receptors refer to local people within a 5 km radius of the proposed Project that may be influenced by the project activities due to their proximity to the proposed project area.

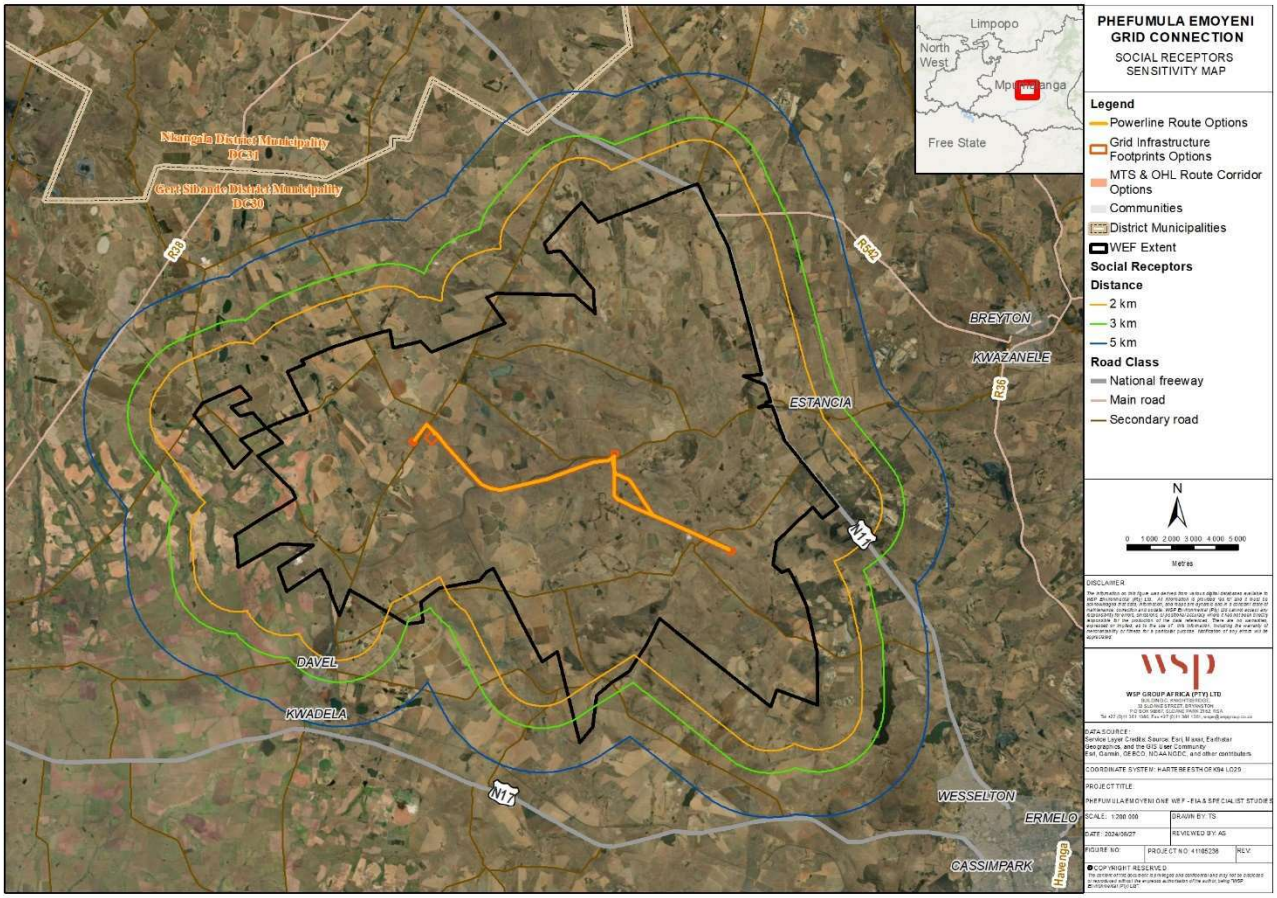


Figure 4-1 - Social Receptors Sensitivity Map

Figure 4-1 is a satellite image which indicates potentially sensitive social receptors within the 5 km radius of the boundary of the proposed project area. Kwa-Dela is a township within 5 km from the project boundary. It has an area extent of approximately 96 ha.

There are two provincial roads, one on the east of the Project, R542, connecting to Breyton. The other, R38, lies on the west side of the project area towards Hendrina, located in the Nkangala District Municipality. Within 3 km lies Davel, a small town with roughly a population 1193. New Street is the road that intercepts the town, connecting it to Kwa-Dela, which connects to the national road N17. Closer to the 2 km radius are several farms, agricultural farm buildings, farm dwellings, and the national road, N11.

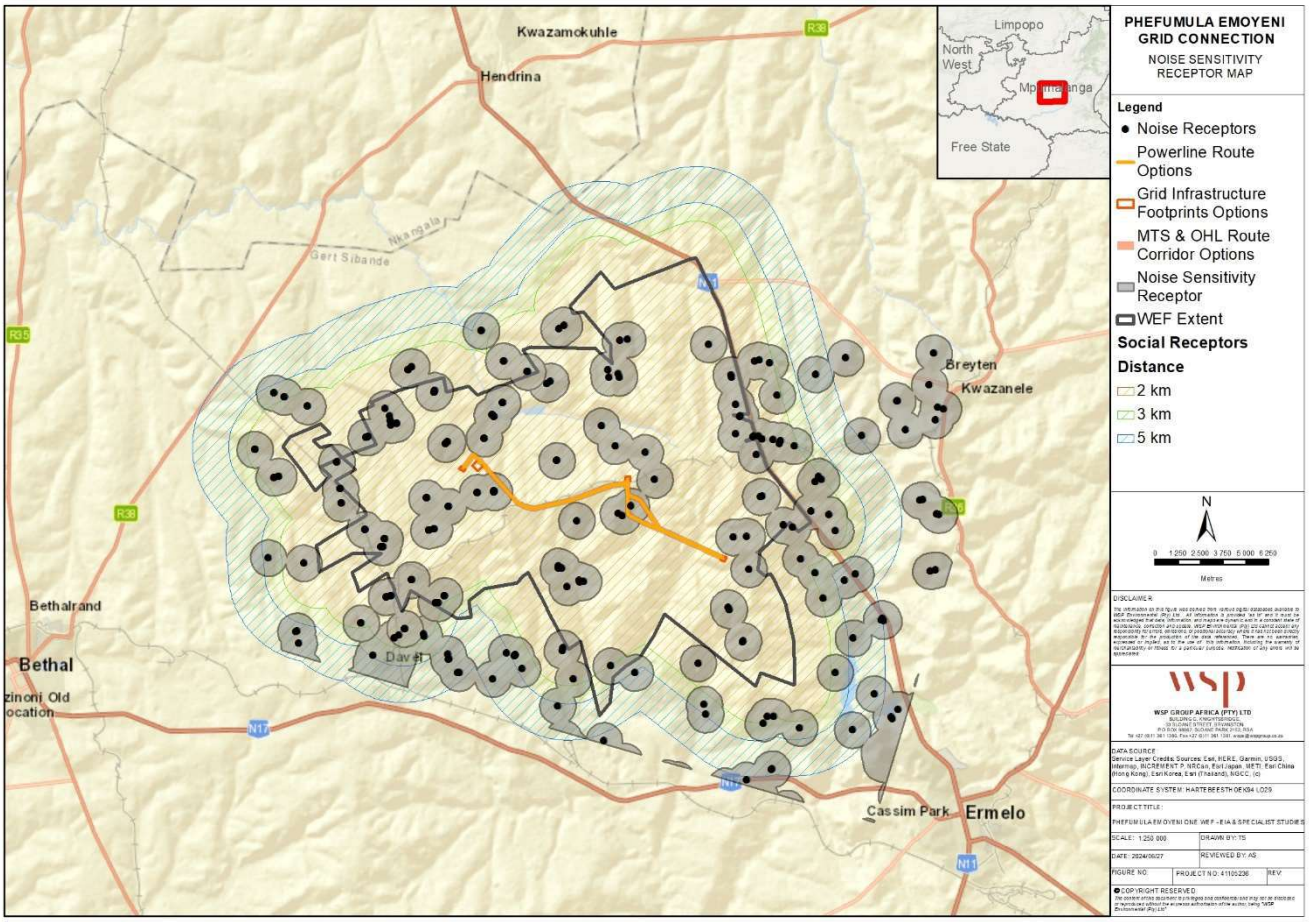


Figure 4-2 - Noise Sensitivity Receptor Map

The project site is located primarily within farmlands. Farm buildings are located within the project boundary and a 5 km radius from the project boundary, as illustrated by points in **Figure 4-2**. These points have been identified as receptors susceptible to noise generated from the project site. The noise specialist recommends a 1 km buffer to be a safe distance to protect receptors from noise, which may become a nuisance.

The sensitive receptors will be confirmed after the specialist studies have taken place in the impact assessment phase of the Project. The specialist studies will further inform the no-go areas, and the project layout could be further amended.

5 SCREENING IMPACT ASSESSMENT

The screening impact assessment identifies potential social impacts during the Project's construction, operational, and decommissioning phases, and cumulative effects are assessed. For the screening phase, impacts are assessed for pre-mitigation only. The post-mitigation impact assessment will be conducted during the EIA phase of the Project.

5.1 SCREENING ASSESSMENT METHODOLOGY

Appendix 2 of GNR 982, as amended, requires the identification of the significance of potential impacts during scoping. To this end, the scoping phase has used an impact screening tool. The screening tool is based on two criteria, probability scores and descriptors (**Table 5-3)**, where the latter is based on a general consideration of the impact's intensity, extent, and duration.

The scales used for scoring probability and consequence are detailed in **Table 5-1** and **5-2,** respectively.

Table 5-1 – Probability Scores and Descriptors

Score	Descriptor
4	Definite: The impact will occur regardless of any prevention measures.
3	Highly Probable: It is most likely that the impact will occur.
2	Probable: There is a good possibility that the impact will occur.
1	Improbable: The possibility of the impact occurring is very low.

Table 5-2 – Consequence Score Descriptions

Score	Negative	Positive
4	Very severe: An irreversible and permanent change to the affected system(s) or party(ies) which cannot be mitigated.	Very beneficial: A permanent and substantial benefit to the affected system(s) or party(ies), with no real alternative to achieving this benefit.
3	Severe: A long-term impact on the affected system(s) or party(ies) that could be mitigated. However, this mitigation would be difficult, expensive, time-consuming or some combination of these.	Beneficial: A long-term impact and substantial benefit to the affected system(s) or party(ies). Alternative ways of achieving this benefit would be difficult, expensive, time-consuming, or a combination.
2	Moderately severe: A medium to long-term impact on the affected system(s) or party (ies) that could be mitigated.	Moderately beneficial: A medium to long-term impact of real benefit to the affected system(s) or party(ies). Other ways of optimising the beneficial effects are equally as difficult, expensive, and time-consuming (or some combination of these) as achieving them in this way.

Score	Negative	Positive
1	Negligible: A short to medium-term impact on the affected system(s) or party(ies). Mitigation is straightforward, cheap, less time-consuming and not necessary.	Negligible: A short to medium-term impact and negligible benefit to the affected system(s) or party(ies). Other ways of optimising beneficial effects are easier, cheaper, quicker, or combination.

Table 5-3 – Significance Screening Tool

	Consequence Scale				
Probability Scale		1	2	3	4
	1	Very Low	Very Low	Low	Medium
	2	Very Low	Low	Medium	Medium
	3	Low	Medium	Medium	High
	4	Medium	Medium	High	Very High

The nature of the impact must be characterised as to whether the impact is deemed to be positive (+ve) (i.e. beneficial) or negative (-ve) (i.e. harmful) to the receiving environment/receptor. For ease of reference, a colour reference system (**Table 5-4)** has been applied according to the nature and significance of the identified impacts.

Table 5-4 – Impact Significance Colour Reference System

NEGATIVE IMPACTS (-VE)	POSITIVE IMPACTS (+VE)
Negligible	**Negligible**
Very Low	**Very Low**
Low	**Low**
Medium	**Medium**
High	**High**
Very High	**Very High**

6 IDENTIFICATION OF IMPACTS

Based on the collected secondary data and expert knowledge, impacts were identified and categorised according to the project phase in which they are likely to occur, i.e., construction, operational, and decommissioning.

6.1 CONSTRUCTION PHASE

The Project's construction phase is labour intensive, and there is, therefore, more potential to influence the social change of the project environment. The activities required are the construction camp, site offices, material laydown area, construction of internal roads, Operations and Management Office Building, three substations and overhead power lines construction. These construction activities will require a labour force. **Table 6-1** summarises the impact assessments during the construction phase.

6.1.1 JOB CREATION

The construction phase is estimated to be 12-24 months. The number of employees for the construction phase is estimated to be 1 247 (including direct, indirect and induced). Furthermore, the Project undertakes that predominantly local South Africans will be employed during construction. Most workers will be low-skilled, with approximately 60% low-skilled and 30 – 40 % semi-skilled and skilled, respectively. The facility's construction will create approximately 400 equivalent full-time jobs.

The job creation projection indicates that many low-skilled persons will be employed. Job creation will have a potential **very high positive impact**.

6.1.1.1 Job Creation Mitigation Measures

To enhance job creation, the Project should prioritise local recruitment for low-skilled work and invest in skills development for locals to improve their competitiveness in the job market.

6.1.2 THE INFLUX OF JOB SEEKERS

Based on a report by Statistics South Africa in 2023, the unemployment rate during the first quarter of the year stood at 32.9% (Statistics South Africa, 2023). This unemployment rate poses a significant challenge for job seekers who may feel compelled to relocate to areas experiencing development to secure employment opportunities. However, such a move can potentially negatively affect the local community. There will also be added pressure on the existing municipal infrastructure and services. This pressure includes an increase in traffic, water usage and housing demands. Additionally, the influx of people from different cultures and languages may impact the local culture, and family structures, leading to a sense of displacement for locals. The impact significance is rated as **medium negative**.

6.1.2.1 Influx of Job Seekers Mitigation Measures

Recruitment procedures should prioritise local employment to limit influx. Local skill development programmes must be implemented to improve the local skill pool to be competitive in the labour market. Phefumula Emoyeni One could partner with the municipality to implement community programmes and facilities to ease the pressure on municipal services and infrastructure.

6.1.3 PROCUREMENT FROM LOCAL BUSINESSES FOR SUPPLIES AND SERVICES

The Project and its employees will require procurement of goods and services for construction. This procurement will increase local economic growth. Local economic growth has the potential to have a **medium positive impact**.

6.1.3.1 Local Procurement Enhancement Measures

The Project could partner with local suppliers through procurement programmes to develop local suppliers to enhance this positive impact. Furthermore, the procurement programmes should prioritise local procurement for locally available goods and services.

6.1.4 LOSS OF AGRICULTURAL LAND

The Project is located within 10 farm portions, including state-owned land. The primary land use of the project area is agricultural. The main commodity farmed within the site is maize.

The physical construction of the infrastructure discussed in the project description will require vegetation clearance. A portion of the area will be within the croplands. The loss of farmland could potentially negatively impact the local agricultural sector. The impact is rated as **low negative**.

6.1.4.1 Loss of Agricultural Land Mitigation Measures

The Project should limit the construction of infrastructure during planting and harvesting season. Disturbed areas should be rehabilitated post-construction phase.

6.1.5 GENERATE INCOME FOR AFFECTED LANDOWNERS

The proponent will enter into lease agreements with the affected landowners to use the land to construct the proposed wind energy facilities. The affected landowners will be paid an annual sum based on the area affected under the terms of the lease agreement. The extra revenue will mitigate the landowner/farmer's livelihood risk posed by droughts and fluctuating market prices for farm outputs and inputs. The added income is a substantial benefit to the impacted landowner. The impact is rated as **medium positive**.

6.1.5.1 Income for Affected Landowners Mitigations

Implement agreements with affected landowners. Where possible, the loss of high-quality agricultural land should be avoided and minimised as far as possible by careful planning in the final layout of the proposed energy-generating facilities.

6.1.6 COMMUNITY HEALTH, SAFETY AND SECURITY

The project workers could damage farm fences and buildings, increase crime, theft or killing of livestock, and theft of farm produce. While the creation of jobs is positive, it may also introduce changes in lifestyle, such as multiple sexual relations, which could lead to a higher infection rate of HIV/STIs within the project area. The movement of construction vehicles and increased human activity by workers may have a **low negative impact** on the community's health, safety and security.

6.1.6.1 Community Health, Safety and Security Mitigation Measures

The Project should employ security personnel onsite during construction to implement security. The Project should include monthly health talks and coordinate health and safety campaigns to educate personnel and the community on general health, safety and security issues.

6.1.7 ENVIRONMENTAL HEALTH IMPACT

The construction activities will result in increased noise and dust and alter the visual aesthetics of the area. The effect is rated to be a **low negative impact**.

6.1.7.1 Environmental Health Impact Mitigation Measures

The Project must implement the measures in the EMPr to mitigate dust emission, noise, and visual impacts. Furthermore, the Project must establish onsite complaints register to record and address complaints regarding noise and dust impacts from the facility's construction.

6.1.8 SUMMARY OF CONSTRUCTION PHASE IMPACTS

Table 6-2 summarises the impacts of the construction phase.

Table 6-1 – Construction phase impacts

IMPACT	IMPACT SIGNIFICANCE
Job Creation	Positive - Very High
The influx of Job Seekers	**Negative - Medium**
Procurement from Local Businesses	**Positive - Medium**
Loss of Farmlands	**Negative - Low**
Income for Affected Landowners	**Positive - Medium**
Community Health, Safety, and Security	**Negative - Low**
Environmental Health	**Negative - Low**

6.2 OPERATIONAL PHASE

The project activities will be operational during this phase, whereby renewable energy will be produced, stored, and supplied to the consumers. See **Table 6-2** for the operational phase's summary of the Impact Assessment.

6.2.1 JOB CREATION

The total number of employments generated during the operational phase is estimated at 25-40 per sub-phase so 75-120 in total. Furthermore, the Project undertakes that local South Africans will be employed during the construction phase. Most workers will be low-skilled, with approximately 30 – 40 % semi-skilled.

The job creation projection indicates that many low-skilled persons will be employed. The impact significance is rated as a potentially **high positive** impact.

6.2.1.1 Job Creation Mitigation Measures

To enhance job creation impact, the Project should prioritise local recruitment for low-skilled workers and invest in skills development for locals to improve their competitiveness in the job market.

6.2.2 THE INFLUX OF JOB SEEKERS

As discussed in the construction phase, there will also likely be an influx of job seekers during the operational phase. The influx of job seekers can potentially affect the local community negatively. The significance is rated as a **negative medium** impact.

An increase in job seekers may increase pressure on the existing municipal infrastructure and services. An influx of job seekers includes increased road traffic, water usage and housing demands. The influx of people from different cultures and languages may impact the local culture, language, and family structures, leading to a sense of displacement for the locals.

6.2.2.1 Influx of Job Seekers Mitigation Measures

Recruitment procedures should prioritise local employment to limit influx. Local skill development programmes must be implemented to improve the local skill pool to be more competitive in the labour market. Phefumula Emoyeni One could partner with the municipality to implement community programmes and facilities to ease the pressure on municipal services and infrastructure.

6.2.3 PROCUREMENT FROM LOCAL BUSINESSES FOR SUPPLIES AND SERVICES

The Project and its employees will require procurement of goods and services for operations. It increases local economic growth when local entrepreneurs and businesses are procured for supplies and services. Local economic growth has the potential to have a **medium positive impact**.

6.2.3.1 Local Procurement Mitigation Measures

Local businesses should be prioritised to supply goods and services to the Project during operations.

6.2.4 COMMUNITY HEALTH, SAFETY AND SECURITY

The movement of vehicles and increased human activity may damage buildings and increase crime, theft or killing of livestock, and theft of farm produce. It could have a **low negative impact** on the community's health, safety and security.

6.2.4.1 Community Health, Safety and Security Mitigation Measures

The Project should employ security personnel onsite during the operational phase to secure the Project and its assets. The Project should train its personnel in health and safety. The staff should also receive training on how to interact with locals.

6.2.5 ENVIRONMENTAL HEALTH IMPACT

The operational activities will increase noise and alter the visual aesthetics of the area. The effect is rated to be a **low negative impact**.

6.2.5.1 Environmental Health Impact Mitigation Measures

The Project must refer to the approved EMPr to mitigate dust emission and noise impacts. Furthermore, the Project must establish complaints register onsite to record and address complaints on noise, dust and visual impacts arising from the Project.

6.2.6 ENERGY GENERATION

The wind energy generated will be an alternative to coal-powered energy. Energy generation will have a **high positive impact** because the Project will produce renewable energy, less air-polluted emissions, and a more reliable energy source for the energy consumer.

6.2.6.1 Enhance Mitigation Measures

Operations Management Systems must be planned, monitored, and evaluated regularly to ensure that production, financial, human resources and other Key Performance Indicators targets are routinely achieved.

6.2.7 SUMMARY OF OPERATIONAL PHASE IMPACTS

Table 6-2 presents a summary of the operational phase impacts.

Table 6-2 – Operational phase impacts

IMPACT	IMPACT SIGNIFICANCE
Job Creation	**Positive - High**
An influx of Job Seekers	**Negative - Medium**
Procurement from Local Businesses	**Positive - Medium**
Community Health, Safety and Security	**Negative - Low**
Environmental Health	**Negative - Low**
Energy Generation	**Positive - High**

6.3 DECOMMISSIONING PHASE

The Decommissioning Phase is a phase in the Project where the projection operational activities cease to operate. Refer to **Table 6-3** for a summary of the decommissioning phase and social impact assessment.

6.3.1 LOSS OF EMPLOYMENT

Employees will have to lose their jobs during the decommissioning phase due to retrenchment, which is unavoidable during the phase. Retrenchment will result in a decrease in employment. The impact is rated as a **negative medium impact** on employment.

6.3.1.1 Loss of Employment Mitigation Measures

The Project is recommended to establish a structured employment forum consisting of representatives of employees and organised labour, i.e., labour unions and human resource

experts. The forum will have to be established during the operational phase for effectiveness. The forum will be responsible for planning fair retrenchment compensation packages, including financial compensation or alternative employment opportunities elsewhere for the retrenched employees. Furthermore, skills development programmes must be incorporated within the retrenchment packages for eligible retrenched employees.

6.3.2 LOSS OF LIVELIHOODS

Employees, business owners, and entrepreneurs will likely lose their livelihoods during the decommissioning phase. The impact is predicted to have a **high negative impact** on the livelihoods of the receptors.

6.3.2.1 Livelihood Mitigation Measures

It is recommended to include skills development programmes in the retrenchment packages offered to eligible employees. Skills development will enable them to compete fairly with other job seekers in the market. To facilitate this process, the forum discussed in section **6.3.1** of this report will coordinate with companies looking for employees with the skills retrenched workers possess.

In addition, creating a community engagement forum comprising community leaders, municipal LED representatives, and local business representatives could be effective. This forum will be a structured organisation that will ensure that affected businesses are developed to continue trading even after the decommissioning phase of the Project, enabling these businesses to sustain the market and support economic growth in the area.

6.3.3 SUMMARY OF DECOMMISSIONING IMPACTS

Table 6-3 presents a summary of the decommissioning impacts.

Table 6-3 – Decommissioning Impacts

IMPACT	IMPACT SIGNIFICANCE
Loss of Employment	**Negative - Medium**
Loss of Livelihoods	**Negative - High**

6.4 CUMULATIVE IMPACTS

Cumulative social impacts can be defined as changes to the social environment triggered by the combined impact of current, past, present and future human activities and natural processes.

6.4.1 SENSE OF PLACE

The potential cumulative impacts on the area's sense of place will be linked mainly to potential visual impacts. These issues relate to wind energy facilities and their associated infrastructure. The relevant issues identified include:

- Combined visibility (whether two or more wind farms will be visible from one location).
- Sequential visibility (e.g. the effect of seeing two or more wind farms along a single journey, e.g. road or walking trail).
- The visual compatibility of different energy facilities in the same vicinity.

- Perceived or actual change in land use across a character type or region.
- Loss of a characteristic element (e.g. viewing type or feature) across a character type caused by developments across that character type.

Cumulative impacts need to be considered from dynamic and static viewpoints. For example, the experience of driving along a tourist road is regarded as a dynamic sequence of views and visual impacts, not just as the cumulative impact of several developments on one location. The viewer may only see one renewable energy facility and the associated infrastructure at a time. Still, each successive stretch of the road is dominated by views of renewable energy facilities, which can be argued to have a cumulative visual impact ((Environmental Protection and Heritage Council, 2010).

Approximately 20 renewable energy projects are located within a 55 km range of the project site. The project reference numbers are listed below. The approved projects are illustrated in green, the projects that are not yet approved are illustrated in brown and the projects that have been rejected are illustrated in red on the **Figure 6-1** below.

- The Halfgewonnen solar photovoltaic (PV) facilities on portions 7,8,9 and 16 of the farm Halfgewonnen 190 IS (DFFE Ref: 14/12/16/3/3/2/2068) located 19km northeast of the site;
- The authorised Forzando North Coal Mine Solar PV Facility, 9.5MW, (DFFE Ref: 14/12/16/3/3/1/452) is located 13km northwestof the site;
- Eskom Arnot PV Facility at the Arnot Power Station on Remainder of Portion 24 of Reitkuil 491 JS near Middleburg in Mpumalanga (DFFE Ref: 14/12/16/3/3/2/760) is located 35km north of the site;
- Proposed establishment of the Haverfontein wind energy facility near Carolina, Mpumalanga Province (DFFE Ref: 12/12/20/2018/AM2) is located 42km Northwest of the site;
- Camden I Wind Energy Facility (WEF) (up to 200MW) (subject to a Scoping and Environmental Impact Reporting (S&EIR) process) (DFFE Ref: 14/12/16/3/3/2/2137) located approximately 28km southeast of the site;
- Camden I WEF Grid Connection (up to 132kV) (DFFE Ref: 14/12/16/3/3/1/2769) located approximately 28km southeast of the site;
- Camden Grid Connection and Collector substation (up to 400kV) (DFFE Ref: 14/12/16/3/3/2/2134) located approximately 28km southeast of the site;
- Camden I Solar (up to 100MW) (DFFE Ref: 14/12/16/3/3/2/2136) located approximately 28km southeast of the site;
- Camden I Solar Grid Connection (up to 132kV) (DFFE Ref: 14/12/16/3/3/1/2768) located approximately 28km southeast of the site;
- Camden II Wind Energy Facility (up to 200MW) (DFFE Ref: 14/12/16/3/3/2/2135) located approximately 35km southeast of the site;
- Camden II Wind Energy Facility up to 132kV Grid Connection located approximately 35km southeast of the site;
- Hendrina North WEF (up to 200MW) (DFFE Ref: 14/12/16/3/3/2/2130) located approximately 16km northwest of the site;
- Hendrina North Grid Infrastructure (up to 275kV) (DFFE Ref: 14/12/16/3/3/2/2128) located approximately 16km northwest of the site;
- Hendrina South WEF (up to 200MW) (DFFE Ref: 14/12/16/3/3/2/2131) located approximately 16km northwest of the site;
- Hendrina South Grid Infrastructure (up to 275kV) (DFFE Ref: 14/12/16/3/3/2/2129) located approximately 16km northwest of the site;

- Ummbila Emoyeni WEF (up to 900MW) (DFFE Ref: 14/12/16/3/3/2/2160) located approximately 10km southwest of the site;
- Ummbila Emoyeni Grid Connection (up to 400kV) (DFFE Ref: 14/12/16/3/3/2/2162) located approximately 10km southwest of the site; and Ummbila Emoyeni WEF (up to 150MW) (DFFE Ref: 14/12/16/3/3/2/2161) located approximately 17km southwest of the site.

There is, therefore, the possibility of combined and sequential impacts. However, given the site's location, the potential impact of the proposed energy-generating facilities and associated infrastructure on the area's sense of place is likely to be limited. The significance of this impact is rated **Negative-Medium**.

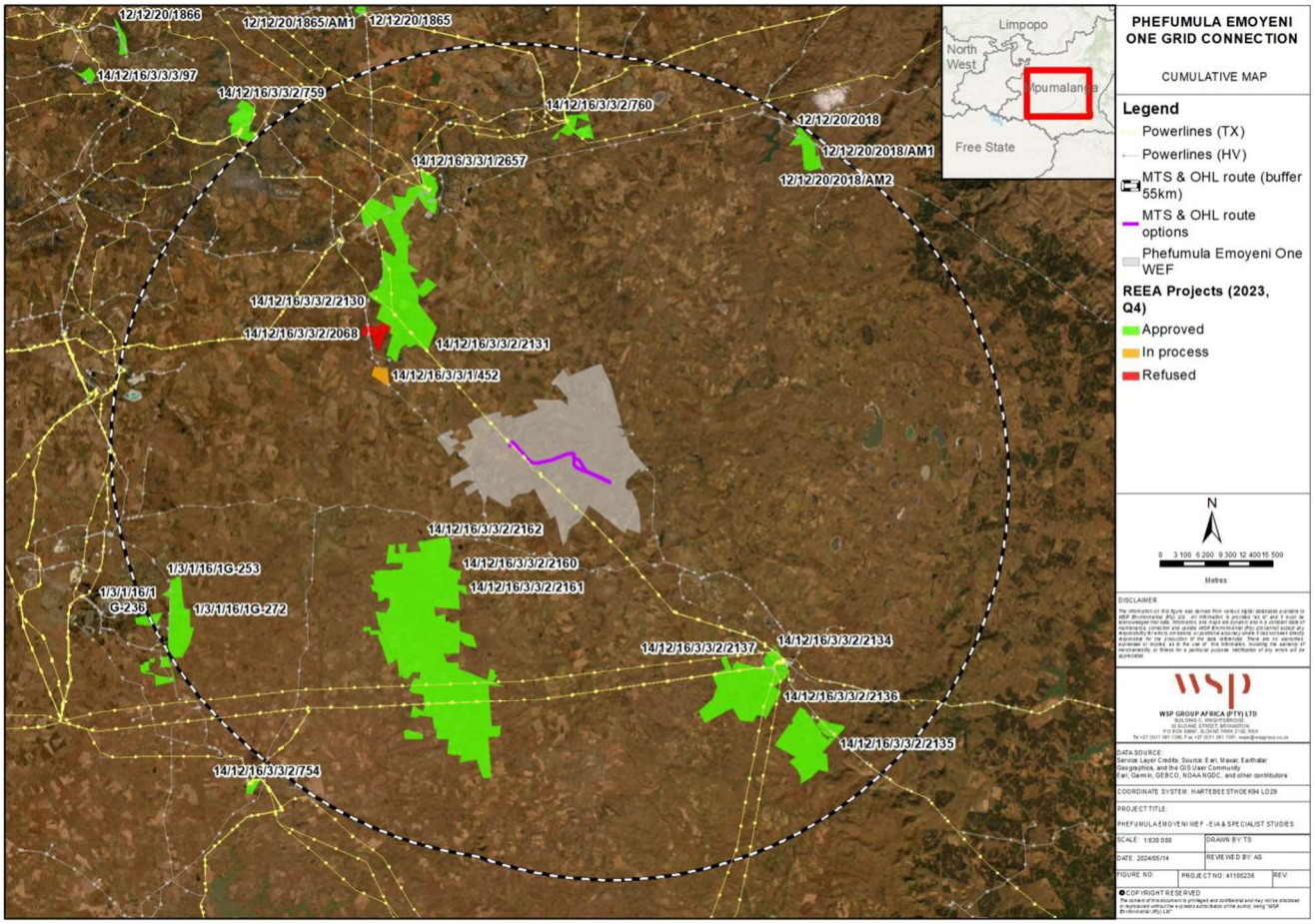


Figure 6-1 - Cumulative Impact Map

6.4.1.1 Sense of Place Mitigation Measures

The recommendations in the Visual Impact Assessment, which will be undertaken as part of the EIA, should be implemented.

6.4.2 LOCAL SERVICES AND ACCOMMODATION

The development of multiple renewable energy projects has the potential to put a strain on local services and accommodations, particularly during the construction phase. The goal will be to source

as many un-skilled and semi-skilled employees from the local municipality as possible during the construction and operational phases of the Project. Sourcing skills locally will relieve the strain on local services, accommodations, and the nearby town of Ermelo. However, considering the construction phase's brief duration, the potential impact is expected to be limited.

The potential impact should also be considered in light of the possible beneficial cumulative effects on the local economy linked with the planned facilities and accompanying renewable energy projects in the local municipality. Such benefits will generate opportunities for investment in the municipality, such as upgrading and expanding existing services and building new residences. The significance of this impact is rated **Negative-Low.**

6.4.2.1 Local Services and Accommodation Mitigation Measures

The proponent should liaise with the Msukaligwa local municipality to address potential impacts on local services.

6.4.3 LOCAL ECONOMY

In addition to the potential negative impacts, establishing renewable energy facilities and associated infrastructure will create several socio-economic opportunities for the Msukaligwa local municipality. The positive cumulative economic opportunities include the creation of employment, skills development and training opportunities, and downstream business opportunities.

The potential cumulative benefits for the local and regional economy are associated with the construction and operational phases of renewable energy projects and related infrastructure, extending over 20-25 years. However, steps must be taken to maximise employment opportunities for local community members and support skills development and training programmes. This impact's significance is **positive and rated Medium.**

6.4.3.1 Local Economy Mitigation Measures

The proponent should liaise with the Msukaligwa local municipality to identify potential local economy and business opportunities.

6.4.4 SUMMARY OF CUMULATIVE IMPACTS

The cumulative impacts are identified as a sense of place resulting from the visual change of scenic views because of several solar PV, grid connections and wind energy facilities within the viewer's sight. Due to limited resources, local services and accommodation could negatively affect the local municipality service delivery. Socio-economic opportunities may rise due to increased renewable energy facilities within the municipality. **Table 6-4** indicates a summary of the cumulative impacts.

Table 6-4 – Summary of cumulative impacts

CUMULATIVE IMPACT	IMPACT SIGNIFICANCE
Sense of place	**Negative - Medium**
Local Services and Accommodation	**Negative - Low**
Local Economy	**Positive - Medium**

7 CONCLUSION

The SIA baseline findings show that the Project will positively impact the community, including power generation, employment, and economic benefits. The negative impacts include visual, loss of livelihood, community health, safety and security. It must be noted that the impacts identified are based on secondary data collection. The SIA will piggyback on the Public Participation Process during the scoping phase. The assessments and mitigations of the impacts are based on secondary data and will be updated after consultations with interested and affected parties. See **Table 7-1** for the summary of all the impacts of all the project phases.

Table 7-1 – Summary of All Impacts

IMPACT	IMPACT SIGNIFICANCE
Construction Phase	
Job Creation	Positive - Very High
The influx of Job Seekers	**Negative - Medium**
Procurement from Local Businesses	**Positive - Medium**
Loss of Farmlands	**Negative - Low**
Income for Affected Landowners	**Positive - Medium**
Community Health, Safety, and Security	**Negative - Low**
Environmental Health	**Negative - Low**
Operational Phase	
Job Creation	**Positive - High**
An influx of Job Seekers	**Negative - Medium**
Procurement from Local Businesses	**Positive - Medium**
Community Health, Safety and Security	**Negative - Low**
Environmental Health	**Negative - Low**
Energy Generation	**Positive - High**
Decommissioning Phase	
Loss of Employment	**Negative - Medium**

IMPACT	IMPACT SIGNIFICANCE
Loss of Livelihoods	**Negative - High**
Cumulative Impacts	
Sense of place	**Negative - Medium**
Local Services and Accommodation	**Negative - Low**
Local Economy	**Positive - Medium**

8 BIBLIOGRAPHY

Environmental Protection and Heritage Council. (2010, July). *National Wind Farm Development Guidelines - Draft.* Retrieved from https://www.nepc.gov.au/sites/default/files/2022-09/draft-national-wind-farm-development-guidelines-july-2010.pdf

Mpumalanga Province, Department of Economic Development & Tourism. (2017). *Socio- Economic Profile.*

Msukaligwa Municipality. (2022). Msukaligwa Local Municipality Final Integrated Development Plan 2022-2023. Mpumalanga.

Statistics South Africa. (2011). 2011 Population Census.

Statistics South Africa. (2016). *Community Survey .*

Statistics South Africa. (2023). Quarterly Labour Force Survey.

Statistics South Africa. (2023). *Quarterly Labour Force Survey.*

Stats SA. (2024). *Quarterly Labour Force Survey .*

Building 1, Maxwell Office Park
Magwa Crescent West, Waterfall City
Midrand, 1685
South Africa

wsp.com