Social Impact Assessment Report for the Highveld North-West and Lowveld Strengthening Project Borutho-Silimela 400 kV Transmission Line and Associated Infrastructure, within the Limpopo Province

For

NTC Group (Pty) Ltd

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BASIC ASSESSMENT PROCESS OBJECTIVES

The objective of the BA process is to, through a consultative process -

- Determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- Identify the alternatives considered, including the activity, location, and technology alternatives;
- Describe the need and desirability of the proposed alternatives,
- Through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:
    - The nature, significance, consequence, extent, duration, and probability of the impacts occurring to;
    - The degree to which these impacts -
    - can be reversed;
    - may cause irreplaceable loss of resources; and
    - can be managed, avoided or mitigated;
- Through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to -

- identify and motivate a preferred site, activity and technology alternative;
- identify suitable measures to manage, avoid or mitigate identified impacts; and
- identify residual risks that need to be managed and monitored.

STATEMENT OF INDEPENDENCE

Neither ETC nor any of the authors of this Report have any material present or contingent interest in the outcome of this Report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of ETC.

ETC has no beneficial interest in the outcome of the assessment which is capable of affecting its independence.

SPECIALIST DECLARATION

Full Name	Title/Position
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Experience (years):	4
Registration(s)	EAPASA: 2022/5305 SACNASP: 150157

I, Marvin Gabara, declare that: –

- I act as an independent specialist in this application;
- I will perform the work relating to the application objectively, 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 concerning 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 offense and is punishable by law.

16/0/2024

Signature of the Specialist Date

Findings, recommendations, and conclusions provided in this report are based on the best available scientific methods and the author's professional knowledge and information at the time of compilation. The author of this report, however, accepts no liability for any actions, claims, demands, losses, liabilities, costs, damages, and expenses arising from or in connection with services rendered, and by the use of the information contained in this document.

No form of this report may be amended or extended without the prior written consent of the author and/or a relevant reference to the report by the inclusion of an appropriately detailed citation.

Any recommendations, statements, or conclusions drawn from or based on this report must cite or refer to this report. Whenever such recommendations, statements or conclusions form part of the main report relating to the current investigation, this report must be included in its entirety.

SPECIALIST AFFIRMATION

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

31/07/2024

Signature of the Specialist Date

EXECUTIVE SUMMARY

INTRODUCTION

ETC was commissioned by NTC Group (Pty) Ltd (NTC) as the lead consultant to manage the Socio-Economic Impact Assessment (SIA) process for the establishment of the proposed Highveld North-West and Lowveld Strengthening Project Eskom Borutho-Silimela 400 kV Transmission Line. The length of the powerline is approximately 150km. The proposed power line is located between the Borutho Substation on farm Gillimberg 861 in Mokopane and runs south to the Silimela Substation on farm Loskop Noord 12, near Marble Hall within the Lepelle-Nkumpi, Mogalakwena, Modimolle-Mookgophong and Ephriam Mogale Local Municipalities, Limpopo Province.

The construction of the power line will aid Eskom in strengthening the power supply transmission scope of work:

- Equip 1 x 400kV feeder bay at Borutho Substation for Silimela Line 1.
- Equip 1 x 400kV feeder bay at Silimela Substation for Borutho Line 1.
- Build approximately 150km 400kV line from Borutho Substation to Silimela Substation, with associated extensions at the terminal substations.

It is important to note that Silimela and Borutho substations have already been approved for construction under other Environmental Authorisations and as such, exist. Therefore, the proposed expansion works entail accommodation of 1 x 400kV feeder bay for Silimela Line 1 and 1 x 400kV feeder bay for Borutho Line 1. There will be no expansion of the existing terrace or substation boundaries.

Since the current Eskom network has reached capacity and cannot handle anticipated future demand, the proposed power line's construction is now required. Thus, to fortify the supply network in the area and thereby meet future demand driven by mines and rural development in the area, Eskom intends to reinforce the current network by building a 400 kV 165 km power line and related substation works. The proposed project spans approximately 16 km, and two possible routes have been determined.

The routes pass through a variety of agricultural, residential, and commercial regions that are all situated inside the local governments. The districts in Greater Sekhukhune, Capricorn, and Waterberg are District Municipalities. High rates of poverty, unemployment, and unequal income distribution along with comparatively poor service delivery describe these locations.

The project is divided into two phases: construction and operation. Most of the work will be focused on building the line. Construction will start with the footprint being pegged, then move on to building an access road, securing the servitude, excavating, preparing the tower foundation, and finally stringing the transmission cables. Eskom always needs access to the line during the project's operating phase to perform maintenance and repairs, which should happen twice a year on average.

There are several project-related consequences that were determined and evaluated for the building and operation phases of the project for each of the three possible routes. It was discovered that many of the problems that had been detected were related to the project's development phase and that they might be lessened by putting in place suitable mitigation measures.

A compromise between the project's supporters and the impacted parties will need to be established considering the project's social implications and the evident necessity to reinforce the local electrical grid. In addition, the technological constraints that such a project faces as well as the wider environmental risks it poses in terms of things like plants and animals as well as dangers to delicate natural areas must be considered. Because of the way the transmission line is designed, it is feasible to maintain a different route while attempting to adapt more locally to the circumstances at hand.

This report contains the findings of the SIA undertaken as part of the broader Environmental Impact Assessment (EIA) process.

APPROACH TO STUDY

The approach to the Basic Assessment Level SIA study is based on the Western Cape Department of Environmental Affairs and Development Planning Guidelines for Social Impact Assessment (February 2007). These guidelines are based on international best practices.

The key activities in the SIA process embodied in the guidelines include:

- Describing and obtaining an understanding of the proposed intervention (type, scale, and location), the settlements, and communities likely to be affected by the proposed project.
- Collecting baseline data on the current social and economic environment.
- Identifying the key potential social issues associated with the proposed project. This requires a site visit to the area and consultation with affected individuals and communities. As part of the process, a basic information document was prepared and made available to key interested and affected parties. The aim of the document was to inform the affected parties of the nature and activities associated with the construction and operation of the proposed development to enable them to better understand and comment on the potential social issues and impacts.
- Assessing and documenting the significance of social impacts associated with the proposed intervention.
- Identifying alternatives and mitigation measures.
- A site visit will be undertaken during the Assessment Phase of the SIA. The site visit will include interviews with interested and affected parties. Annexure A contains a list of the secondary information reviewed. Annexure B summarizes the assessment methodology used to assign significance ratings to the assessment process.

Preparation of a SIA Report for inclusion in the Scoping Report to be prepared for the project.

COLLECTION AND REVIEW OF EXISTING INFORMATION

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

- Project maps 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 Socio-economic upliftment and local economic development opportunities (as provided by the project proponent);
- Census Data (2022), and the Local Government Handbook (2019);
- Available literature pertaining to social issues associated with the development and operation of power plant, and associated infrastructure;
- 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; and
- Relevant legislation, guidelines, policies, plans, and frameworks.

The identification of potential social issues associated with the proposed Eskom Borutho-Silimela project is based on primary and secondary information about the area and visits to the relevant communities and town by field workers/members of the SIA study team.

KEY FINDINGS

From a social perspective it is concluded that the project is supported, but that mitigation measures should be implemented and adhered to. Positive and negative social impacts have been identified. The assessment of the key issues indicated that there are no negative impacts that can be classified as fatal flaws, and which are of such significance that it cannot be successfully mitigated. Positive impacts could be enhanced by implementing appropriate enhancement measures and through careful planning.

Based on the social assessment, the following general conclusions and findings can be made:

- The development of an overhead powerline is a critical step in addressing the socio-economic challenges faced by residents. The assessment identified key issues such as inadequate access to water, electricity, sanitation, and safety concerns. By developing these services, the project aims to improve living conditions, enhance safety, and provide equal opportunities for all residents.

- The proposed development aligns with the national, provincial, and local policy frameworks, emphasizing the importance of inclusive housing development, improved service delivery, and sustainable urban development. It supports the goals outlined in the National Development Plan and various housing policies, which prioritize the provision of basic services and the enhancement of living conditions in informal settlements.
- The development of an overhead powerline will have positive socio-economic impacts. Job creation is expected during the construction phase, stimulating local economic activity through the procurement of construction materials and services. It also offers opportunities for skills development and training for the local labour force, contributing to improved employment prospects and income generation. The project will result in enhanced access to basic services and amenities, improving the standard of living and quality of life for affected communities.
- The stakeholder engagement process played a vital role in shaping the project. Community members and other stakeholders provided valuable insights and feedback, highlighting the importance of basic services, job opportunities, and addressing major social issues. The overwhelming support for the proposed development underscores the recognition of its potential benefits in improving the socio-economic well-being of the community.
- Mitigation measures are necessary to address potential negative impacts associated with the construction and operational phases. Temporary inconveniences and disruptions during construction should be minimized through effective project management and communication. Challenges in managing and maintaining the formalized services effectively require the implementation of efficient management practices, ongoing monitoring, and community engagement. Measures should also be in place to manage and resolve potential conflicts or disputes related to the allocation of formalized services.
- The cumulative impacts of the project can contribute to sustained economic growth, improved infrastructure development, and enhanced local services. Economic growth will be driven by job creation, increased business activity, and revenue generation. Infrastructure development will result in improved transportation networks, utilities, and community facilities, enhancing access to services.
- However, the cumulative impacts also present challenges that need to be addressed. The increased demand on resources, including water, energy, and land, must be managed efficiently to prevent scarcity and environmental degradation. Measures should be in place to minimize social displacement and avoid exacerbating socio-economic inequalities. Environmental degradation, including habitat loss, pollution, and resource depletion, must be mitigated through robust environmental management strategies.
- The proposed Eskom Burotho-Silimela development in the Limpopo area is a crucial step in addressing socio-economic challenges, enhancing quality of life, promoting

equitable development, and creating sustainable opportunities for the community. By considering affordability, implementing mitigation measures, and engaging stakeholders, the project can maximize its positive impacts while minimizing any negative consequences. The project's alignment with policy frameworks and its potential to contribute to sustained economic growth, improved infrastructure, and enhanced local services make it a promising endeavour for the socio-economic development of the area.

CONCLUSION

During the Assessment Phase of the Socio-Economic Impact Assessment (SIA), a comprehensive site visit was conducted to gather valuable insights and engage with key stakeholders and interested and affected parties. The site visit involved conducting semi-structured interviews to ensure a systematic and informative exchange of information.

The primary objective of the site visit was to provide stakeholders with a clear understanding of the proposed development, including its location, scope, and planned activities during both the construction and operational phases. To facilitate effective communication, visual aids such as maps and diagrams were utilized to illustrate the project's spatial aspects and provide stakeholders with a tangible representation of the planned development.

Through the semi-structured interviews, key stakeholders had the opportunity to express their opinions, concerns, and perceptions regarding the project's social impacts. The discussions during the site visit aimed to capture a broad range of perspectives and ensure that stakeholders' voices were heard and considered in the assessment process.

The feedback received from the site visit/interviews plays a crucial role in informing the analysis of the project's social impacts. By incorporating stakeholder perceptions and concerns, the assessment can provide a comprehensive understanding of the potential positive and negative socio-economic effects associated with the proposed development.

Through a rigorous review of policies, stakeholder engagement processes, and data analysis, this assessment has identified key socio-economic issues at various levels and examined the positive and negative impacts during the construction and operational phases.

At the district and local levels, the assessment identified challenges related to infrastructure, basic service provision, economic opportunities, and community development. These findings highlight the importance of coordination, capacity building, and effective implementation at the local level. By engaging with local municipalities, addressing land tenure issues, and ensuring transparency and accountability, the project can promote sustainable development and enhance the quality of life in the target communities.

The assessment also acknowledged the significance of enhanced access to basic services, amenities, and infrastructure development in informal settlements. These positive impacts can lead to improved living conditions, increased social inclusion, and enhanced community development. However, it is crucial to address potential challenges such as temporary inconveniences, disruptions to local businesses, and the risk of short-term social and economic challenges for affected residents. By implementing mitigation measures, such as

effective project scheduling, stakeholder engagement, and support mechanisms, these negative impacts can be minimized.

The findings of this assessment underscore the importance of stakeholder engagement, transparency, and coordination among relevant government departments and agencies. The involvement of stakeholders throughout the assessment process has ensured that diverse perspectives, concerns, and aspirations have been considered. Mitigation and enhancement measures specific to the project have been identified to address the identified impacts and maximize the project's positive outcomes.

The socio-economic impact assessment has provided a comprehensive understanding of the potential social and economic effects associated with the development of a powerline. By identifying key issues, assessing impacts, and recommending mitigation measures, the assessment serves as a valuable tool for decision-making, policy development, and project implementation. The project, when effectively executed with the incorporation of mitigation measures, has the potential to address socio-economic disparities, enhance quality of life, and promote sustainable development in the target communities.

The proposed project is unlikely to result in permanent damaging social impacts. From a social perspective, it is concluded that the project is acceptable subject to the implementation of the recommended mitigation and enhancement measures and management actions identified for the project. Considering the findings of the report and the potential for mitigation and management of impacts, it is the reasoned opinion of the specialist that the project can be authorised.

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LIST OF ABBREVIATIONS

Abbreviations	Description
DFFE	Department of Forestry, Fisheries and the Environment
DoE	Department of Energy
DM	District Municipality
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GDP	Gross Domestic Product
GNR	Government Notice
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IEP	Integrated Energy Plan
IRP	Integrated Resource Plan
km	Kilometre
LM	Local Municipality
NDP	National Development Plan
NEMA	National Environmental Management Act (No. 107 of 1998)
O&M	Operation and Maintenance
PGDS	Provincial Growth and Development Strategy
PICC	Presidential Infrastructure Coordinating Committee
PSDF	Provincial Spatial Development Framework
SDF	Spatial Development Framework
SIA	Social Impact Assessment

SPECIALIST CHECKLIST

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
	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.	Specialist Details
b	a declaration that the specialist is independent in a form as may be specified by the competent authority;	Specialist Declaration
c	an indication of the scope of, and the purpose for which, the report was prepared;	Section 1
	an indication of the quality and age of base data used for the specialist report	Section 1.3
	a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 7
d	the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 3
e	a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 3
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 alternative;	Section 6.2
g	an identification of any areas to be avoided, including buffers;	Section 7.2
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;	Section 5.2
I	a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.5
j	a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 9.1
k	any mitigation measures for inclusion in the EMPr;	Section 8
l	any conditions for inclusion in the environmental authorisation;	Section 7
m	any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Section 8

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
n	a reasoned opinion— I. whether the proposed activity, activities or portions thereof should be authorised. II. regarding the acceptability of the proposed activity or activities; and III. if the opinion is that the proposed activity, activities 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.	Section 9.2
o	a description of any consultation process that was undertaken during the course of preparing the specialist report;	Section 4.2
p	a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	Section 9.3 Photo 1 Appendix A
q	any other information requested by the competent authority.	N/A

1 Background

ETC was commissioned by NTC Group (Pty) Ltd as the lead consultant to manage the Socio-economic Impact Assessment (SIA) process for the establishment of the proposed Highveld North-West and Lowveld Strengthening Project Eskom Borutho-Silimela 400 kV Transmission Line and Associated Infrastructure within the Limpopo Province.

This report contains the findings of the SIA undertaken as part of the broader EIA process.

1.1 Terms of Reference

A specialist study is required to establish the socio-economic baseline and to identify and potential Socio-economic impacts arising from the proposed development based on the general requirements for a comprehensive SIA. The SIA has been completed in terms of NEMA Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) Appendix 6: Specialist Reports.

The following terms of reference were established:

- **Baseline Study**: Conduct a socio-economic baseline study to understand the current conditions in the project area.
- **Stakeholder Engagement**: Identify and engage with key stakeholders to understand their views and concerns related to the project.
- **Impact Assessment**: Identify and assess potential socio-economic impacts, both positive and negative, arising from the project.
- **Mitigation and Enhancement**: Develop measures to mitigate negative impacts and strategies to enhance positive impacts.
- **Monitoring Plan**: Develop a plan to track the implementation of measures and monitor actual Socio-economic impacts post-project.
- **Compliance**: Ensure the SIA complies with relevant legislation, guidelines, and best practices.
- **Reporting**: Prepare a comprehensive, clear, and concise SIA report suitable for submission to relevant authorities.

1.1.1 Objectives of Study

This SIA Report has been prepared as part of the Basic Assessment (BA) process being undertaken for Highveld North-West and Lowveld Strengthening Project Eskom Borutho-Silimela 400 kV Transmission Line and associated infrastructure. The purpose of this SIA Report is to provide details on the nature and extent of development and the potential Socio-economic impacts associated with the construction, operation, and decommissioning of the project. The inputs contained within this SIA Report are intended to provide a high-level overview of the Socio-economic environment within which the project is proposed and identify potential Socio-

economic issues which will be addressed in detail as part of the BA process specialist investigations.

The objective of this SIA Report is therefore to:

- Identify and review policies and legislation which may have relevance to the activity from a Socio-economic perspective.
- Provide comment on the need and desirability of the proposed activity from a Socio-economic perspective.
- Identify potential impacts and risks associated with the preferred activity and technology alternatives.
- Identify key socio-economic issues to be addressed in the BA phase.
- Agree on the level of assessment to be undertaken, including the methodology to be applied to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site.
- Identify suitable measures to avoid, manage or mitigate identified Socio-economic impacts and determine the extent of residual risks that need to be managed and monitored.

1.2 Structure of the Report

The report is organised into nine sections:

- Section 1: Background;

1.3 Section 1.7: Level of Confidence

Level of confidence is determined as a function of:

The information available, and understanding of the study area by the practitioner:

- 3: A high level of information is available of the study area and a thorough knowledge base could be established during site visits, surveys etc. The study area was readily accessible.
- 2: A moderate level of information is available of the study area and a moderate knowledge base could be established during site visits, surveys etc. Accessibility to the study area was acceptable for the level of assessment.
- 1: Limited information is available of the study area and a poor knowledge base could be established during site visits and/or surveys, or no site visit and/or surveys were carried out.

The information available, understanding of the study area and experience of this type of project by the practitioner:

- 3: A high level of information and knowledge is available of the project and the visual impact assessor is well experienced in this type of project and level of assessment.
- 2: A moderate level of information and knowledge is available of the project and/or the visual impact assessor is moderately experienced in this type of project and level of assessment.
- 1: Limited information and knowledge is available of the project and/or the visual impact assessor has a low experience level in this type of project and level of assessment.

The level of confidence for this assessment is determined to be 9 and indicates that the author's confidence in the accuracy of the findings is high:

- The information available, and understanding of the study area by the practitioner is rated as 3 and
- The information available, understanding and experience of this type of project by the practitioner is rated as 3.
- Project Description;

1.4 Section 2.4: Proposed Route Deviation

The original route for the Borutho-Silimela 400kV transmission line, as depicted in Figure 1, required a deviation due to several factors identified during the preliminary assessment phase. The proposed deviation is illustrated in the updated maps within this report, which show the adjusted route of the transmission line.

The deviation was proposed for the following reasons:

- Landowner Agreements: Negotiations with landowners along the original route revealed concerns and preferences that were addressed by modifying the route to achieve better alignment with land use plans and agreements.
- Technical and Safety Considerations: Engineering assessments indicated that certain sections of the original route presented challenges related to terrain and infrastructure safety. The deviation provides a more feasible path, ensuring safer construction and operation of the transmission line.

The deviation impacts several aspects of the project:

- Environmental Impact: By avoiding sensitive areas, the deviation reduces potential negative impacts on local ecosystems.

- Social Impact: The adjusted route considers the concerns of local communities and landowners, thereby enhancing stakeholder acceptance and reducing potential conflicts.
- Project Cost and Timeline: While the deviation may alter the project timeline and cost, these adjustments are justified by the long-term benefits of improved environmental compliance and stakeholder relations.

2 Approach and Methodology

2.1 Definition of Social Impacts

"The consequences to human populations of any public or private actions (including policies, programs, plans, and/or projects) that alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally live and cope as members of society." These effects are felt at various levels, including the individual, family or household, community, organization, or society. Some social impacts are physically felt by the body, whereas others are perceptual or emotional" (Vanclay, 2002).

It can therefore be deduced that social change is natural and ongoing when considering social impacts (Burdge, 1995). It's also important to realize that government and private sector policies, plans, programs, and projects can affect social change's pace and direction. Social impacts are often change processes (Vanclay, 2002). For instance, temporary construction workers don't affect society. However, their presence can increase antisocial behaviour and other social issues. Understanding processes with social impacts is Vanclay's approach. Social assessment specialists must consider the complex causal mechanisms that cause social impacts. Following impact pathways, or causal chains, and considering likely interactions can reveal the full range of impacts (Vanclay, 2002).

A SIA should thus enable authorities, project proponents, individuals, communities, and organizations to understand and anticipate the potential social consequences of implementing a proposed policy, program, plan, or project. The SIA process should inform communities and individuals about the proposed project and its potential social consequences, while also allowing them to assess the implications and identify potential alternatives. The assessment process should also alert proponents and planners to the likelihood and nature of social impacts, allowing them to anticipate and predict these impacts ahead of time, so that the assessment's findings and recommendations are incorporated into and inform the planning and decision-making process.

However, the issue of social impacts is complicated by the way in which different people from different cultural, ethic, religious, gender, and educational backgrounds, etc. view the world. This is referred to as the “social construct of reality”. The social construct of reality informs people’s worldview and the way in which they react to changes.

2.2 Approach to Study

The approach to the Basic Assessment Level SIA study is based on the Western Cape Department of Environmental Affairs and Development Planning Guidelines for Social Impact Assessment (February 2007). These guidelines are based on international best practice. The key activities in the SIA process embodied in the guidelines include:

- Describing and obtaining an understanding of the proposed intervention (type, scale, and location), the settlements, and communities likely to be affected by the proposed project.

- Collecting baseline data on the current social and economic environment.
- Identifying the key potential socio-economic issues associated with the proposed project. This requires a site visit to the area and consultation with affected individuals and communities. As part of the process a basic information document was prepared and made available to key interested and affected parties. The aim of the document was to inform the affected parties of the nature and activities associated with the construction and operation of the proposed development to enable them to better understand and comment on the potential socio-economic issues and impacts.
- Assessing and documenting the significance of socio-economic impacts associated with the proposed intervention.
- Identifying alternatives and mitigation measures.
- A site visit will be undertaken during the Assessment Phase of the SIA. The site visit will include interviews with interested and affected parties.
- Preparation of a SIA Report for inclusion in the BA Report to be prepared for the project.

2.2.1 Collection and Review of Existing Information

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

- Project maps 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 socio-economic upliftment and local economic development opportunities (as provided by the project proponent).
- Census Data (2016), 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 400kv powerline and associated infrastructure.

The identification of potential social issues associated with the proposed development is based on primary and secondary information about the area and visits to the relevant communities and town by field workers/members of the SIA study team. Annexure A contains a list of the secondary information reviewed and interviews conducted. Annexure B

summarises the assessment methodology used to assign significance ratings to the assessment process.

2.2.2 Timing of Social Impacts

Social impacts vary in both time and space. In terms of timing, all projects and policies go through a series of phases, usually starting with initial planning, followed by implementation (construction), operation, and finally closure (decommissioning). The activities, and hence the type and duration of the socio-economic impacts associated with each of these phases are likely to differ.

2.3 Reporting

2.3.1 Baseline Report

Based on the information collected through the desktop review, engagement with and information from other specialist studies, a socio-economic baseline profile was compiled for the respective study areas defined in Section 5. Topics considered as part of this profile include (but are not limited to) the following:

- Population;
- Education;
- Economy;
- Employment;
- Income and Poverty; and
- Human Development.

2.3.2 Impact Assessment

The assessment of the socio-economic impacts identified for the proposed Project is based on an impact rating process designed to provide a numerical rating of the significance of each impact. The significance rating process follows the established impact / risk assessment formula where significance is a function of the consequence of an event multiplied by the probability of its occurrence.

The following steps were undertaken as part of the impact assessment:

- Impact identification and assessment: Based on the anticipated interaction between specific and / or collective project activities and baseline socio-economic conditions, several potential impacts were identified for each phase of the Project; and
- Impact mitigation: realistic measures were developed aimed at mitigating, and if possible, avoiding the negative social impacts, and enhancing the benefits of positive social impacts.

2.4 Assessment Criteria

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

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high).
- The duration, wherein it will be indicated whether:

  the lifetime of the impact will be of a very short duration (0 – 1 years) – assigned a score of 1;

  the lifetime of the impact will be of a short duration (2 – 5 years) – assigned a score of 2;

  medium-term (5 – 15 years) – assigned a score of 3;

  long term (> 15 years) – assigned a score of 4; or

  permanent – assigned a score of 5;
- The magnitude, quantified on a scale from 0 – 10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The probability of occurrence, which shall describe the likelihood of the impact occurring. Probability will be estimated on a scale of 1 – 5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- The significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
- The status, which will be described as either positive, negative or neutral.
- The degree to which the impact can be reversed.
- The degree to which the impact may cause irreplaceable loss of resources.
- The degree to which the impact can be mitigated.

The **significance** is calculated by combining the criteria in the following formula: S=(E+D+M)P

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

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

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

The summarising of assessment impacts in a prescribed table format including the rating values as per above criteria. Measures for inclusion in the Environmental Management Programme.

- Legislation and Policy Review;

2.5 Section 3.4: Proposed Route Deviation

The original route for the Borutho-Silimela 400kV transmission line, as depicted in Figure 1, required a deviation due to several factors identified during the preliminary assessment phase. The proposed deviation is illustrated in the updated maps within this report, which show the adjusted route of the transmission line.

The deviation was proposed for the following reasons:

- Landowner Agreements: Negotiations with landowners along the original route revealed concerns and preferences that were addressed by modifying the route to achieve better alignment with land use plans and agreements.
- Technical and Safety Considerations: Engineering assessments indicated that certain sections of the original route presented challenges related to terrain and infrastructure safety. The deviation provides a more feasible path, ensuring safer construction and operation of the transmission line.

The deviation impacts several aspects of the project:

- Environmental Impact: By avoiding sensitive areas, the deviation reduces potential negative impacts on local ecosystems.

- Social Impact: The adjusted route considers the concerns of local communities and landowners, thereby enhancing stakeholder acceptance and reducing potential conflicts.
- Project Cost and Timeline: While the deviation may alter the project timeline and cost, these adjustments are justified by the long-term benefits of improved environmental compliance and stakeholder relations.
- Approach and Methodology;
- Section 6: Socio-Economic Profile
- Section 7: Key Social Impacts

2.6 Section ●: Identification of Key Social Issues

The identification of key socio-economic issues is a crucial component of any development project, as it provides valuable insights into the challenges and needs of the community. In the context of the proposed project for the development of a powerline understanding the socio-economic landscape is essential to ensure that the project effectively addresses the most pressing concerns of the community

The following key socio-economic issues were found to be relevant for the proposed project based on the desktop and literature review done:

National Level:

- Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) (Constitution)
- The National Environmental Management Act (107 of 1998) (NEMA)
- The National Energy Act (34 of 2008)
- The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended.
- National Development Plan (2030)
- White Paper on the Energy Policy of the Republic of South Africa (1998)
- National Integrated Resource Plan for South Africa (2010-2030)
- Strategic Infrastructure Projects (SIPs)
- Social Impact Assessment: Guidance document (2015)
- Guideline for Involving Social Assessment Specialists in EIA Processes (Barbour, 2007)

Provincial Level:

- Limpopo Department of Socio-Economic Development Annual Performance Plan (2023 – 2024);

- Limpopo Socio-Economic Review and Outlook (Sero) (2022/2023);
- Limpopo Provincial Spatial Development Framework (2030).
- Limpopo Development Plan (LDP) (2020 – 2025);

Municipal Level:

- The Capricorn District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024
- The Lepelle-Nkumpi Local Municipality (LNDM) Draft Integrated Development Plan (IDP) 2022/2023
- The Waterberg District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024
- Mogalakwena Final Local Municipality Integrated Development Plan IDP (2023/2024)
- Modimolle-Mookgophong Draft Local Municipality Integrated Development Plan IDP (2022/2023)
- Sekhukhune District Municipality (SDM) Final Integrated Development Plan (IDP) (2022/2023)
- Ephraim Mogale Draft Local Municipality Integrated Development Plan IDP (2023/2024)
- Impacts and Assessment
- Section 9: Monitoring and Compliance (EMPr)
- Section 10: Environmental Impact Statement
- Section 11: References

2.7 Information Base

The following information was used to conduct the SIA:

- Documentation and KML files supplied by the client;
- Terms of Reference (ToR) for the socio-economic specialist;
- Photographs, interviews, and information captured during the site visit;
- Google Earth software and data (aerial imagery - 2018);
- Sentinel-2 Satellite Imagery (2018);
- SRTM Digital Elevation Model;
- Census data and other socio-economic statistics;
- Stakeholder engagement records and feedback;
- Relevant legislation, guidelines, and best practices for Socio-economic impact assessment.

2.8 Seasonal Change

In terms of Appendix 6 of the 2014 EIA Regulations, a specialist report must contain information on "the date and season of the site investigation and the relevance of the season to the outcome of the assessment". The site visit was undertaken in 20th of May 2023. The season in which the site visit was undertaken does not have any considerable effect on the significance of the impacts identified, the mitigation measures, or the conclusions of the assessment, since the vegetation cover does not vary significantly over the seasons.

2.9 Limitations and Assumptions

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

- It was assumed that information provided by NTC Group (Pty) Ltd was accurate and that the technical specifications of the Project and site selection are in accordance with the relevant requirements.
- The assessment has been based on the requirements of the Limpopo of Environmental Affairs & Development Planning Guidelines.
- The assessment assumes that all necessary consultations with stakeholders, including local communities, authorities, and other interested parties, have been / will be conducted in accordance with legal requirements, and that their views and concerns have been duly considered.
- Whilst most homesteads and housing areas were visited during the site visit in order to confirm their nature and likely socio-economic of the development, it was not possible to visit all homesteads and housing areas.

- The Project report uses the concept of 'worst case scenario' to identify issues and rate socio-economic impacts.
- Regulation 11(3) of the EIA Regulations, which suggests that if more than one activity is part of the same development, a single application may be required, discourages the practice of splitting components or assessing them in isolation, thereby promoting a unified and integrated approach to cumulative impact assessment.
- This report and assessment are dependent on the accuracy of the publicly available secondary information such as Statistics South Africa (Stats SA, 2022).
- This SIA Report was prepared based on information that was available to the specialist at the time of preparing the report. The sources consulted are not exhaustive, and the possibility exists that additional information which might strengthen arguments, contradict information in this report, and/or identify additional information might exist.
- Some of the project projections reflected in this SIA Report may be subject to change, and therefore may be higher or lower than those estimated by the project proponent.
- It is assumed that the motivation for the planning and feasibility study of the project were undertaken with integrity, and that information provided by the project proponent was accurate and true at the time of preparing this SIA Report.
- The responsibility for implementing the recommendations, mitigation measures, and any other actions outlined in this report lies solely with the client or project proponent. The SIA practitioners are not responsible for monitoring, enforcing, or ensuring compliance with these measures. It is the client's duty to ensure that all necessary permits, approvals, and consents are obtained, and that the project is carried out in accordance with all applicable laws, regulations, and standards. Any deviations from the recommendations or failure to implement the suggested measures may result in different impacts and outcomes than those described in this report.

2.10 Specialist Details

ETC is a 100% woman-owned, private company that specializes in a range of specialist studies, such as socio-economic research, economic development planning, development program design and implementation as well as community trust management. Based across South Africa, Eco-Thunder has established itself as an expert on the conditions, needs and assets of communities that are linked to independent power generation facilities.

ETC has conducted research on behalf of and advised IPPs since 2017. Its client base is thus comprised of IPPs that have been successful across all the REIPPPP bidding rounds. ETC also implements development programs in energy communities, which ensures a comprehensive understanding of the how to drive positive socio-economic impact.

2.11 Level of Confidence

Level of confidence is determined as a function of:

The information available, and understanding of the study area by the practitioner:

- 3: A high level of information is available of the study area and a thorough knowledge base could be established during site visits, surveys etc. The study area was readily accessible.
- 2: A moderate level of information is available of the study area and a moderate knowledge base could be established during site visits, surveys etc. Accessibility to the study area was acceptable for the level of assessment.
- 1: Limited information is available of the study area and a poor knowledge base could be established during site visits and/or surveys, or no site visit and/or surveys were carried out.

The information available, understanding of the study area and experience of this type of project by the practitioner:

- 3: A high level of information and knowledge is available of the project and the visual impact assessor is well experienced in this type of project and level of assessment.
- 2: A moderate level of information and knowledge is available of the project and/or the visual impact assessor is moderately experienced in this type of project and level of assessment.
- 1: Limited information and knowledge is available of the project and/or the visual impact assessor has a low experience level in this type of project and level of assessment.

The level of confidence for this assessment is determined to be 9 and indicates that the author's confidence in the accuracy of the findings is high:

- The information available, and understanding of the study area by the practitioner is rated as 3 and
- The information available, understanding and experience of this type of project by the practitioner is rated as 3.

3 Project Description

3.1 Introduction

NTC Group (Pty) Ltd has enlisted the services of Eco Thunder Consulting (Pty) Ltd (referred to as "ETC") as the lead consultant to undertake the Social Impact Assessment (SIA) for the establishment of the proposed ±150km 400kV transmission power line from the Borutho Substation on farm Gillimberg 861 in Mokopane and runs south to the Silimela Substation on farm Loskop Noord 12, near Marble Hall within the Lepelle-Nkumpi, Mogalakwena, Modimolle-Mookgophong and Ephriam Mogale Local Municipalities, Limpopo Province.

The construction of the power line will aid Eskom in strengthening the power supply transmission of the scope of work:

- Equip 1 x 400kV feeder bay at Borutho Substation for Silimela Line 1.
- Equip 1 x 400kV feeder bay at Silimela Substation for Borutho Line 1.
- Build approximately 150km 400kV line from Borutho Substation to Silimela Substation, with associated extensions at the terminal substations.

This development includes associated infrastructure to integrate the new transmission power line into the Transmission grid (such as access roads, relocation of existing lines, etc) and accommodate the new line into the substations (such as the construction of new feeder bays).

Eskom Holdings SOC Ltd is responsible for the provision of reliable and affordable power to its consumers in South Africa. Electricity cannot be stored and therefore must be used as it is generated. Electricity is generated in accordance with supply-demand requirements.

In South Africa, thousands of kilometres of high voltage transmission lines (i.e. 765kV or 400kV transmission lines) transmit this power, which is mainly generated at the power stations located within Mpumalanga and Limpopo Provinces, to Eskom's major substations. At these major substations, the voltage is reduced, and distributed to smaller substations all over the country through distribution lines (i.e. 132kV, 88kV or 66kV distribution power lines). Here the voltage is reduced and distributed to local substations, which distribute the power via numerous small lines (i.e. 22kV and 11kV distribution power lines) to local users. The power generated by Eskom can only be utilised from those points of supply, voltage, and the ability to transform the power into a usable voltage.

The SIA primarily focuses on the potential social impacts of the proposed development, considering factors such as changes to local employment, community cohesion, access to services and facilities, and health and wellbeing. It also considers the potential cumulative social impacts, taking into account other existing, planned, or reasonably foreseeable developments in the area.

3.2 Project Location

Table 1, and Figure 1 to Figure 5 provide details pertaining to the proposed project location.

Table 1: Project Location

Province	Districts Municipalities	Local Municipalities	Wards	Nearby Communities
Limpopo	Capricorn	Lepelle-Nkumpi	9	Zebediela
	Waterberg	Mogalakwena	12, 13, 16, 18, 20, 32	Ga-Mashashane, Ga-Mapela, Mokopane, Ga-Taueatswala, Mokerong
		Modimolle-Mookgophong	14	Mookgophong, Modimolle
	Greater Sekhukhune	Ephraim Mogale	5	Marble Hall, Manapsane, Moganyaka.

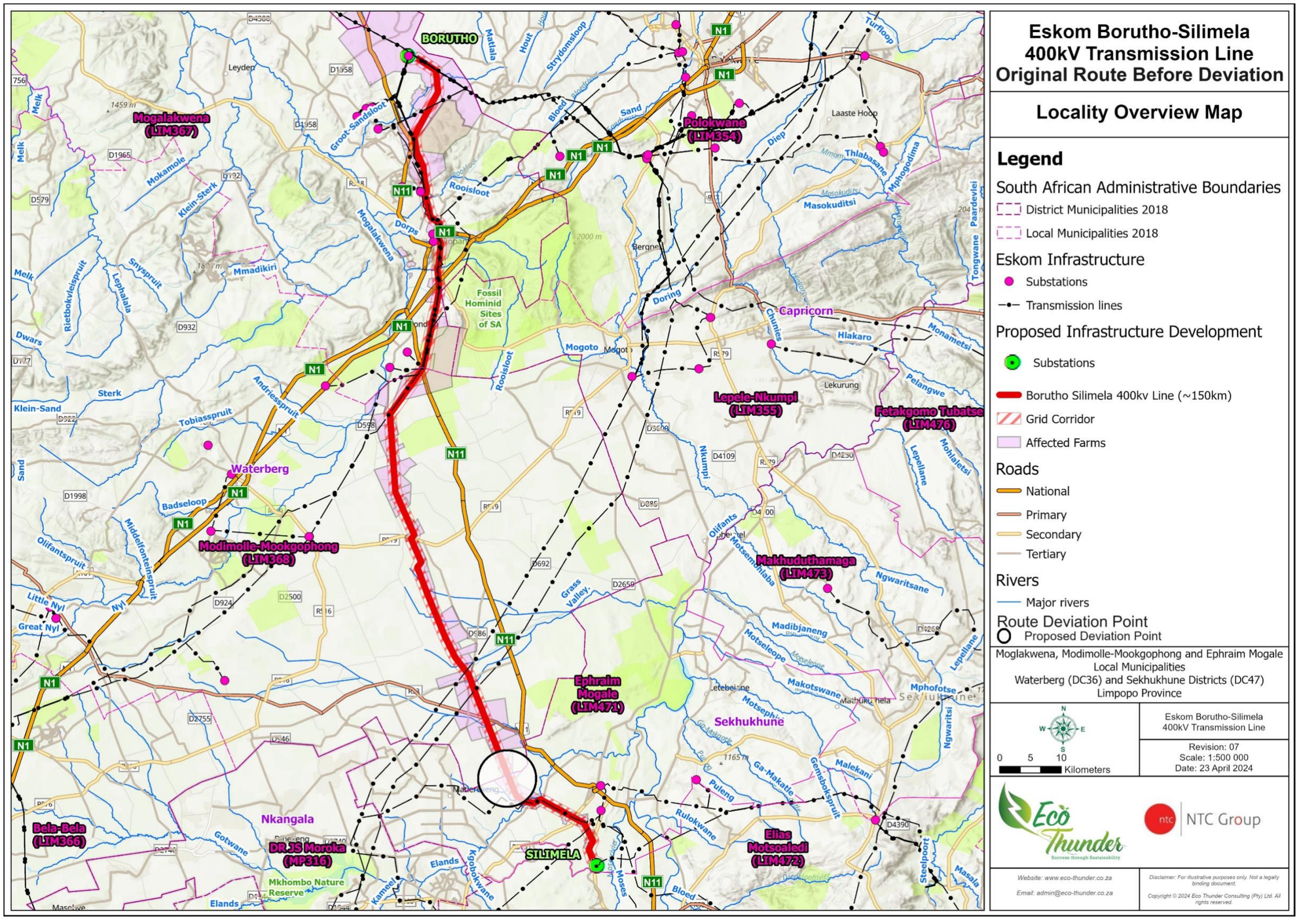

Figure 1: Locality Map: Overview: Original Route Before Deviation

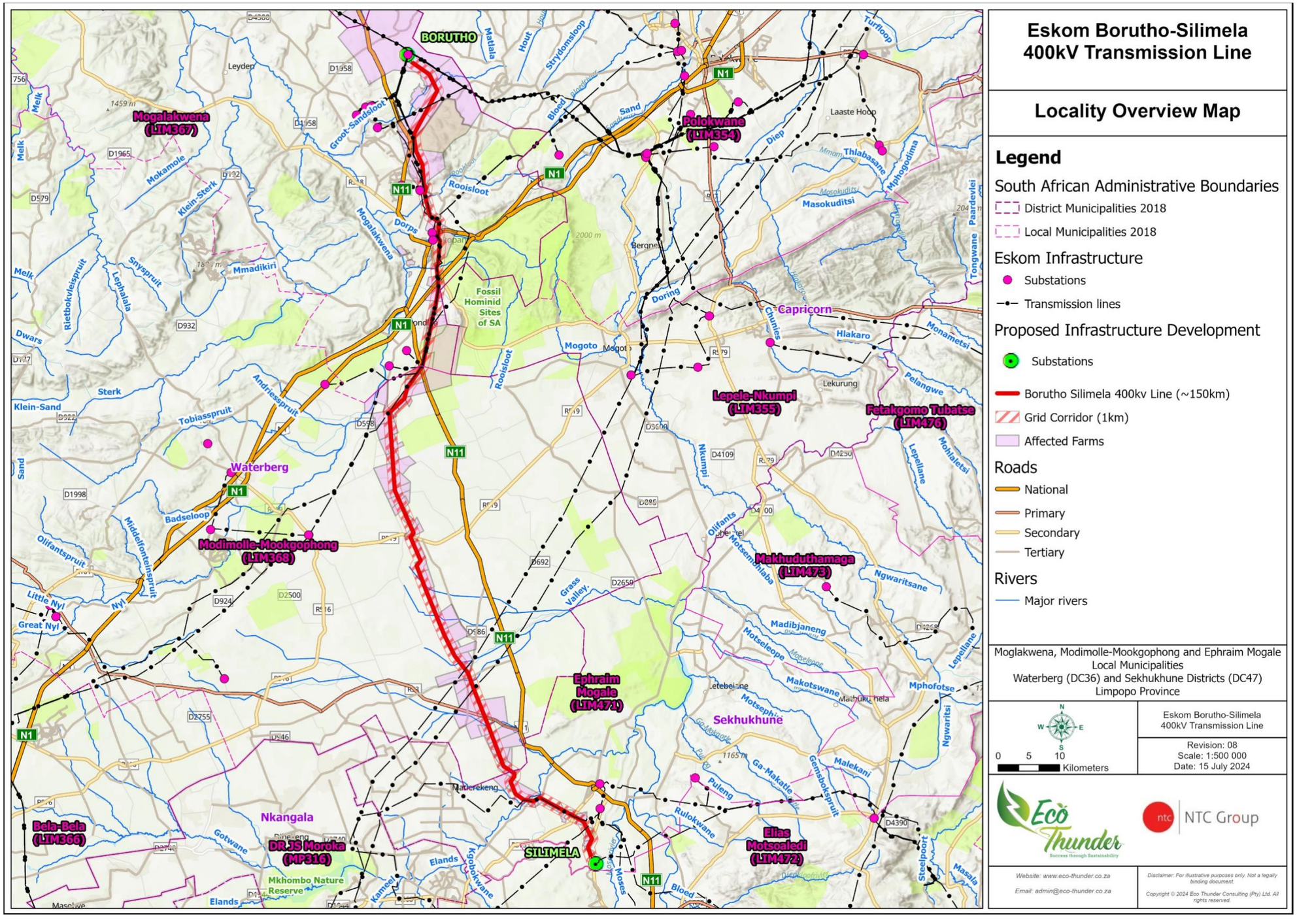
BORUTHO
Mogalakwena (LIM367)
Polokwane (LIM354)
Capricorn
Lepele-Nkumpi (LIM355)
Fetakgomo Tubatse (LIM476)
Waterberg
Modimolle-Mookgophong (LIM368)
Ephraim Mogale (LIM471)
Sekhukhune
Makhuduthamaga (LIM473)
Elias Motsoaledi (LIM472)
Bela-Bela (LIM366)
DR JS Moroka (MP316)
Nkangala
SILIMELA
Fossil Hominid Sites of SA
Mkhombo Nature Reserve
N1
N11
Eskom Borutho-Silimela 400kV Transmission Line
Locality Overview Map
Legend
South African Administrative Boundaries
District Municipalities 2018
Local Municipalities 2018
Eskom Infrastructure
Substations
Transmission lines
Proposed Infrastructure Development
Substations
Borutho Silimela 400kv Line (~150km)
Grid Corridor (1km)
Affected Farms
Roads
National
Primary
Secondary
Tertiary
Rivers
Major rivers
Moglakwena, Modimolle-Mookgophong and Ephraim Mogale Local Municipalities
Waterberg (DC36) and Sekhukhune Districts (DC47)
Limpopo Province
0 5 10 Kilometers
Eskom Borutho-Silimela 400kV Transmission Line
Revision: 08
Scale: 1:500 000
Date: 15 July 2024
Website: www.eco-thunder.co.za
Email: admin@eco-thunder.co.za
Disclaimer: For illustrative purposes only. Not a legally binding document.
Copyright © 2024 Eco Thunder Consulting (Pty) Ltd. All rights reserved.

Figure 2: Locality Map: Overview

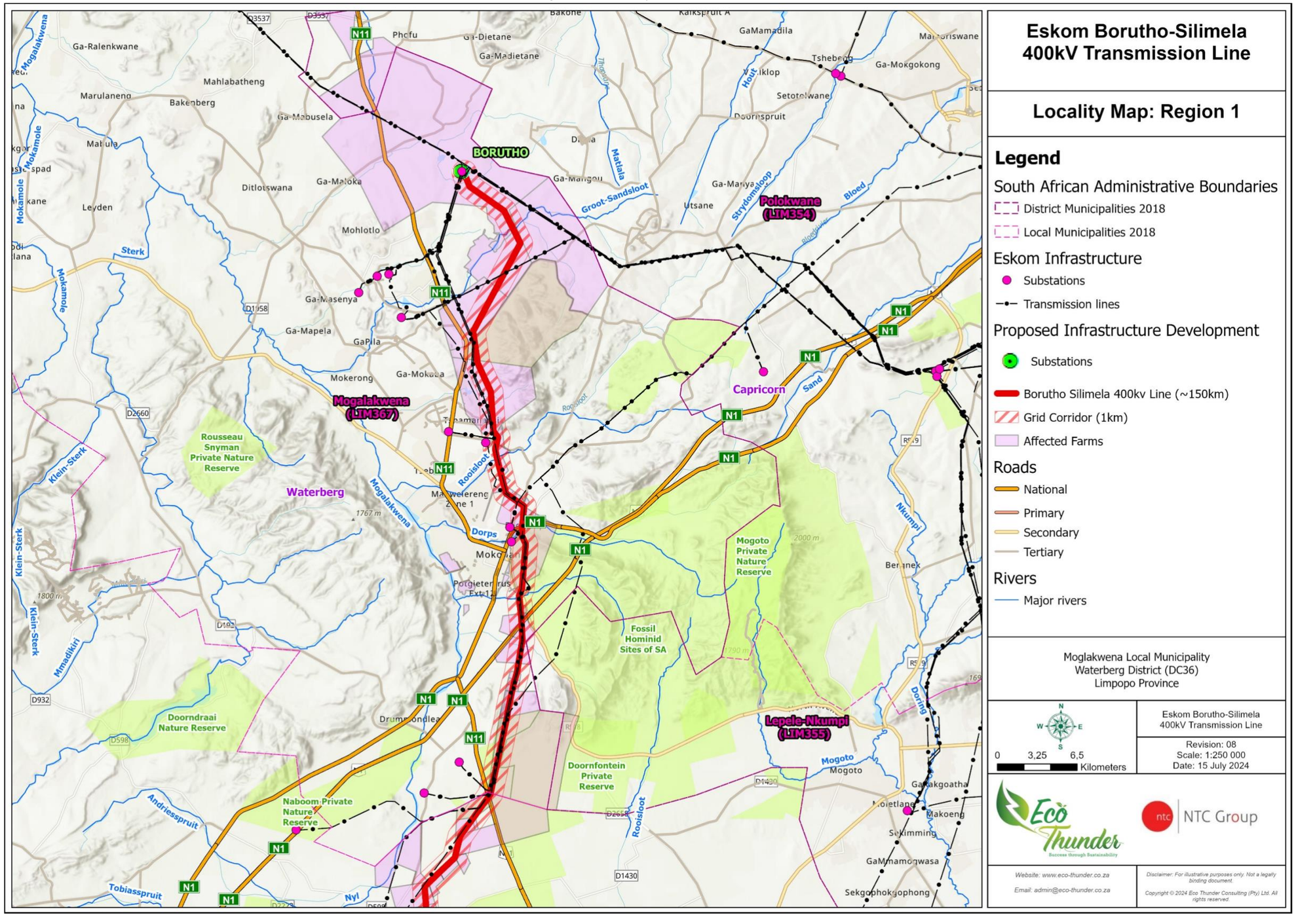

Figure 3: Locality Map: Region 1

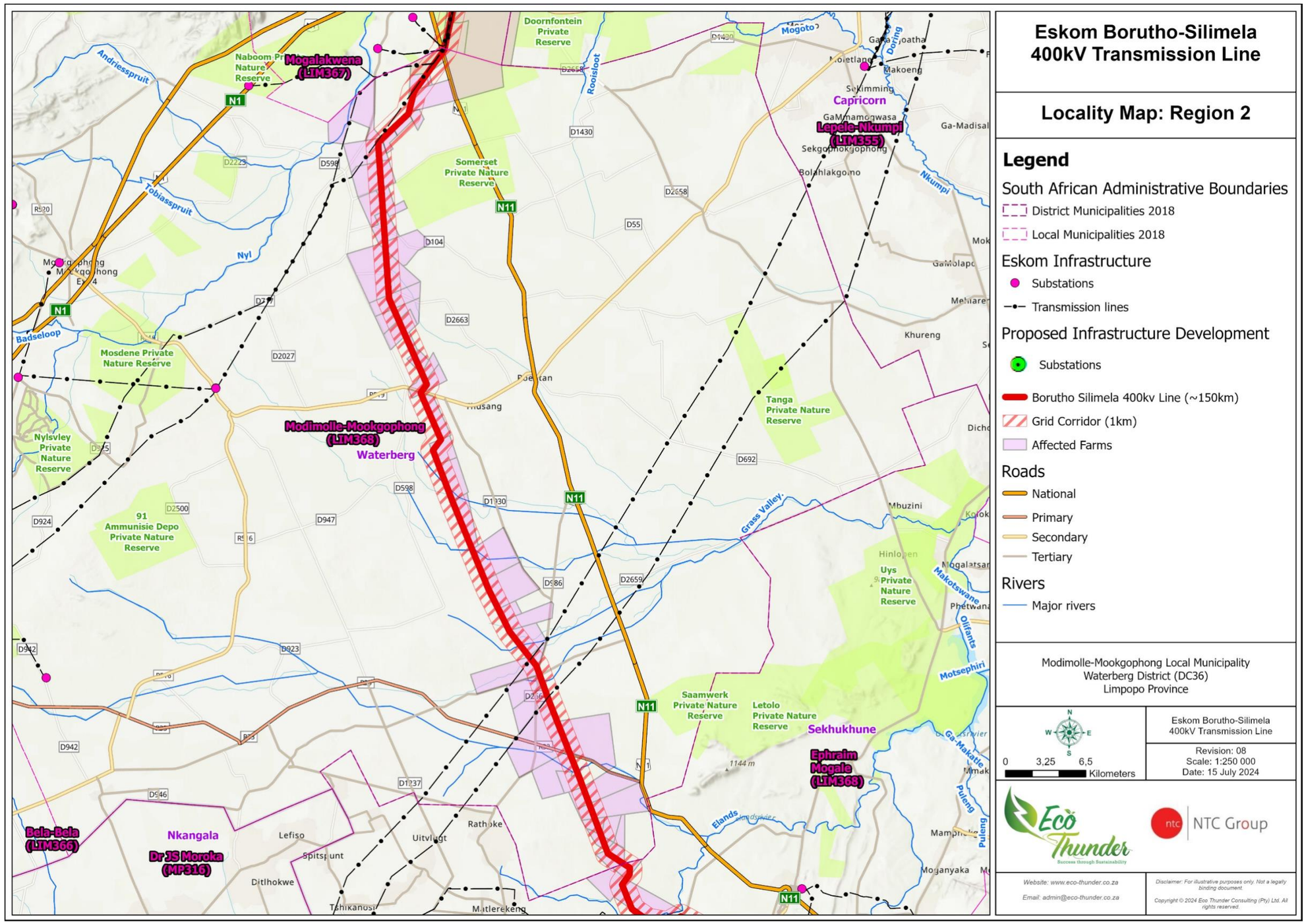

Figure 4: Locality Map: Region 2

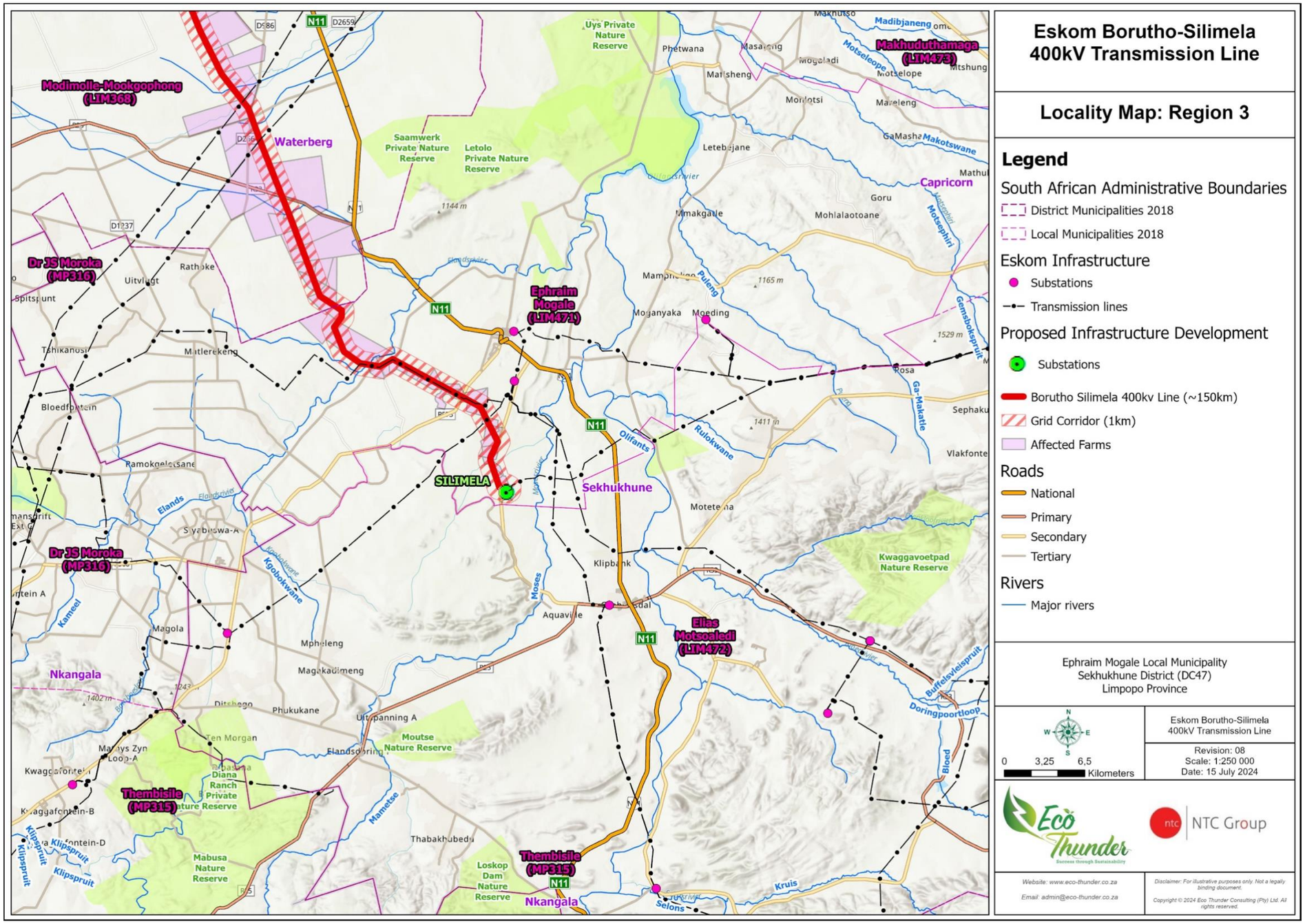

Figure 5: Locality Map: Region 3

3.3 Project Technical Details

The proposed power line is located between the Borutho Substation on farm Gillimberg 861 in Mokopane and runs south to the Silimela Substation on farm Loskop Noord 12, near Marble Hall within the Lepelle-Nkumpi, Mogalakwena, Modimolle-Mookgophong and Ephriam Mogale Local Municipalities, Limpopo Province.

The construction of the power line will aid Eskom in strengthening the power supply transmission scope of work:

- Equip 1 x 400kV feeder bay at Borutho Substation for Silimela Line 1.
- Equip 1 x 400kV feeder bay at Silimela Substation for Borutho Line 1.
- Build approximately 150km 400kV line from Borutho Substation to Silimela Substation, with associated extensions at the terminal substations.
- The powerline corridor to be studied is 250m.

A power line typically consists of pylons, which are tower-like structures that support electrical cables above the ground. The distance between each pylon is dependent on the type of terrain the lines cross. The standard width of a servitude for a 400kV Transmission line is 55m (27.5m on either side of the power line). Towers for the proposed powerline would be between 29m and 40m in height. In general, the type of towers to be used would consider weight, the area (e.g. topography characteristic), height, costs and erection time. In addition, from an engineering perspective, transmission powerline routes are planned with as few bends as possible.

The cross-rope and self-supporting suspension towers are typical of most single structures, having been developed to support 400kV lines. In order for maintenance staff to access the lines and undertake routine maintenance or repair faults, it may be necessary to construct access roads. The types of pylons chosen for the project depend on several factors, these include terrain; expense; and recommendations from the visual specialist. Eskom tries not to bind themselves to one tower/pylon type during the environmental assessment in case another type, based on the factors mentioned above, would be more suitable.

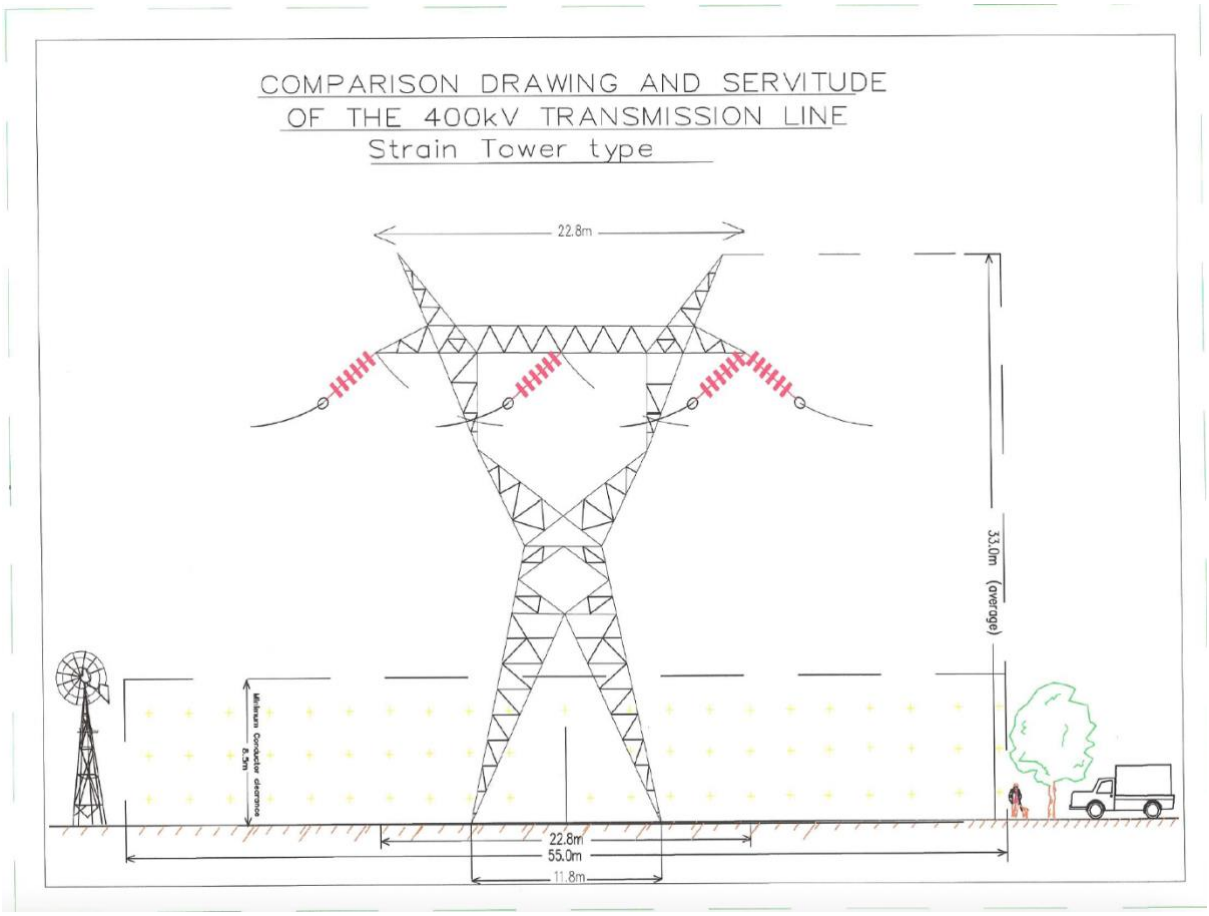

Figure 6: Servitude and Conductor Clearance for a 400kV Transmission Line, Strain Tower Type

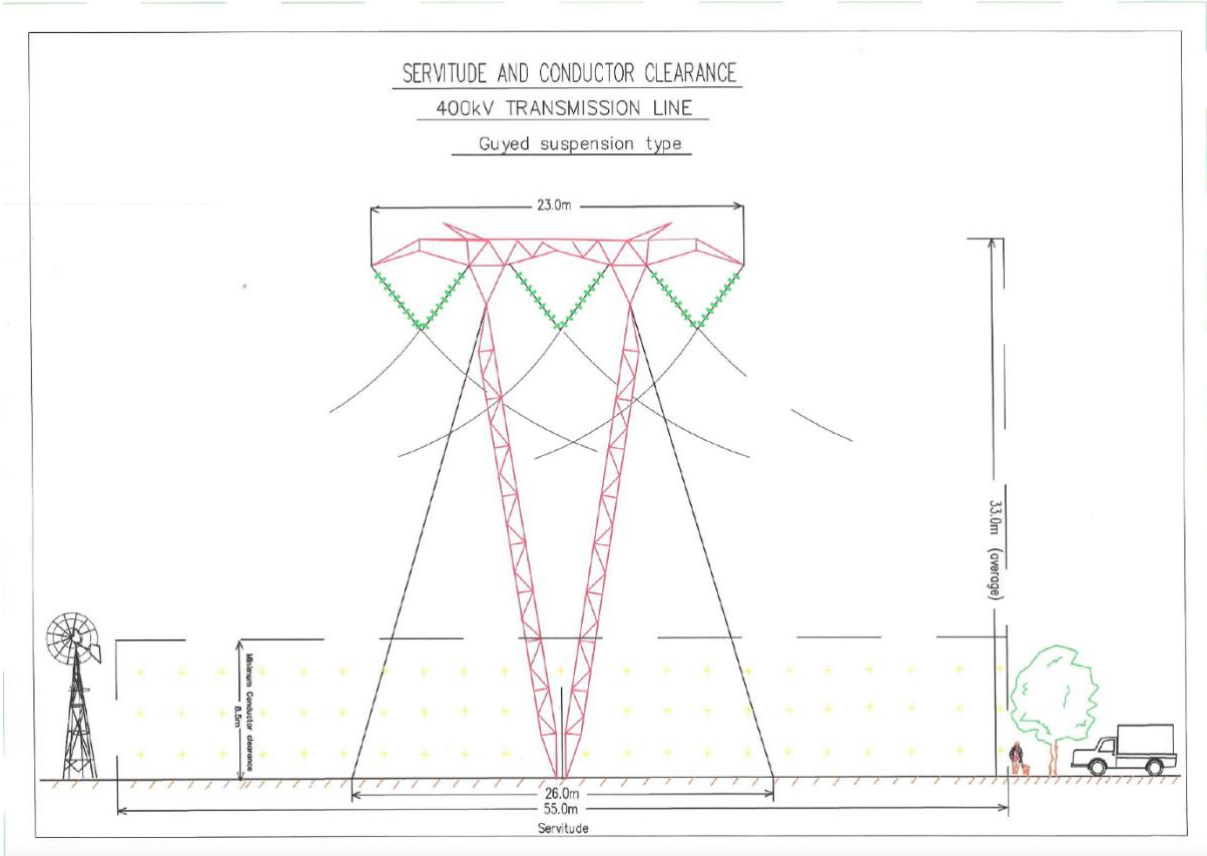

Figure 7: Servitude and Conductor Clearance for a 400kV Transmission Line,

Guyed Suspension Type

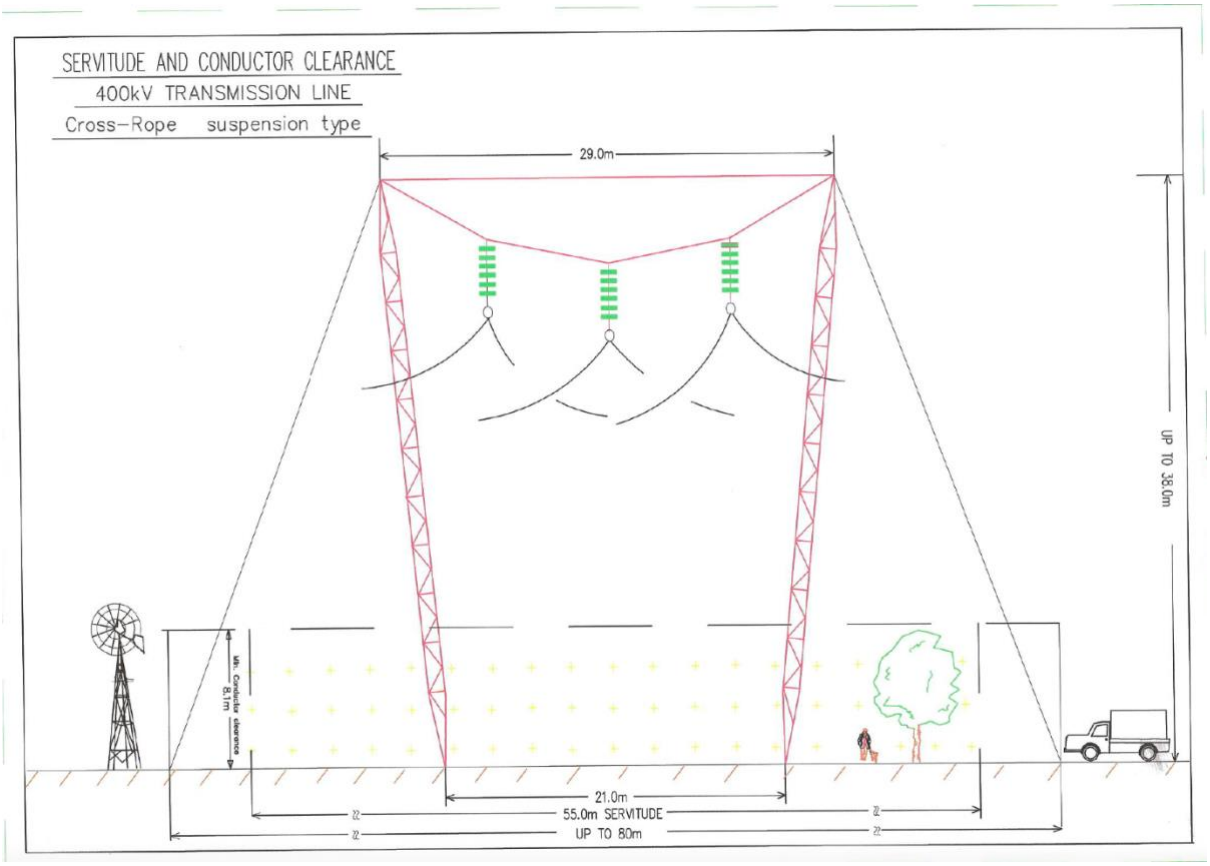

Figure 8: Servitude and Conductor Clearance for a 400kV Transmission Line, Cross-Rope Suspension Type

To link the substations to the power lines, loop-in lines are required. The location of the loop-in lines depend on which route alternative (for the power line) and locality alternative (for the substation) are the preferred alternatives.

3.4 Proposed Route Deviation

The original route for the Borutho-Silimela 400kV transmission line, as depicted in Figure 1, required a deviation due to several factors identified during the preliminary assessment phase. The proposed deviation is illustrated in the updated maps within this report, which show the adjusted route of the transmission line.

The deviation was proposed for the following reasons:

- Landowner Agreements: Negotiations with landowners along the original route revealed concerns and preferences that were addressed by modifying the route to achieve better alignment with land use plans and agreements.
- Technical and Safety Considerations: Engineering assessments indicated that certain sections of the original route presented challenges related to terrain and infrastructure

safety. The deviation provides a more feasible path, ensuring safer construction and operation of the transmission line.

The deviation impacts several aspects of the project:

- Environmental Impact: By avoiding sensitive areas, the deviation reduces potential negative impacts on local ecosystems.
- Social Impact: The adjusted route considers the concerns of local communities and landowners, thereby enhancing stakeholder acceptance and reducing potential conflicts.
- Project Cost and Timeline: While the deviation may alter the project timeline and cost, these adjustments are justified by the long-term benefits of improved environmental compliance and stakeholder relations.

4 Approach and Methodology

4.1 Definition of Social Impacts

"The consequences to human populations of any public or private actions (including policies, programs, plans, and/or projects) that alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally live and cope as members of society." These effects are felt at various levels, including the individual, family or household, community, organization, or society. Some social impacts are physically felt by the body, whereas others are perceptual or emotional" (Vanclay, 2002).

It can therefore be deduced that social change is natural and ongoing when considering social impacts (Burdge, 1995). It's also important to realize that government and private sector policies, plans, programs, and projects can affect social change's pace and direction. Social impacts are often change processes (Vanclay, 2002). For instance, temporary construction workers don't affect society. However, their presence can increase antisocial behaviour and other social issues. Understanding processes with social impacts is Vanclay's approach. Social assessment specialists must consider the complex causal mechanisms that cause social impacts. Following impact pathways, or causal chains, and considering likely interactions can reveal the full range of impacts (Vanclay, 2002).

A SIA should thus enable authorities, project proponents, individuals, communities, and organizations to understand and anticipate the potential social consequences of implementing a proposed policy, program, plan, or project. The SIA process should inform communities and individuals about the proposed project and its potential social consequences, while also allowing them to assess the implications and identify potential alternatives. The assessment process should also alert proponents and planners to the likelihood and nature of social impacts, allowing them to anticipate and predict these impacts ahead of time, so that the assessment's findings and recommendations are incorporated into and inform the planning and decision-making process.

However, the issue of social impacts is complicated by the way in which different people from different cultural, ethic, religious, gender, and educational backgrounds, etc. view the world. This is referred to as the “social construct of reality”. The social construct of reality informs people’s worldview and the way in which they react to changes.

4.2 Approach to Study

The approach to the Basic Assessment Level SIA study is based on the Western Cape Department of Environmental Affairs and Development Planning Guidelines for Social Impact Assessment (February 2007). These guidelines are based on international best practice. The key activities in the SIA process embodied in the guidelines include:

- Describing and obtaining an understanding of the proposed intervention (type, scale, and location), the settlements, and communities likely to be affected by the proposed project.
- Collecting baseline data on the current social and economic environment.

- Identifying the key potential socio-economic issues associated with the proposed project. This requires a site visit to the area and consultation with affected individuals and communities. As part of the process a basic information document was prepared and made available to key interested and affected parties. The aim of the document was to inform the affected parties of the nature and activities associated with the construction and operation of the proposed development to enable them to better understand and comment on the potential socio-economic issues and impacts.
- Assessing and documenting the significance of socio-economic impacts associated with the proposed intervention.
- Identifying alternatives and mitigation measures.
- A site visit will be undertaken during the Assessment Phase of the SIA. The site visit will include interviews with interested and affected parties.
- Preparation of a SIA Report for inclusion in the BA Report to be prepared for the project.

4.2.1 Collection and Review of Existing Information

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

- Project maps 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 socio-economic upliftment and local economic development opportunities (as provided by the project proponent).
- Census Data (2016), 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 400kv powerline and associated infrastructure.

The identification of potential social issues associated with the proposed development is based on primary and secondary information about the area and visits to the relevant communities and town by field workers/members of the SIA study team. Annexure A contains a list of the secondary information reviewed and interviews conducted. Annexure B summarises the assessment methodology used to assign significance ratings to the assessment process.

4.2.2 Timing of Social Impacts

Social impacts vary in both time and space. In terms of timing, all projects and policies go through a series of phases, usually starting with initial planning, followed by implementation (construction), operation, and finally closure (decommissioning). The activities, and hence the type and duration of the socio-economic impacts associated with each of these phases are likely to differ.

4.3 Reporting

4.3.1 Baseline Report

Based on the information collected through the desktop review, engagement with and information from other specialist studies, a socio-economic baseline profile was compiled for the respective study areas defined in Section 5. Topics considered as part of this profile include (but are not limited to) the following:

- Population;
- Education;
- Economy;
- Employment;
- Income and Poverty; and
- Human Development.

4.3.2 Impact Assessment

The assessment of the socio-economic impacts identified for the proposed Project is based on an impact rating process designed to provide a numerical rating of the significance of each impact. The significance rating process follows the established impact / risk assessment formula where significance is a function of the consequence of an event multiplied by the probability of its occurrence.

The following steps were undertaken as part of the impact assessment:

- Impact identification and assessment: Based on the anticipated interaction between specific and / or collective project activities and baseline socio-economic conditions, several potential impacts were identified for each phase of the Project; and
- Impact mitigation: realistic measures were developed aimed at mitigating, and if possible, avoiding the negative social impacts, and enhancing the benefits of positive social impacts.

4.4 Assessment Criteria

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- The duration, wherein it will be indicated whether:

  the lifetime of the impact will be of a very short duration (0 – 1 years) – assigned a score of 1;

  the lifetime of the impact will be of a short duration (2 – 5 years) – assigned a score of 2;

  medium-term (5 – 15 years) – assigned a score of 3;

  long term (> 15 years) – assigned a score of 4; or

  permanent – assigned a score of 5;
- The magnitude, quantified on a scale from 0 – 10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The probability of occurrence, which shall describe the likelihood of the impact occurring. Probability will be estimated on a scale of 1 – 5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- The significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
- The status, which will be described as either positive, negative or neutral.
- The degree to which the impact can be reversed.
- The degree to which the impact may cause irreplaceable loss of resources.
- The degree to which the impact can be mitigated.

The **significance** is calculated by combining the criteria in the following formula: S=(E+D+M)P

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

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

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

The summarising of assessment impacts in a prescribed table format including the rating values as per above criteria. Measures for inclusion in the Environmental Management Programme.

5 Legislation and Policy Review

This section introduces the relevant policies on various levels of government and their content. Relevant policy content is contained in the National White Paper on Renewable Energy, National Energy Act, Integrated Resources Plan for Electricity and the National Development Plan (NDP).

The National Energy Regulator of South Africa (NERSA) and the Department of Energy (DOE) govern the energy sector's regulatory framework. Critical stakeholders further include the national utility Eskom, National Treasury, Department of Trade and Industry, and the Department of Economic Development

The legislative and policy context applicable to a project plays an important role in identifying and assessing the potential socio-economic 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:

5.1 National Legislation and Guidelines

The following documentation provides national policy guidelines:

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

5.1.1 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 Socio-economic 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.

5.1.2 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.

5.1.3 National Development Plan 2030 (2012)

The National Development Plan (NDP) 2030, prepared by the National Planning Commission, envisions a dynamic energy sector that drives economic growth, promotes social equity, and ensures environmental sustainability.

For the Eskom Borutho-Silimela 400 kV Transmission Line project, the NDP's focus on providing reliable and efficient energy services is particularly relevant. This project plays a crucial role in expanding access to energy at affordable tariffs, supporting the NDP's goal of eliminating poverty and reducing inequality by 2030.

The project aligns with the NDP's vision of facilitating a more labour-absorbing economy, with a supportive environment for growth and development.

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

The White Paper on Energy Policy emphasizes expanding energy supply options and the integration of renewable energy sources. In the context of the Eskom Borutho-Silimela 400 kV Transmission Line project, this policy is particularly pertinent.

The project supports the White Paper's objectives by enhancing South Africa's energy security through a reliable transmission network, which is essential for the efficient distribution of energy, including renewable sources.

The transmission line facilitates the diversification of energy supply and contributes to a sustainable energy future by ensuring that energy generated from various sources, renewable and otherwise, is effectively integrated into the national grid.

5.1.5 National Energy Act (No.34 of 2008)

The National Energy Act aims to ensure a diverse and sustainable energy supply to the South African economy, which is integral for supporting economic growth and alleviating poverty.

For the Eskom Borutho-Silimela 400 kV Transmission Line project, this Act is particularly relevant as it provides a legal framework that underscores the significance of electricity in the national economy and citizens' quality of life.

The project aligns with the Act's objectives by facilitating an uninterrupted supply of energy, promoting diverse energy sources, and improving energy access across the country. This legislation supports the development and strengthening of the electrical grid infrastructure, recognizing the crucial role of transmission lines in achieving a sustainable and diversified energy provision.

5.1.6 Integrated Energy Plan (IEP) (2016)

The Integrated Energy Plan (IEP) outlines South Africa's strategy for energy planning and integration into the grid, with specific support for renewable energy procurement and integration.

The Eskom Borutho-Silimela 400 kV Transmission Line project is a key component in realizing the IEP's goals. By enhancing the national grid's capacity and reliability, this project plays a pivotal role in integrating diverse energy sources, including renewables, into the national energy system. The transmission infrastructure ensures the effective distribution of energy, aligning with the IEP's vision for a diversified and secure energy future for South Africa.

5.1.7 Strategic Infrastructure Projects (SIPs)

The Presidential Infrastructure Coordinating Committee (PICC) manages Strategic Infrastructure Projects (SIPs) to drive significant national development goals. These SIPs encompass a wide range of infrastructure projects, including energy infrastructure like the Eskom Borutho-Silimela 400 kV Transmission Line.

This project aligns with the SIPs' objectives by contributing to the transformation of South Africa's economic landscape, creating new employment opportunities, strengthening the delivery of basic services, and supporting the integration of the African economies.

The Eskom Borutho-Silimela project is instrumental in fostering a balanced approach to development. It underscores the greening of the economy and boosting energy security through the development of robust and efficient electrical grid infrastructure. This project plays a significant role in facilitating integrated urban development, investing in rural development, and enabling regional integration, thereby contributing to the overarching goals of the Strategic Infrastructure Projects.

5.2 Provincial Policy

Relevant policy and planning documents on provincial level include:

- Limpopo Department of Socio-Economic Development Annual Performance Plan (2023 – 2024);
- Limpopo Socio-Economic Review and Outlook (Sero) (2022/2023);
- Limpopo Provincial Spatial Development Framework (2030).
- Limpopo Development Plan (LDP) (2020 – 2025);

5.2.1 Limpopo Department of Socio-Economic Development Annual Performance Plan (2023 – 2024)

The Limpopo Department of Socio-Economic Development Annual Performance Plan for 2023-2024, tabled on 23 March 2023, outlines the province's strategic focus and commitment to sustainable development, aligning with national mandates like the Sustainable Development Goals and the National Development Plan. This plan emphasizes the importance of inclusive socio-economic growth, environmental sustainability, and enhanced quality of life for all citizens, particularly in marginalized and vulnerable communities.

In the context of the Eskom Borutho-Silimela 400 kV Transmission Line project, this plan supports the development of critical infrastructure as a means to stimulate economic growth and infrastructure investment. The project aligns with the province's vision by contributing to the energy mix and supply infrastructure. Notably, the transmission line project is expected to aid in poverty alleviation through the creation of direct and indirect employment opportunities and skills development, crucial for the socio-economic upliftment of the Limpopo province.

The plan's focus areas, such as the updated situational analysis including the Limpopo population dynamics, economic outlooks (global, national, and provincial), and labor force characteristics, provide a comprehensive backdrop against which the Eskom Borutho-Silimela project can be contextualized. The project's alignment with the provincial priorities, especially in terms of supporting economic diversification, enhancing labor force skills, and addressing unemployment, reinforces its significance in Limpopo's socio-economic landscape.

5.2.2 Limpopo Socio-Economic Review and Outlook (Sero) (2022/2023)

The Limpopo Socio-Economic Review and Outlook (SERO) for 2022/23 provides a comprehensive analysis of the province's economic situation, particularly in the context of the ongoing global economic recovery and the challenges posed by the COVID-19 pandemic. The SERO highlights that while the global economic recovery continues, it is weakened by uncertainties such as the COVID-19 Omicron variant and cyclical commodity prices, which significantly affect South Africa and, by extension, the Limpopo region.

For the Eskom Borutho-Silimela 400 kV Transmission Line project, the SERO’s insights are crucial. The project's development aligns with the need to boost the provincial economy, particularly in light of the challenges posed by the pandemic. By enhancing energy infrastructure, the project supports the broader economic goals of the province, including mitigating the impacts of economic downturns and fostering recovery.

Key areas such as infrastructure development, particularly in electricity connection, water infrastructure, sanitation, and road infrastructure, are outlined in the SERO as critical for provincial growth and development. The Eskom Borutho-Silimela project is instrumental in this regard, as it promises to improve the electricity supply, which is a cornerstone for economic activities and overall development in the region.

Furthermore, the SERO emphasizes the need for tailored national and provincial policies to strengthen economic prospects. The Eskom Borutho-Silimela project, in this respect, represents a strategic response to these policy directives, contributing to the province's long-term economic resilience and sustainability.

5.2.3 Limpopo Provincial Spatial Development Framework (2030)

The Limpopo Provincial Spatial Development Framework (2030) provides a strategic vision for the spatial development of the province, aiming to balance the protection of the natural environment and agricultural land with economic growth and the provision of quality living environments and job opportunities.

Key aspects of the framework that align with the Eskom Borutho-Silimela 400 kV Transmission Line project include:

- **Infrastructure Development**: The framework emphasizes the development of a multi-modal transport network and engineering infrastructure investment focused on priority nodal points. The transmission line project aligns with this by enhancing the electrical grid infrastructure, which is crucial for supporting economic activity and human settlement.
- **Economic Growth and Diversification**: The framework supports the optimization of agricultural potential, promotion of sustainable tourism, and sustainable mining activities. The transmission line project contributes to these goals by providing the necessary energy infrastructure to support various economic activities.
- **Environmental Protection and Sustainability**: The framework underlines the need for efficient utilization of natural resources and sustainable environmental management. The Eskom Borutho-Silimela project, by facilitating the distribution of energy, including from renewable sources, supports this objective.
- **Spatial Restructuring**: The framework encourages urban and rural spatial restructuring to address spatial injustice and facilitate climate change mitigation and adaptation. The transmission line project supports this by enhancing energy access in various regions, thus contributing to balanced regional development.

The Eskom Borutho-Silimela 400 kV Transmission Line project is in line with the objectives of the Limpopo Provincial Spatial Development Framework, contributing to the province's overall spatial development goals of economic growth, environmental sustainability, and spatial justice.

5.2.4 Limpopo Development Plan (LDP) (2020 – 2025)

The Limpopo Development Plan (LDP) 2020-2025 sets a comprehensive strategy for economic growth and social development in the province, focusing on the enhancement of infrastructure, diversification of the economy, and improvement of the quality of life for residents. This plan underlines the significance of the mining and utilities sectors and emphasizes spatially targeted development in key areas, including distressed mining towns and priority human settlements.

In the context of the Eskom Borutho-Silimela 400 kV Transmission Line project, the LDP's objectives align closely with the project's aims. The project supports the LDP's vision by contributing to the strengthening of infrastructure, particularly in the energy sector, which is pivotal for unlocking economic potential and supporting various economic activities in the province. The transmission line is expected to enhance the energy mix and supply, directly correlating with the LDP's focus on diversified and sustainable energy sources.

Moreover, the project resonates with the LDP's emphasis on addressing environmental concerns and compliance, especially in the context of licensed landfill sites. By potentially incorporating renewable energy sources into the grid, the project aligns with the LDP's goals for sustainable environmental management.

Furthermore, the Eskom Borutho-Silimela project is instrumental in supporting the LDP's aim to mitigate the impact of economic downturns, like those exacerbated by the COVID-19 pandemic, through strategic infrastructure projects. It contributes to economic resilience and sustainability in Limpopo by providing a robust energy infrastructure, crucial for both current and future development initiatives as outlined in the LDP.

Lastly, the project supports the LDP's focus on spatial development, aiming to balance economic growth with environmental sustainability and social justice. By improving energy accessibility in various regions, the project aids in achieving a more balanced regional development, in line with the LDP's spatial restructuring goals.

In summary, the Eskom Borutho-Silimela 400 kV Transmission Line project is in harmony with the Limpopo Development Plan 2020-2025, contributing significantly to the province's overarching goals of economic growth, environmental sustainability, and improved quality of life for its residents.

5.3 District & 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 project 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 below:

- The Capricorn District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024

The Lepelle-Nkumpi Local Municipality (LNDM) Draft Integrated Development Plan (IDP) 2022/2023

- The Waterberg District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024
  - Mogalakwena Final Local Municipality Integrated Development Plan IDP (2023/2024)
  - Modimolle-Mookgophong Draft Local Municipality Integrated Development Plan IDP (2022/2023)
- Sekhukhune District Municipality (SDM) Final Integrated Development Plan (IDP) (2022/2023)
  - Ephraim Mogale Draft Local Municipality Integrated Development Plan IDP (2023/2024)

5.3.1 Capricorn District Municipality (CDM) Final Integrated Development Plan (IDP) (2023/2024)

The Capricorn District Municipality's mission is to offer quality services in a cost-effective and efficient manner, focusing on sustainable economic development for all stakeholders. This aligns with the Eskom Borutho-Silimela 400 kV Transmission Line project in several ways:

- **Spatial Rationale and Environmental Analysis (KPA 1):** The project supports the municipality's goal of environmental protection, as it ensures energy provision while considering environmental sustainability.
- **Basic Services Delivery and Infrastructure Analysis (KPA 2):** The transmission line enhances infrastructure, directly contributing to the district's aim of effective service delivery, including in firefighting and rescue services.
- **Local Economic Development (KPA 3):** By improving energy infrastructure, the project fosters a conducive environment for key economic sectors like agriculture, tourism, manufacturing, and mining, crucial for the district's economic development.
- **Financial Viability Analysis (KPA 4):** The project's robust infrastructure supports disaster response and recovery, aligning with the district’s focus on resilience and preparedness.
- **Good Governance and Public Participation Analysis (KPA 5):** The project complements the municipality's goals of fostering participation and partnership, as it involves multiple stakeholders and community engagement.
- **Municipal Transformation and Organizational Development (KPA 6):** By contributing to the district’s development, the project aligns with the goal of organizational development and transformation, particularly in legal and regulatory aspects.

Overall, the Eskom Borutho-Silimela project is in harmony with the Capricorn District Municipality's mission and key performance areas, contributing to the overarching goal of creating a home of excellence and opportunities for a better life in the district.

5.3.1.1 Lepelle-Nkumpi Draft Local Municipality Integrated Development Plan IDP (2022/2023)

The Lepelle-Nkumpi Local Municipality's IDP 2022-2023 outlines a strategic vision for sustainable development, emphasizing infrastructure improvement, economic development, environmental management, and community empowerment. This aligns with the Eskom Borutho-Silimela 400 kV Transmission Line project in several ways:

- **Infrastructure Improvement:** The IDP's focus on infrastructure development resonates with the transmission line project, which aims to enhance electrical infrastructure, crucial for the municipality's growth.
- **Economic Development:** The project supports the IDP's economic objectives by providing reliable energy, essential for stimulating local industries and businesses.
- **Environmental Management:** The transmission line aligns with the IDP's emphasis on sustainable environmental management, especially in its potential to facilitate renewable energy distribution.
- **Community Empowerment:** By improving energy access, the project contributes to community empowerment, aligning with the IDP's goals of enhancing the quality of life and fostering socio-economic development.

In summary, the Eskom Borutho-Silimela 400 kV Transmission Line project aligns with the Lepelle-Nkumpi IDP by contributing to infrastructure enhancement, economic growth, environmental sustainability, and community development in the municipality.

5.3.2 Waterberg District Municipality (WDM) Final Integrated Development Plan (IDP) (2023/2024)

The Waterberg District Municipality's IDP demonstrates a commitment to sustainable development, focusing on basic service delivery, municipal transformation, local economic development (LED), financial viability, good governance, and spatial rationale. The Eskom Borutho-Silimela 400 kV Transmission Line project aligns with these key performance areas (KPAs) in the following ways:

- **Basic Service Delivery (KPA 1)**: The project supports the municipality's commitment to enhancing basic service delivery through improved energy infrastructure, essential for public services and community welfare.
- **Municipal Transformation (KPA 2)**: The transmission line contributes to the transformation of municipal infrastructure, aiding in the overall modernization and development of the municipality.

- **Local Economic Development (LED) (KPA 3)**: By improving energy reliability, the project boosts LED, supporting industries like mining and agriculture, and attracting new investments to the region.
- **Financial Viability (KPA 4)**: The project aids in strengthening the financial sustainability of the municipality by supporting economic activities that contribute to the local revenue base.
- **Good Governance (KPA 5)**: The project demonstrates good governance through its alignment with strategic municipal objectives and its implementation in an environmentally and socially responsible manner.
- **Spatial Rationale (KPA 6)**: The transmission line supports the spatial development plans of the municipality, facilitating balanced regional development and connectivity.

In essence, the Eskom Borutho-Silimela project is aligned with the Waterberg District Municipality's IDP, contributing to the district's vision of holistic and sustainable development.

5.3.2.1 Mogalakwena Final Local Municipality Integrated Development Plan IDP (2023/2024)

The Mogalakwena Local Municipality's IDP for 2023-2024 focuses on sustainable and diversified economic development, emphasizing community needs. This vision and mission align with the Eskom Borutho-Silimela 400 kV Transmission Line project in several aspects:

- **Spatial Rationale (KPA 1)**: The project aligns with the municipality's goal of becoming an accredited housing authority by enhancing infrastructure, crucial for sustainable human settlements.
- **Basic Service Delivery and Infrastructure Development (KPA 2)**: The transmission line aligns with the municipality's target of reliable potable water supply by enhancing energy infrastructure, a prerequisite for water treatment and distribution facilities.
- **Local Economic Development (KPA 3)**: The project fosters partnerships with the private sector, creating an environment for sustainable economic development, essential for the municipality's economic goals.
- **Financial Viability and Municipal Management (KPA 4)**: By supporting the municipality's economic activities, the project contributes to the financial viability and effective management of the municipality.
- **Municipal Transformation and Organisational Development (KPA 5)**: The project supports the objective of a fully functional HR Unit by enhancing infrastructure, which is key to organizational efficiency.

Overall, the Eskom Borutho-Silimela project aligns with the Mogalakwena Local Municipality's IDP by contributing to its strategic goals of improved infrastructure, economic development, and sustainable community empowerment.

5.3.2.2 Modimolle-Mookgophong Draft Local Municipality Integrated Development Plan IDP (2022/2023)

The Modimolle-Mookgophong Local Municipality's vision of being Limpopo's leader in reliable service delivery and sustainable economic growth aligns well with the Eskom Borutho-Silimela 400 kV Transmission Line project. This alignment is evident across various Key Performance Areas (KPAs):

- **Spatial Rationale (KPA 1)**: The transmission line project enhances socio-economic development in the region, aligning with the municipality's spatial planning for balanced regional growth.
- **Basic Services Delivery (KPA 2)**: The project contributes to improving the quality of life by ensuring a reliable energy supply, essential for basic service delivery.
- **Local Economic Development (KPA 3)**: By providing a stable power supply, the project bolsters socio-economic development, supporting local industries and attracting new investments.
- **Financial Viability (KPA 4):** The project aids in financial sustainability through improved financial management, as reliable energy is key to economic activities that boost the municipality's revenue.
- **Good Governance & Public Participation (KPA 5)**: The project exemplifies accountable and transparent governance, with a focus on community engagement and stakeholder involvement.
- **Municipal Transformation & Organizational Development (KPA 6)**: The project supports the capacity building of municipal leadership and management, crucial for the municipality's transformation and development.

In summary, the Eskom Borutho-Silimela project supports Modimolle-Mookgophong Local Municipality's vision and mission by promoting governance, social and economic development, service provision, environmental sustainability, and organizational development.

5.3.3 Sekhukhune District Municipality (SDM) Final Integrated Development Plan (IDP) (2022/2023)

The Eskom Borutho-Silimela 400 kV Transmission Line project aligns with the Sekhukhune District Municipality's IDP in the following ways:

- **Provision of Water and Sanitation Services**: The project supports the sustainable provision of these services by ensuring reliable energy supply, critical for water and sanitation infrastructure.
- **Local Economic Development, Growth, and Job Creation**: By enhancing energy infrastructure, the project fosters conditions conducive for agrarian reform, mining, tourism, and the revitalization of the Sekhukhune Development Agency.

- **Good Governance and Sound Financial Management**: The project aligns with these goals through its structured and transparent implementation, contributing to the municipality's financial health and governance standards.
- **Sustainable Land Use Management and Spatial Transformation**: The transmission line aids in spatial transformation, supporting balanced regional development and land use management.
- **Community Development, Social Cohesion, and Nation Building**: The project enhances community development and nation-building by improving energy access, which is vital for social and economic wellbeing.
- **Public Participation, Stakeholder Engagements, and Partnership**: The project promotes public participation and stakeholder engagement, crucial for ensuring inclusive and sustainable development.

Overall, the Eskom Borutho-Silimela project significantly contributes to the Sekhukhune District Municipality's vision of sustainable development, economic growth, and community empowerment.

5.3.3.1 Ephraim Mogale Draft Local Municipality Integrated Development Plan IDP (2023/2024)

The Ephraim Mogale Local Municipality's IDP, with its vision of becoming a "World Class Agricultural Hub of Choice," aligns with the Eskom Borutho-Silimela 400 kV Transmission Line project across several Key Performance Areas:

- **Spatial Rationale (KPA 1)**: The transmission line supports the municipality’s plan for future development, enhancing socio-economic growth through improved infrastructure.
- **Basic Services Delivery and Infrastructure Development (KPA 2)**: This project aligns with the municipality's goal of accelerated service delivery, particularly in providing reliable electricity, which is fundamental to basic services.
- **Local Economic Development (KPA 3)**: The project contributes to creating an inclusive economy by supporting agricultural and other economic activities through a stable energy supply.
- **Municipal Transformation and Institutional Development (KPA 4)**: By improving infrastructure, the project aids in building a skilled and retained workforce, facilitating overall municipal transformation.
- **Municipal Financial Viability and Management (KPA 5)**: The project enhances the financial viability of the municipality by supporting economic activities that can increase revenue.
- **Good Governance and Public Participation (KPA 6)**: The project demonstrates sound governance practices through its alignment with strategic municipal goals and its commitment to stakeholder engagement.

In summary, the Eskom Borutho-Silimela project is in harmony with the Ephraim Mogale Local Municipality's IDP, contributing to the region's vision of becoming an agricultural hub through improved infrastructure, economic development, and good governance.

5.4 International Finance Corporation

The IFC Performance Standards were developed to provide guidance on how to identify environmental and Socio-economic risks and impacts of business operations. These standards are designed to help avoid, mitigate, and manage risks and impacts towards doing business in a sustainable way, including meeting stakeholder engagement and disclosure obligations. In South Africa, the scope and intent of the IFC PS is addressed or partially addressed in the country's environmental and Socio-economic regulatory framework.

Performance Standard 1 establishes the importance of:

- integrated assessment to identify the environmental and Socio-economic impacts, risks, and opportunities of projects;
- effective community engagement through disclosure of project-related information and consultation with local communities and other interested parties on matters that directly affect them; and
- the client's management of environmental and Socio-economic performance throughout the life of the project.

Performance Standards 2 through 8 establish objectives and requirements to avoid, minimise, and where residual impacts remain, to compensate/offset for risks and impacts to workers, affected communities, and the environment.

The purpose and scope of each of the IFC Performance Standards is summarised in Table 2. Only those Performance Standards that have been identified as being applicable to the project in this table are discussed further below, where the project's alignment with these standards is considered in detail.

Table 2: IFC Performance Standards – Key Objectives

Standard	Key Requirement	Applicability
PS 1: Assessment and Management of Environmental and Socio-economic Risks and Impacts	This PS relates to integrating and managing environmental and Socio-economic performance throughout the life of a project in line with national regulations and international standards.	It provides guidance on identifying and assessing the potential environmental and Socio-economic risks and impacts associated with a project. This includes potential socio-economic impacts on local communities, such as changes in access to resources, income, and employment opportunities. The standard also emphasizes the importance of stakeholder engagement and consultation in the impact assessment process, which is a key aspect of socio-economic impact assessments. It requires

Standard	Key Requirement	Applicability
		that projects obtain the free, prior, and informed consent of affected communities, which is a critical aspect of ensuring that the impacts of the project are understood and addressed in a manner that is appropriate and respectful of local communities.
PS 2: Labour and Working Conditions	This PS aims to ensure that clients establish, maintain, and improve worker-management relationships that promotes the fair treatment, non-discrimination and equal opportunity of workers, and compliance with national labour and employment laws and international standards (as defined by the International Labour Organisation, ILO)	As part of the assessment, it is crucial to evaluate the potential impact of the project on the working conditions and labour rights of the workers in the project area. The following are some of the key areas that are relevant to a socio-economic impact assessment: Fair Treatment: The assessment should evaluate the extent to which the project promotes fair treatment of workers, including non-discrimination and equal opportunity, and the measures in place to prevent discrimination and promote diversity. Labour Laws: The assessment should evaluate compliance with national labour and employment laws, including the provisions for minimum wage, working hours, health and safety, and other labour rights. International Standards: The assessment should evaluate the extent to which the project complies with the international standards set by the International Labor Organization (ILO), including the core conventions on freedom of association, collective bargaining, forced labour, child labour, and discrimination. Worker-Management Relationship: The assessment should evaluate the relationship between the workers and the management of the project, including the communication channels and mechanisms in place to resolve any conflicts or grievances.
PS 3: Resource Efficiency and Pollution Prevention	This PS aims to abate pollution to air, water, and land that may threaten people and the environment at the local, regional, and global levels. This PS promotes the ability of private sector companies to	Seeks to ensure that the project is developed in a sustainable manner, with minimal negative impacts on the environment and the health of local communities. It is important to assess the potential pollution and environmental impacts of the project on the surrounding area, including air, water, and land quality. The assessment should also consider the adoption of best available technologies and industry best practices to mitigate and prevent

Standard	Key Requirement	Applicability
	adopt such best available technologies and industry best practices where feasible.	pollution. By doing so, the project can promote sustainable development and ensure the protection of the environment and public health.
PS 4: Community, Health, Safety and Security	The role of this PS is to anticipate and avoid adverse impacts on the health and safety of the affected communities throughout the life of the project as a result of routine and non-routine events.	Requires that the potential health and safety impacts on the affected communities are anticipated and avoided throughout the project's life. A socio-economic impact assessment should consider the potential effects of a project on the health and safety of the local community and identify measures to prevent or mitigate any adverse impacts. The assessment should consider the impact of routine and non-routine events that could affect the health and safety of the community, such as accidents or exposure to hazardous materials. The assessment should also consider the potential long-term health impacts of the project on the community.
PS 5: Land Acquisition and Involuntary Resettlement	PS5 aims to anticipate and avoid physical and economic resettlement or, where avoidance is not possible, to minimise adverse Socio-economic and economic impacts of economic and physical displacement.	Aims to ensure that projects do not result in negative Socio-economic and economic impacts of economic and physical displacement. A socio-economic impact assessment can identify the potential for physical and economic resettlement and the related impacts on the affected communities. The assessment can also identify strategies to avoid or minimise these impacts. Therefore, PS5 should be considered during the planning and implementation of a socio-economic impact assessment.
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	This PS aims to protect and conserve biodiversity based on the convention on biological diversity. It divides habitat into three categories: modified, natural, and critical. It provides a list of Criteria to be used to determine the occurrence of Critical Habitat.	To identify if the project under assessment has the potential to impact biodiversity and its habitats, such as in cases where the project is located in a natural or critical habitat. The assessment should include an analysis of the potential impact on biodiversity and its habitat and identify measures to minimise the impact, including compensation or mitigation measures. Additionally, the assessment should consider the potential socio-economic impact of biodiversity conservation measures on local communities and stakeholders, such as impacts on their livelihoods, traditional practices, or cultural values.
PS 7: Indigenous Peoples	This PS deals with safeguarding Indigenous Peoples and aims to protect the interests of	To ensure that the interests and rights of Indigenous Peoples are protected and promoted throughout the

Standard	Key Requirement	Applicability
	Indigenous Peoples during project implementation.	project development process, including during the socio-economic impact assessment. Identify if Indigenous Peoples are present in the project area and whether they will be affected by the project. Identify the rights and interests of Indigenous Peoples that may be affected by the project, including land, resources, and cultural heritage. Determine whether the project could have an adverse impact on Indigenous Peoples, including the potential for displacement, loss of livelihoods, and cultural harm. Evaluate the potential risks and impacts associated with the project and develop appropriate mitigation measures to safeguard the rights and interests of Indigenous Peoples. Ensure that Indigenous Peoples have meaningful and informed participation in the project development process and are consulted on decisions that affect them. Ensure that Indigenous Peoples are provided with appropriate benefits and compensation for any adverse impacts that cannot be avoided or minimised.
PS 8: Cultural Heritage	Cultural heritage refers to tangible forms of cultural heritage, such as tangible movable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values.	The assessment should identify the cultural heritage that may be affected and evaluate the potential impacts on the cultural heritage. The socio-economic impact assessment should also identify measures to avoid, minimise, or mitigate any adverse impacts on cultural heritage, in line with national and international legal requirements and conventions. The assessment should include consultation with affected communities, Indigenous Peoples, and other stakeholders to ensure that their cultural heritage values are taken into account in project planning and implementation.

5.4.1 IFC Environmental, Health and Safety Guidelines

The IFC's General Environment, Health and Safety (EHS) Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors. Table 3 includes a summary of the EHS topics covered by the General Guidelines

Table 3: Topics Covered by the General EHS Guidelines

Environment	Occupational Health and Safety
• Air Emissions and Ambient Air Quality • Energy Conservation • Wastewater and Ambient Water Quality • Water Conservation • Hazardous Materials Management • Waste Management • Noise • Contaminated Land	• General Facility Design and Operation • Communication and Training • Physical Hazards • Chemical Hazards • Biological Hazards • Radiological Hazards • Personal Protective Equipment (PPE) • Special Hazard Environments • Monitoring
Community Health and Safety	**Construction and Decommissioning**
• Water Quality and Availability • Structural Safety of Project Infrastructure • Life and Fire Safety (L&FS) • Traffic Safety • Transport of Hazardous Materials • Disease Prevention • Emergency Preparedness and Response	• Environment • Occupational Health and Safety • Community Health and Safety

The IFC has also published industry specific ESG guidelines. These documents specify performance levels and measures that are acceptable to the IFC, and that are generally considered to be achievable in new facilities at reasonable costs with existing technology.

5.4.2 Equator Principles

The Equator Principles (EPs) is a voluntary credit risk management framework for determining, assessing, and managing environmental and socio-economic risks in project finance transactions. This framework comprises a set of principles adopted by the Equator Principles Financial Institutions (EPFIs) to ensure that the projects they finance are developed and implemented in a manner that is socio-economically responsible and environmentally sound. These principles apply to project-financing with total project capital costs of US$10 million or more across all industry sectors.

The Equator Principles are closely aligned with the IFC Performance Standards and adopt the same approach to project categorisation.

Four versions of the EPs have been published since their origin in 2006. The applicability of the principles of EP IV, which have been in place since 2020, are outlined in Table 4.

Table 4: Equator Principles

Principle	Requirement	Applicability
Review and Categorisation	The project is screened and categorised in accordance with its anticipated risks on the same basis as IFC PS 1.	The principle can be applied in screening and categorising a project based on its anticipated risks, which is similar to IFC PS1. This categorization can help in identifying the potential socio-economic impacts that may occur during the project lifecycle.
Environmental and Socio-economic Assessment	An ESIA needs to be conducted on the proposed project, similar to the requirements of IFC PS 1.	An ESIA needs to be conducted on the proposed project, similar to the requirements of IFC PS1. This ESIA should consider the project's potential impacts on Socio-economic and economic factors, including livelihoods, community health, access to services, and cultural heritage. The assessment should also identify any stakeholders that may be affected by the project and consider their concerns and input in the development of mitigation measures. Overall, EP2 highlights the importance of a comprehensive environmental and Socio-economic assessment that considers the potential impacts on both natural and Socio-economic systems.
Applicable Environmental and Socio-Economic Standards	The ESIA process must comply with the legal requirements of the country in which the project is proposed to be implemented. However, this principle recognizes that standards differ across countries, and differentiates between Designated and Non-designated countries. The laws of Designated Countries are deemed to be sufficient to ensure effective assessment of environmental and Socio-economic risks. Compliance with IFC PSs is required for projects in all non-designated countries.	Since South Africa is a non-designated country, the IFC PSs will apply. The principle requires compliance with the legal requirements of the country where the project will be implemented. The standard acknowledges that there may be differences in standards across countries and mandates compliance with IFC PSs for projects in all non-designated countries. This principle can be applicable to a socio-economic impact assessment by ensuring that the assessment process complies with the relevant environmental and Socio-economic regulations and standards.
Environmental and Socio-economic Management System and Equator Principles Action Plan	For all Category A and Category B Projects, the EPFI will require the client to develop or maintain an Environmental and Socio-economic Management System (ESMS).	This principle requires the client to develop or maintain an Environmental and Socio-economic Management System (ESMS) for all Category A and Category B projects. By incorporating this principle into a socio-economic impact assessment, the assessment can recommend the development or maintenance of an ESMS to manage environmental and Socio-economic risks and impacts.
Stakeholder Engagement	For all Category A and Category B Projects, the EPFI will require the client to demonstrate effective stakeholder engagement as an ongoing process in a structured and culturally appropriate manner.	This principle requires the client to demonstrate effective stakeholder engagement for all Category A and Category B projects. By including this principle in a socio-economic impact assessment, the assessment can recommend that effective stakeholder engagement is necessary for understanding and mitigating Socio-economic impacts of a project.
Grievance Mechanism	A Grievance Mechanism needs to be established as part of the ESMS for all Category A projects and, as appropriate, Category B projects.	The principle requires that a Grievance Mechanism is established as part of the ESMS for all Category A projects and, as appropriate, Category B projects. By including this principle in a socio-economic impact assessment, the assessment can recommend that a Grievance Mechanism is necessary to address and resolve any grievances related to the project.
Independent Review	For all Category A and, as appropriate, Category B Projects, an Independent Environmental and Socio-economic Consultant, not directly associated with the client, will carry out an independent review of the assessment documentation, including the ESMPs, the ESMS, and the stakeholder engagement process documentation to assist the EPFI's due diligence, and assess Equator Principles compliance.	This principle requires an Independent Environmental and Socio-economic Consultant to carry out an independent review of the assessment documentation, including the ESMPs, the ESMS, and the stakeholder engagement process documentation, for all Category A projects and, as appropriate, Category B projects. By incorporating this principle into a socio-economic impact assessment, the assessment can recommend an independent review process to ensure compliance with Equator Principles and to provide additional assurance on the effectiveness of the assessment process.
Covenants	For all Projects, the client will covenant in the financing documentation to comply with all relevant host country environmental and Socio-economic laws, regulations and permits in all material respects.	Relevant for all projects, as it requires compliance with host country environmental and socio-economic laws, regulations, and permits. For Category A and B projects, this principle also requires the client to comply with ESMPs

Principle	Requirement	Applicability
	Furthermore, for all Category A and Category B Projects, the client will covenant the financial documentation: a) to comply with the ESMPs and Equator Principles AP (where applicable) during the construction and operation of the Project in all material respects; b) to provide periodic reports in a format agreed with the EPFI at least annually; and c) to decommission the facilities, where applicable and appropriate, in accordance with an agreed decommissioning plan.	and Equator Principles AP during the construction and operation of the project, and to provide periodic reports and decommission facilities in accordance with an agreed decommissioning plan.
Independent Monitoring and Reporting	Independent monitoring of project compliance with the Equator Principles is required for the life of a loan for all Category A projects and Category B projects, as appropriate.	Required for all Category A projects and appropriate Category B projects, which includes monitoring project compliance with the Equator Principles for the life of a loan.
Reporting and Transparency	This principle requires for all Category A projects and appropriate Category B projects, that a summary of the ESIA is, at a minimum, accessible and available online; and that the client will publicly report GHG emission levels (combined Scope 1 and Scope 2 Emissions) during the operational phase for Projects emitting over 100,000 tonnes of CO_2 equivalent annually.	Applicable to all Category A projects and appropriate Category B projects, as it requires a summary of the ESIA to be accessible and available online and for the client to publicly report GHG emission levels during the operational phase for projects emitting over 100,000 tonnes of CO2 equivalent annually.

5.5 Policy Result

The Eskom Burotho-Silimela project not only aligns with South African national, provincial, and local planning and policy frameworks, but also adheres to the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability.

These standards provide guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities.

In particular, the project aligns with IFC Performance Standard 1 on Assessment and Management of Environmental and Social Risks and Impacts, which involves a process of environmental and social assessment, the establishment of a management system, and engagement with stakeholders.

The project also aligns with IFC Performance Standard 4 on Community Health, Safety, and Security, which addresses community exposure to risks and impacts arising from project activities.

In conclusion, the Eskom Burotho-Silimela project is well-positioned to contribute positively to the social and economic development of the region, while also aligning with the broader environmental and sustainability goals of South Africa and the IFC Performance Standards. This alignment indicates the project's potential for a positive social impact, making it a valuable addition to the region's renewable energy portfolio.

6 Socio-Economic Profile

6.1 Study Area Overview

This section outlines the relevant administrative context, the provincial socio-economic, and municipal contexts. It concludes with a description of the local context of the immediate surroundings of the proposed Highveld North-West and Lowveld Strengthening Project Eskom Borutho-Silimela 400 kV Transmission Line.

Table 5: Study Area Context for the Eskom Borutho-Silimela 400 kV Transmission Line

Province	Limpopo Province
District Municipality	• Capricorn District Municipality (CDM); • Waterberg District Municipality (WDM); and • Sekhukhune District Municipality (SDM).
Local Municipality	• CDM: Lepelle Nkumpi Local Municipality (LNLM); • WDM: Mogalalakwena Local Municipality (MLM) and Modimolle-Mookgophong Local Municipality (MMLM); and • SDM: Ephraime Mogale Local Municipality (EMLM).
Ward number(s)	• LNLM: 9 • MLM: 12; 13; 16; 18; 20 and 32 • MMLM: 14 • EMLM: 5
Nearest town(s)	Zebediela, Ga-Mashashane, Ga-Mapela, Mokopane, Ga-Taueatswala, Mokerong, Mookgophong, Modimolle, Marble Hall, Manapsane, and Moganyaka.
Current Zoning	Agriculture
Current land use	The land in question comprises more than ten properties, and while certain portions remain fallow, other sections are actively utilized for agriculture.
Access	Access to the project area is provided via: the N11, N1, R519, R33, and various tertiary roads surrounding the area.

This Chapter provides an overview of the socio-economic environment of the province, District Municipalities (DMs), and Local Municipalities (LMs) within which the Eskom Burotho-Silimela

Project is proposed and provides the socio-economic basis against which potential issues can be identified.

6.2 Site Specific Sensitivities

Table 6 presents a preliminary assessment of key socio-economic attributes identified in the study area which can be seen on Figure 9, their potential impacts, and proposed next steps for each attribute. The attributes have been identified based on a review of existing information, site visits, and initial stakeholder consultations. The table is intended to provide a structured framework for the ongoing SIA process and will be further refined as the assessment progresses.

The Highveld North-West and Lowveld Strengthening Project Eskom Borutho-Silimela 400 kV Transmission Line presents both challenges and opportunities from a Socio-economic perspective. Through a robust SIA process, we aim to ensure that the development is Socio-economically sustainable and contributes positively to the local Socio-economic environment.

Table 6: Site Specific Sensitive Attributes Identified

Sensitive Attribute Identified	Description	Impact Associated	Risk/Opportunity	Next Steps
Rivers and Streams	Prominent rivers or streams in the surrounding area include the Elandsrivier, Nylerivier, Rabie Dam, Sandrivier, and the Olifantsrivier.	Development which impacts rivers or stream are not advised, the area houses subsistence farmers which make use of these hydrological features and therefore may carry a negative social rating if impacted.	Risk	Implement the recommendations from the freshwater study conducted.
Eskom Overhead Lines	A host of power lines criss-cross the study area, these include, but are not limited to: Pluto – Hermes 1 400kV Pluto – Hermes 2 400kV	Powerlines do not pose a social risk, and the development area has been exposed to similar activities previously, this must however be taken into consideration in terms of avifauna. To put it simply; additional powerlines mean additional power is being fed into the national grid, which, in terms of the national energy crisis is considered a social gain, the construction and maintenance of these lines will also create employment opportunity.	Opportunity	Ensure that the design and operation of the transmission line aligns with Eskom's requirements for grid connection.
Main Access Roads	The main access roads are the: • N1; • R101; and • R520.	These will provide access for the components of the proposed development to be transported along, as well as for the workers to gain access, it is therefore important that public transport exists along these routes, which was confirmed during the site visit.	Opportunity	Implement the recommended traffic management plan to manage the increased traffic during construction and operation, ensuring minimal disruption to local communities.
Internal Farm Gravel roads	Gravel roads along which farm vehicles or livestock use to travel.	These areas are already disturbed and provided for valuable access to the site for evaluation. Additionally, these disturbed areas can be utilized for laydown areas or for the development of permanent internal access roads, therefore reducing the loss of vegetation on site	Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Abandoned Buildings	The area has abandoned infrastructure including abandoned or heavily degraded buildings which appear to have been used for housing of farming staff.	These buildings are in close proximity to the development footprint and could be utilized by the developer to provide temporary residence for developers or security. These buildings could also pose a security risk during construction for individuals using the access road or for locals in close proximity and special attention must therefore be given to utilizing or securing these.	Risk/Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Agricultural Development	Pivots and small holdings within 5 km of the development area.	The development is primarily in mixed agricultural region. The development may pose a security risk and increase the rate for small petty crimes in the surrounding communities, this includes theft of items, livestock, produce, etc.	Risk	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.

Sensitive Attribute Identified	Description	Impact Associated	Risk/Opportunity	Next Steps
Informal Settlements	Small clustered residential developments located in close proximity to and directly in development area.	These areas house mainly unemployed unskilled or semi-skilled labour which may be able to be provided with employment and skills development training during the construction and operational phases.	Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Prison	Prison within proximity to the housing development, on the main access road.	No direct anticipated social impact.	Risk/Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Mixed Residential	Along the main access road in amongst the sub substance farming houses are some mixed residential homes.	These areas house mainly unemployed unskilled or semi-skilled labour which may be able to be provided with employment and skills development training during the construction and operational phases.	Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Mixed Industrial	Small scale economic activities which take place within the local community such as small shops, processing plants, industrial activities, towing companies, etc.	Activities which could provide goods and services on a local scale to the developers during the construction and operational phases of development which will stimulate the local economy.	Opportunity	The extent of the impact and associated mitigation measures will be assessed within this SIA.
Mixed Consumer	Small scale economic activities which take place within the local community such as small shops, processing plants, industrial activities, towing companies, etc.	Activities which could provide goods and services on a local scale to the developers during the construction and operational phases of development which will stimulate the local economy.	Opportunity	The extent of the impact and associated mitigation measures will be assessed within this SIA.
School	Kindergarten, primary schools and secondary schools located in close proximity to the development area and in surrounding area of 5km radius.	Well-maintained schools in surrounding area of 5km radius have no direct impacts from the development.	Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Towns and Settlements	Farm settlements or residences found within the study area include: • Mokopane; and • Mokgophong.	Alternative employment opportunities will be provided to the local community members, although the employment opportunities are anticipated to be limited.	Opportunity	Implement the mitigation measures associated to the extent of the impact as recommended in Chapter 8.
Labor and Working Conditions	The development will create employment opportunities during construction and operation.	Potential for job creation and improved livelihoods, but also potential risks to worker health and safety. This could lead to improved economic conditions, but also potential social risks related to labour conditions.	Opportunity	Implement a labour management plan, ensuring fair labour practices and safe working conditions, as recommended in Chapter 8.
Resource Efficiency and Pollution Prevention	The development will use resources (e.g., land, water for cleaning panels) and could generate waste (e.g., packaging materials, end-of-life panels).	Potential for efficient use of resources and prevention of pollution, but also potential environmental impacts. This could affect the local environment and resources available to the community.	Opportunity	Implement a resource efficiency and pollution prevention plan, aiming to minimize resource use and prevent or mitigate pollution, as recommended in Chapter 8.

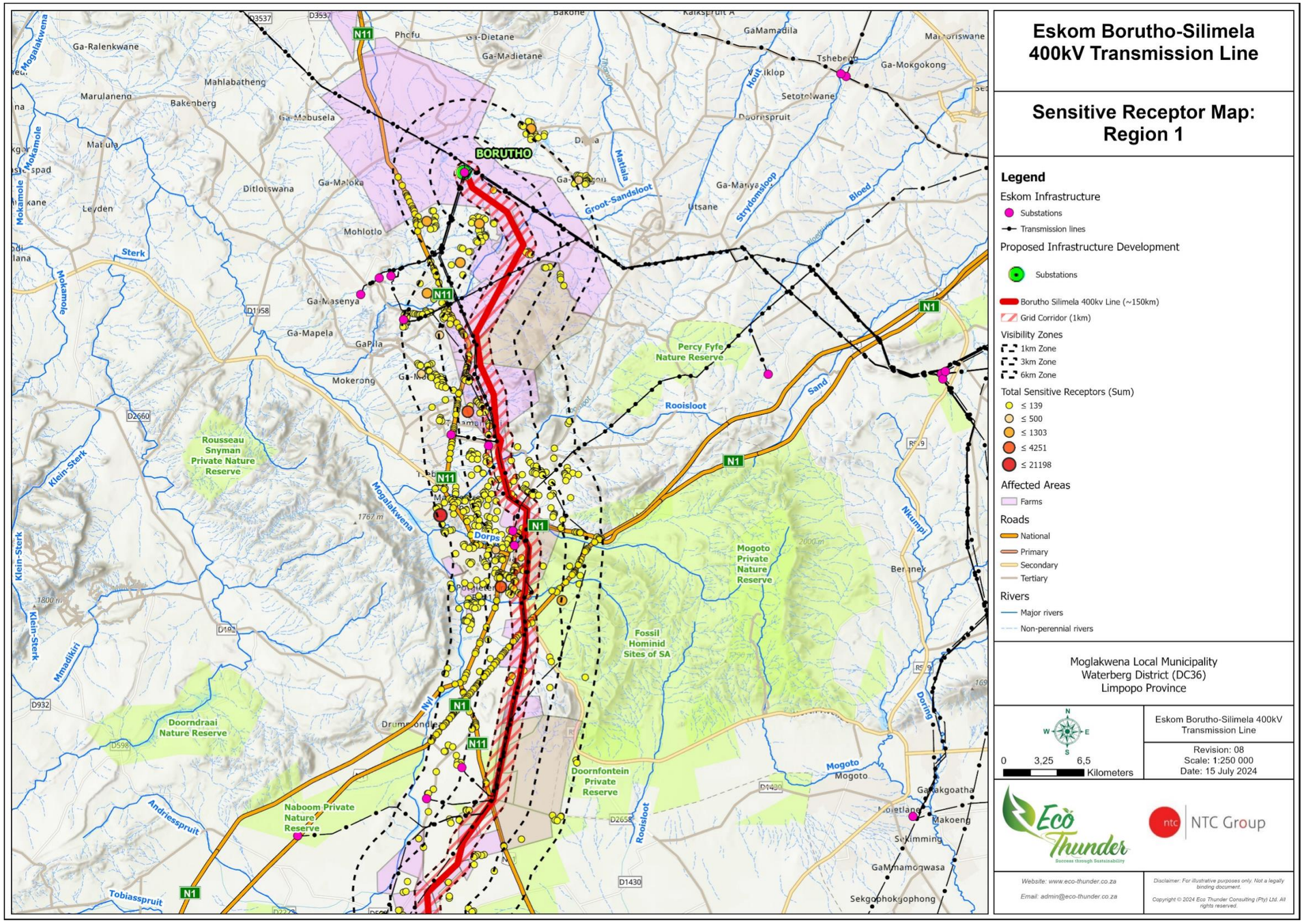

Figure 9: Overview of Sensitivities: Region 1

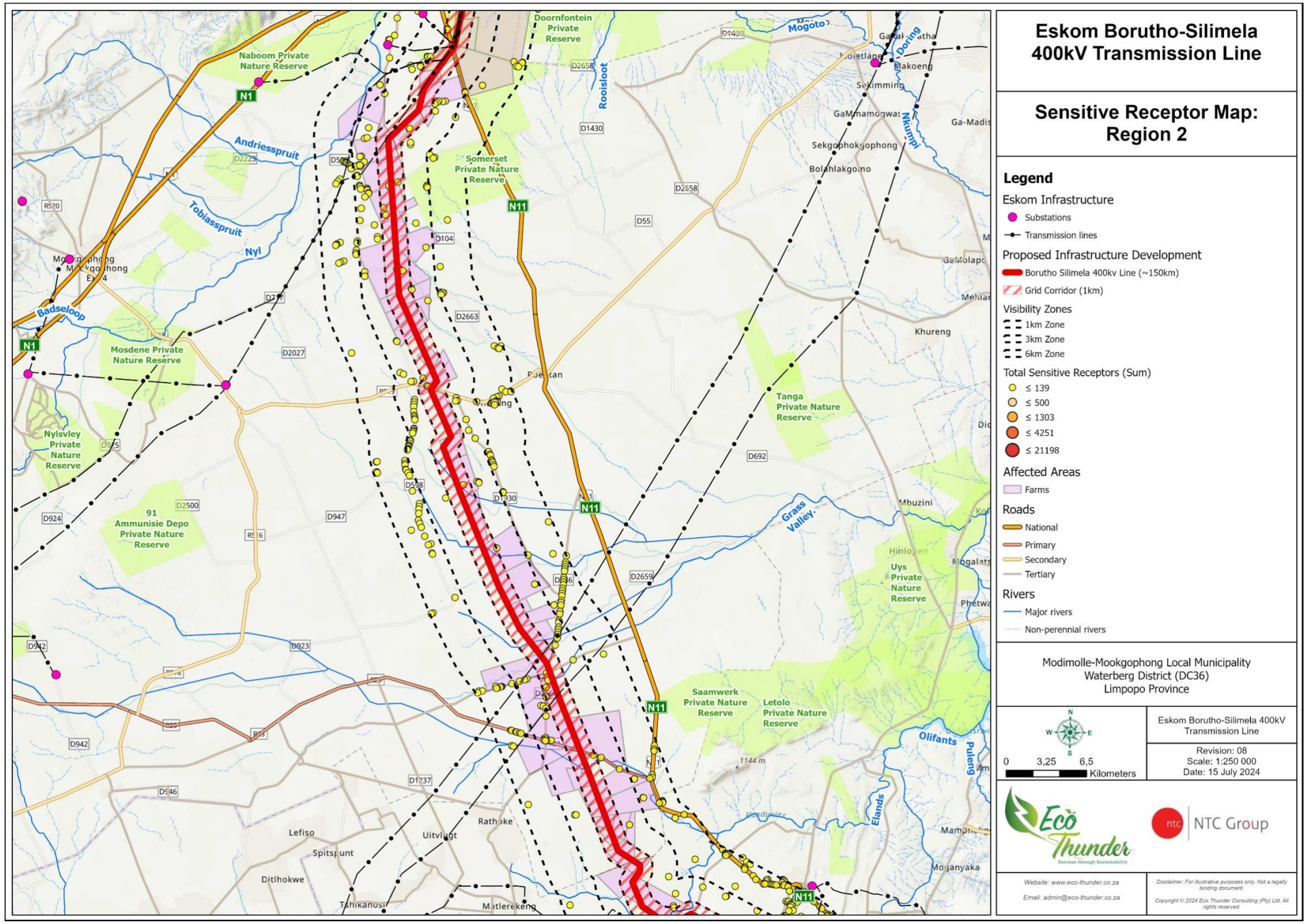

Figure 10: Overview of Sensitivities: Region 2

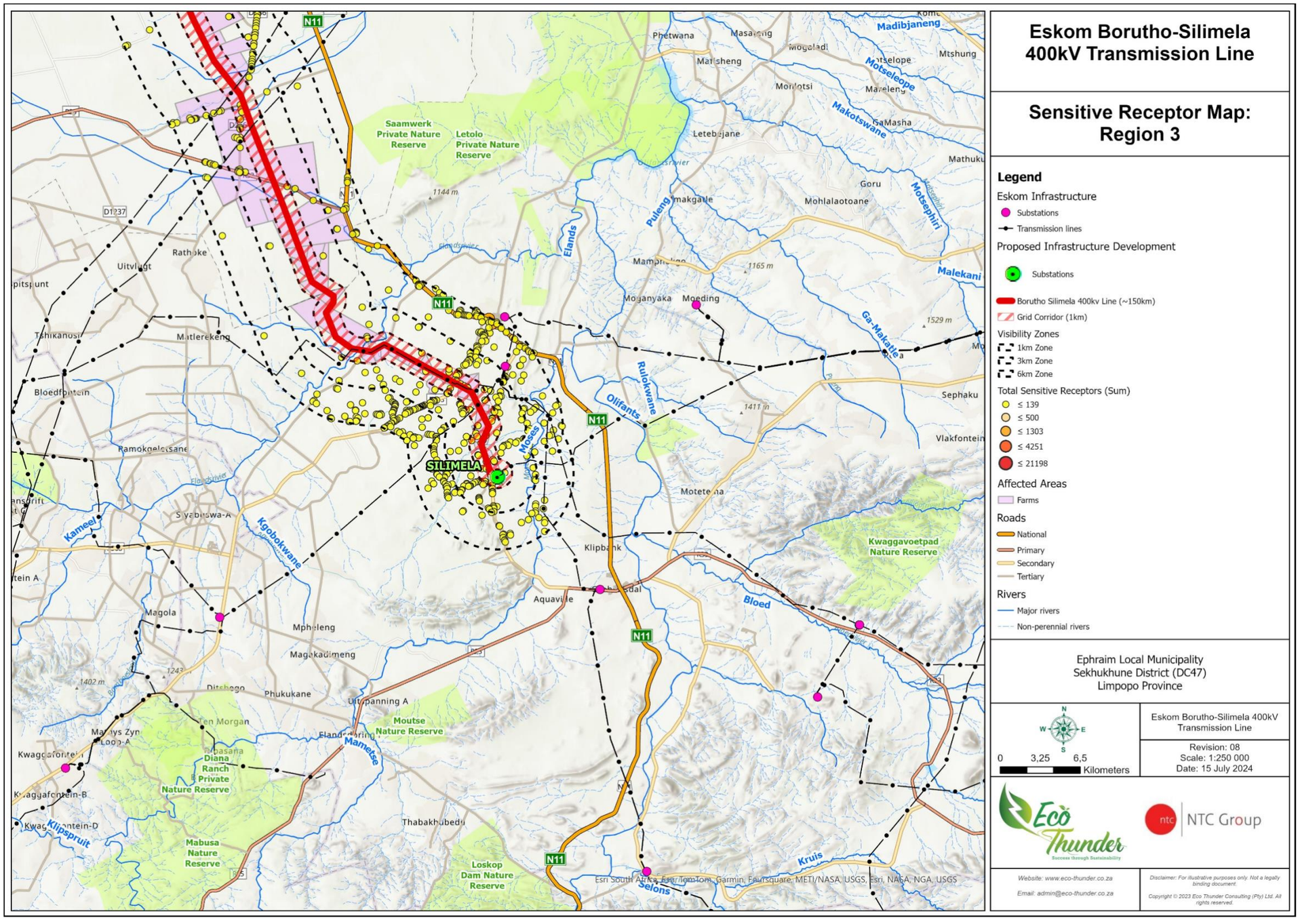

Figure 11: Overview of Sensitivities: Region 3

6.3 Limpopo Province Overview

Limpopo, South Africa's northernmost province, borders onto Mozambique, Zimbabwe, and Botswana. It also borders the Mpumalanga, Gauteng and Northwest provinces. Named after the Limpopo River, which flows along its northern border, it is a region of contrasts, from true Bushveld country to majestic mountains, primeval indigenous forests, unspoiled wilderness, and patchworks of farmland. In the eastern region lies the northern half of the magnificent Kruger National Park.

Limpopo ranks fifth in South Africa in both surface area and population, covering an area of 125 754km²and being home to a population of 5 779 090. The capital is Polokwane (previously Pietersburg). Other major cities and towns include Bela-Bela (Warmbad), Lephalale (Ellisras), Makhado (Louis Trichardt), Musina (Messina), Thabazimbi and Tzaneen.

Mining is the primary driver of economic activity. Limpopo is rich in mineral deposits, including platinum-group metals, iron ore, chromium, high and middle-grade coking coal, diamonds, antimony, phosphate and copper, as well as mineral reserves such as gold, emeralds, scheelite, magnetite, vermiculite, silicon and mica. The province is a typical developing area, exporting primary products and importing manufactured goods and services.

The climatic conditions in the province allow for double harvesting seasons, which results in it being the largest producer of various crops in the agricultural market. Sunflowers, cotton, maize and peanuts are cultivated in the Bela-Bela–Modimolle area. Bananas, litchis, pineapples, mangoes and pawpaws, as well as a variety of nuts, are grown in the Tzaneen and Makhado areas. Extensive tea and coffee plantations create many employment opportunities in the Tzaneen area. The Bushveld is cattle country, where controlled hunting is often combined with ranching. Limpopo is divided into five district municipalities, which are further subdivided into 22 local municipalities.

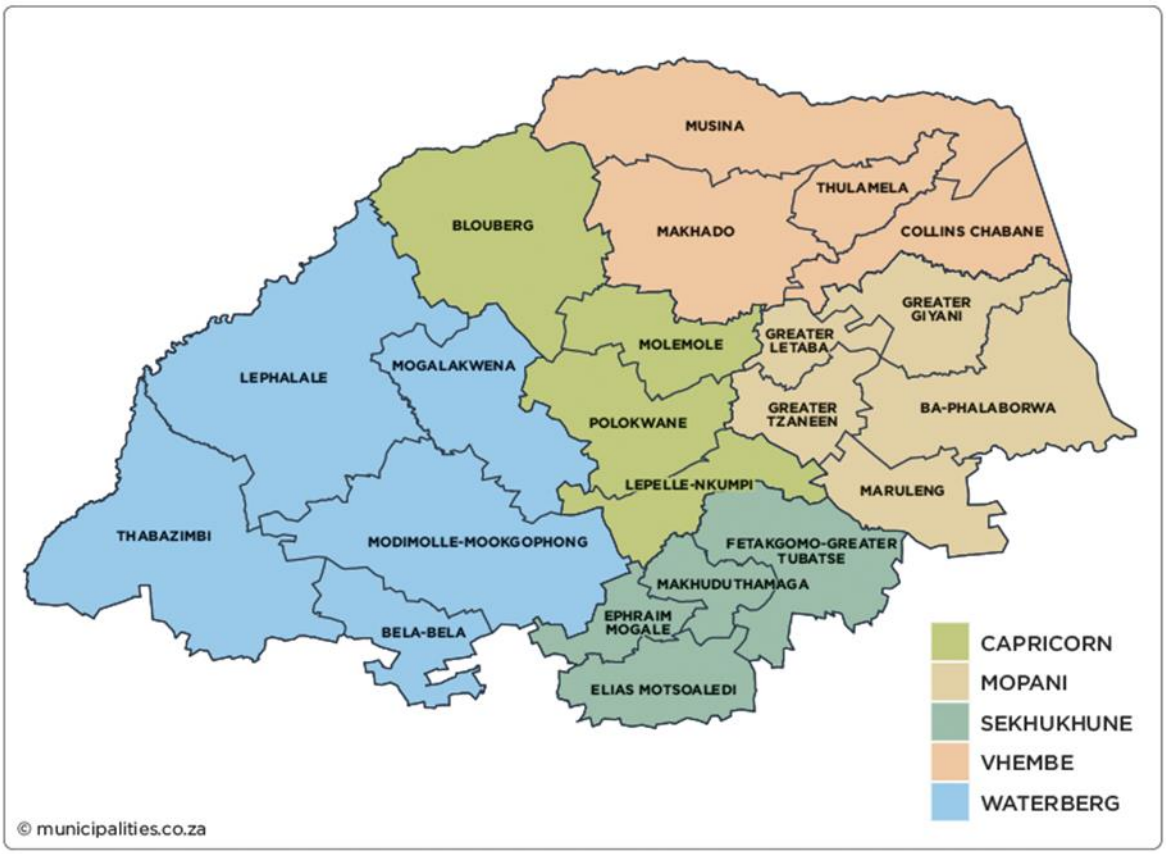

Figure 12: Map showing the districts of the Limpopo Province

(Source: www.municipalities.co.za*)*

Limpopo population was recorded at 5.4 million in 2010 and it has since increased to 5.9 million in 2020, this means that the provincial population has increased by around 500 thousand people between 2010 and 2020 period. The population growth rate has been on decline since 2016, in 2020 the population increased at a rate of 0.8 percent from a high of 1 percent in 2016. As the population number is forever increasing, it means there will be more demand for public goods such as water, housing, energy, healthcare, transportation and more.

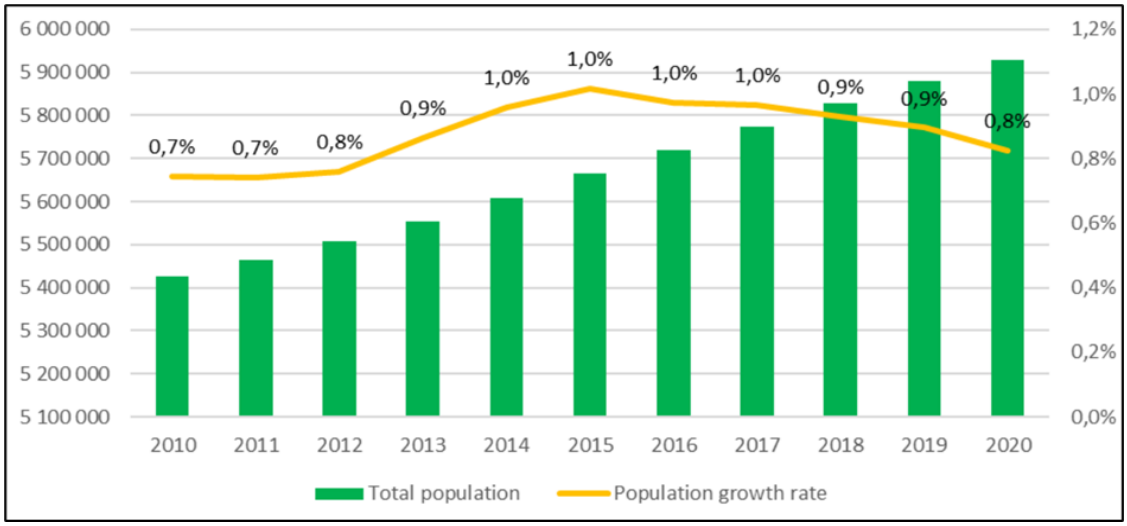

Figure 13: Limpopo Total Population Growth Rate.

Limpopo population in terms of age structure tend to follow similar pattern as that of the country, dominated by people of young age or youth, with ages ranging between below 39 years. Though in Limpopo from the age group of 0-4 to the age group of 25- 29 the male gender is dominant. From the age group of 30-34 to the age group of 80+ the Limpopo population is dominated by females with a large variance between the genders.

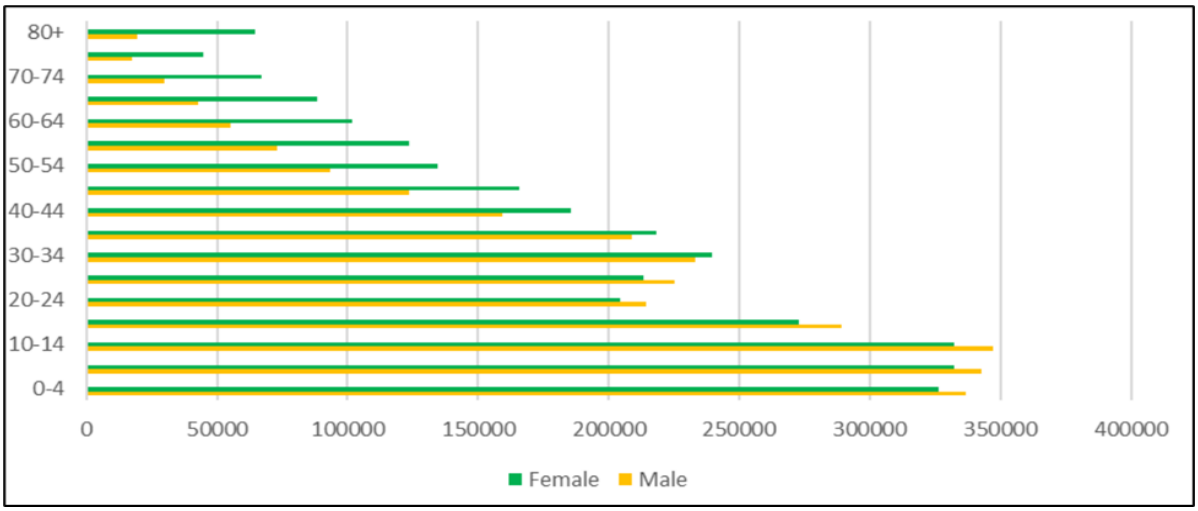

Figure 14: Population Structure of the Limpopo Province

In terms of the district distribution of the Limpopo population, majority of the Limpopo population resides in Vhembe district with a population of around 1.4 million. It is followed by Capricorn, Sekhukhune and Mopani districts with a population size of 1.3 million,1.2 Million, and 1.1 Million respectively. The lowest population in the province is found in Waterberg district with a population size of 768 thousand people.

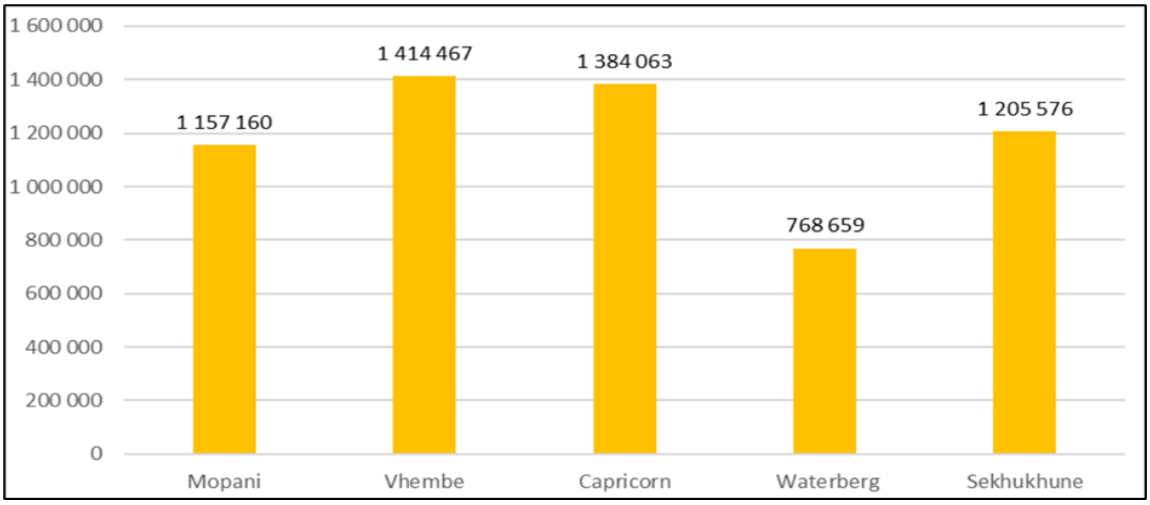

Figure 15: Limpopo District Population Distribution

Limpopo province's, GDP growth has been facing a decline in recent years, growing well below the Limpopo Development Plan's aspired 3 percent growth rate. From 2018 the provincial economy grew by 0.6 percent, from the 2017 2.1 percent growth. Limpopo GDP further declined to negative 0.2 percent in 2019 and to negative 7.2 percent in 2020. It is expected that as the mining and other industries recover the provincial economy will recover.

Figure 16: Limpopo GDP Constant 2010 Prices Percent Change Year-on-Year

In 2020 the industry that contributed positively towards the Limpopo's gross domestic product was the agriculture sector with 0.4 percent points.

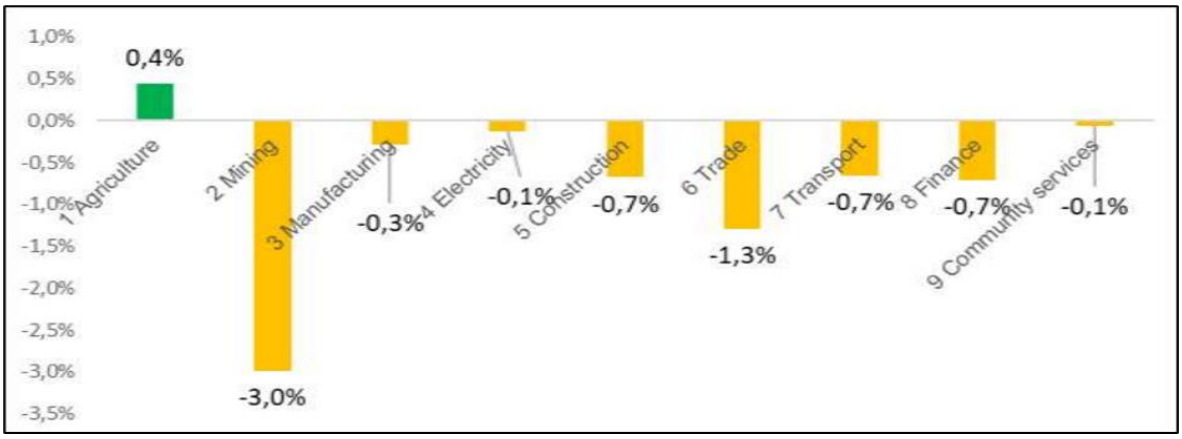

Figure 17: Contributing Industries

Due to the complications caused by the deadly Corona-Virus, other industries contributed negatively towards the economic growth in Limpopo province. Mining industry recorded the highest negative of 3.0 percent followed by trade with negative 1.3 percent.

The Limpopo Districts GDP has been on decline over the years from 2010. Capricorn District has been the leading district in terms of GDP growth in the province from 2010 to 2016, and it was overtaken by Mopani and Vhembe districts from 2017. In 2020 all the districts suffered a negative growth due to the impact of Covid-19. The hardest hit districts were Waterberg and Sekhukhune, experiencing a negative growth of -9.9 and -9.4 percent respectively. Capricorn, Mopani and Vhembe district experienced a negative growth of -6.8, -6.6 and -4.3 percent respectively.

Both South Africa and Limpopo province has experienced a decline in the number of people employed between Jan-March 2020 and Jul-Sep 2021. In South Africa the number of employed persons declined from 16.4 Million between Jan-March 2020 to about 14.3 Million in Jul-Sep 2021 period. About 2.1 Million jobs were lost during this period in the country. The Limpopo number of employed persons declined from 1.4 million between Jan-Mar 2020 to 1.1 million between Jul-Sep 2021.

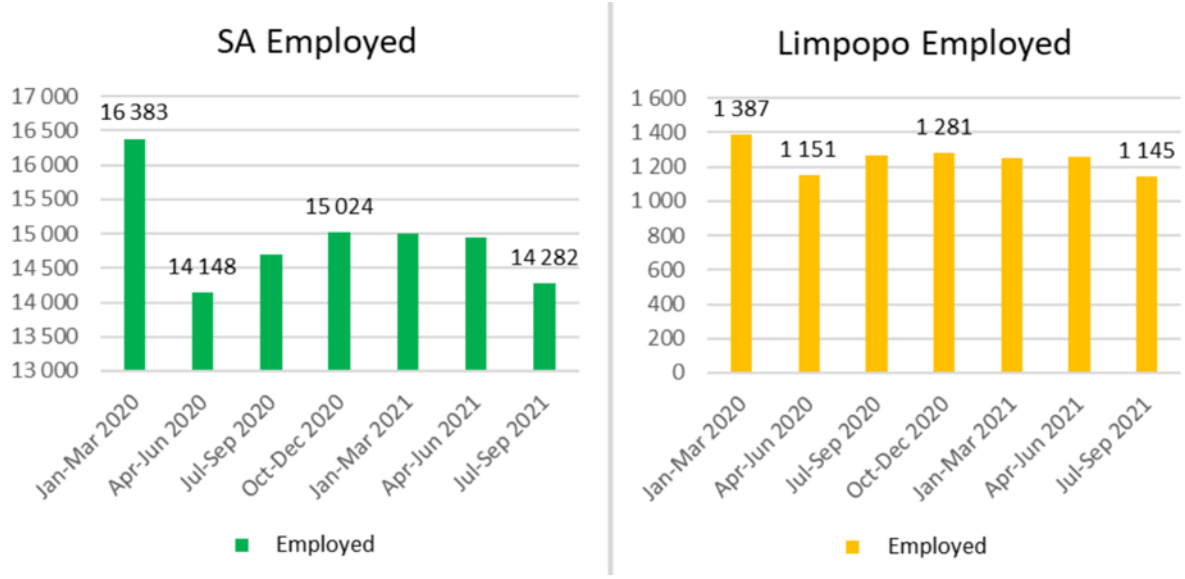

Figure 18: Employment Rate: SA vs Limpopo

Limpopo's unemployment rate surged from 23.6 percent in the 1st quarter of 2020 to 32.5 percent in the 3rd quarter of 2021. Though the provincial unemployment rate is still below the national unemployment rate, the province has seen a bigger upsurge of about 9 percent since the beginning of the COVID-19 pandemic in early 2020. During the same period, the absorption rate reduced from 36.3 percent in the 1st quarter of 2020 to 29.4 percent in the 3rd quarter of 2021, a reduction of about 7 percent in the absorption rate in the province. While the labour force participation rate also witnessed a decrease from 47.3 percent in the 1st quarter of 2020 to 43.6 percent in the 3rd quarter of 2021.

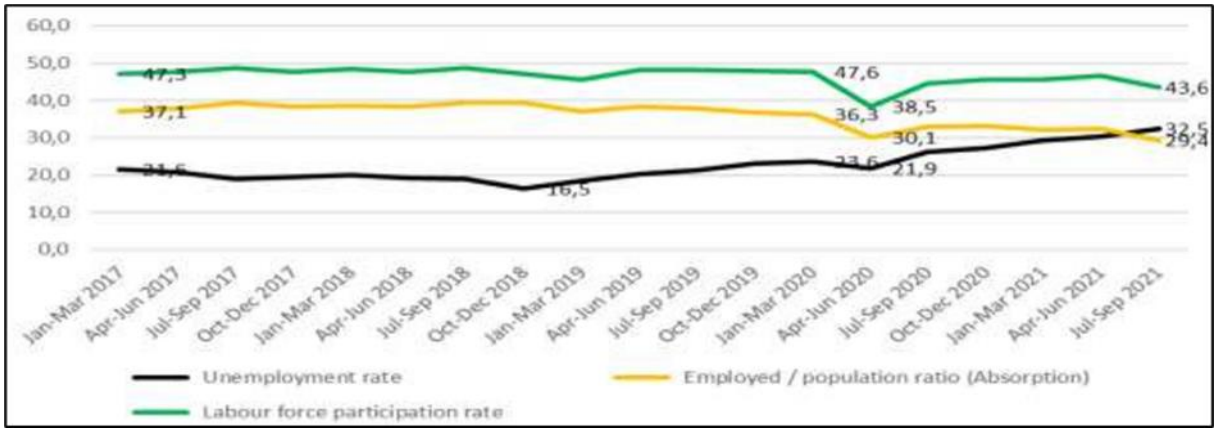

Figure 19: Limpopo Unemployment and Labour Force Participation Rate

Over the period Apr-Jun 2020 the unemployment number in South Africa and in Limpopo Province were recorded at 4.3 million and 323 thousand respectively. South Africa recorded an unemployment number of 7.8 million and Limpopo recorded 550 thousand on the second quarter of 2021. The number of unemployed persons in South Africa decreased by 183 000 to 7.6 million in the 3rd quarter of 2021, while in Limpopo there was no significant changes.

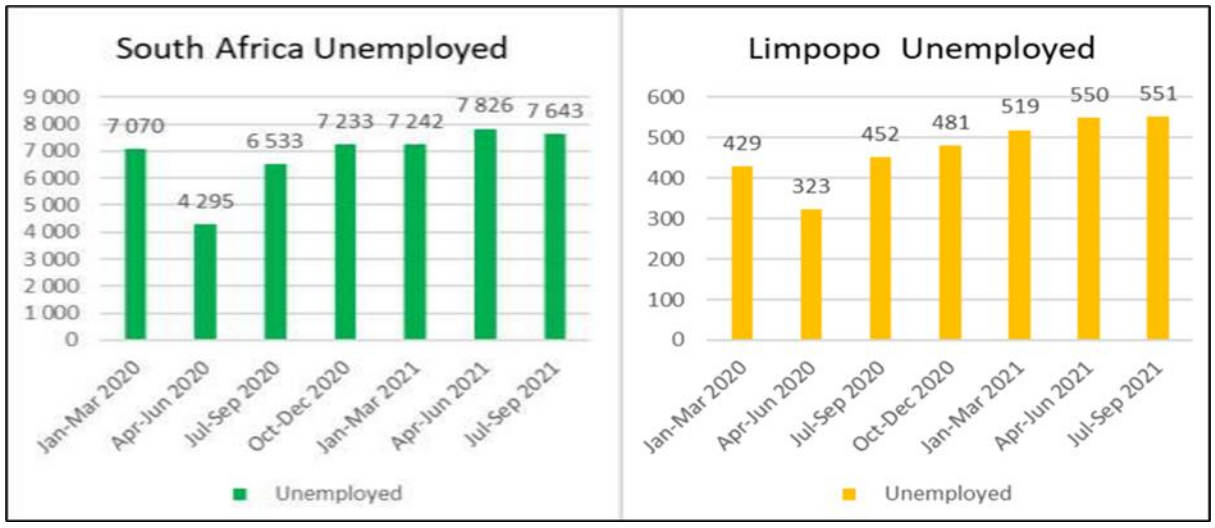

Figure 20: Unemployment Rate: SA vs Limpopo

The Human development index is used to measure the standard of living of citizens in a particular region. Limpopo province has improved when it comes to the standard of living for its citizens since 2010, as the provincial Human Development Index increased from 0.52 in 2010 to 0.66 in 2020. This is an indication that the living conditions of the people in the province has somehow increased over the period.

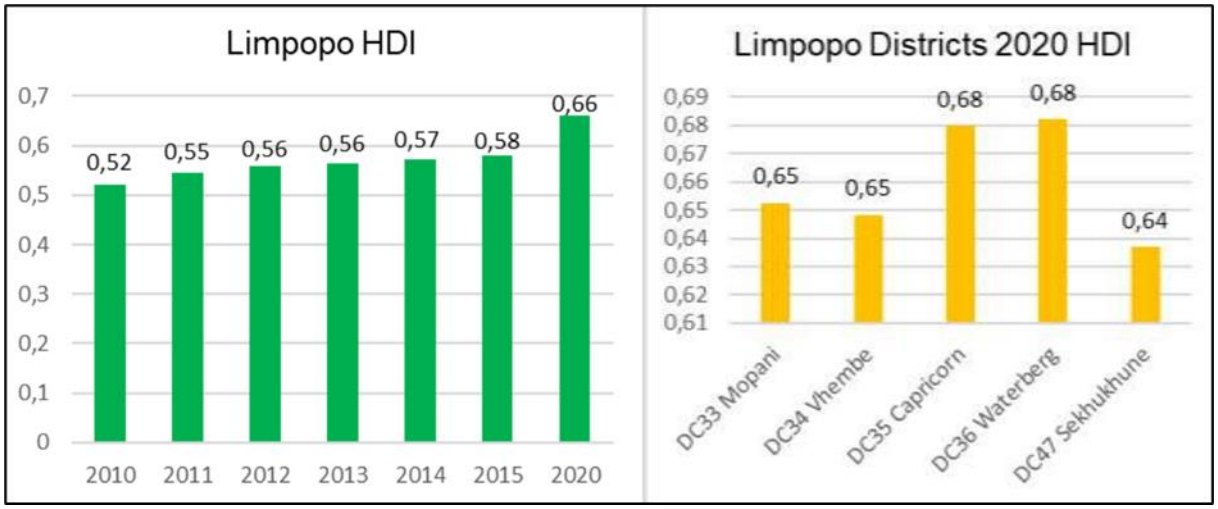

Figure 21: Limpopo HDI

Citizens of Waterberg and Capricorn district have higher standard of living compared with other districts in Limpopo province recorded at 0.68 HDI point respectively. Sekhukhune district recorded an HDI of 0.64 which shows less human prosperity in levels of education, standard of living and life expectancy compared with other districts in the province.

In terms of provincial performance, the Free State again was the best-performing province with a pass rate of 85.7 percent. Gauteng came second at 82.8 percent and the Western Cape achieved 81.2 percent. Limpopo was the only province to achieve a pass rate below 70 percent as the province only managed to get 66.7 percent.

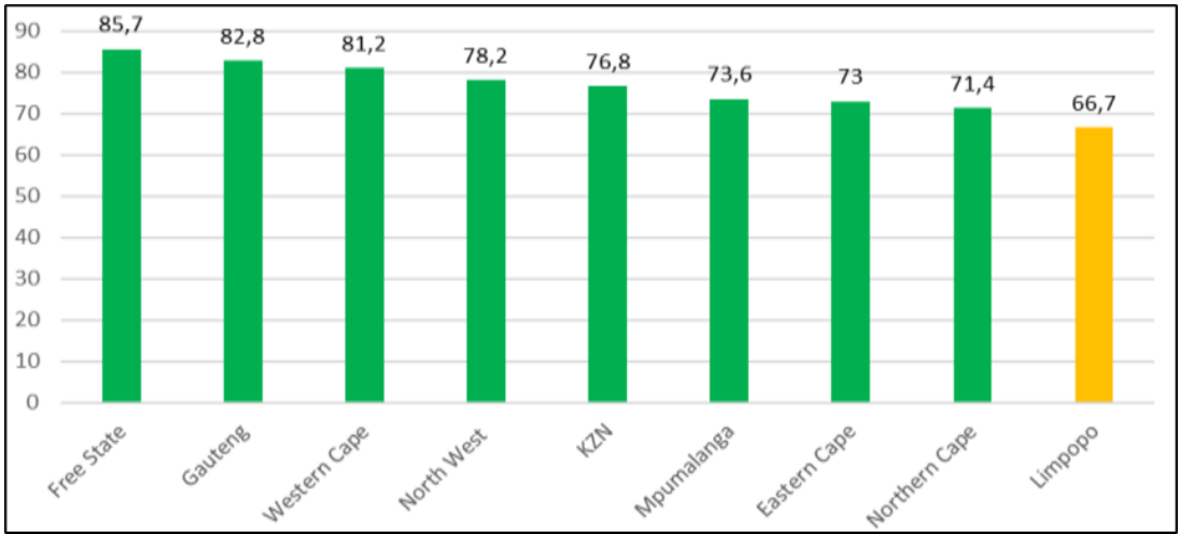

Figure 22: Provincial Performance

Limpopo recorded the lowest matric pass rate among the nine provinces, with 66.7 percent. But for the first time in five years, in 2021 the province didn't have any schools with a 0 percent pass rate as compared to 2020 where there were seven such schools. This is a step in the right direction and the Department shall continue to provide targeted support so that no school ever reports a 0 percent pass rate in their NSC results.

The number of people in Limpopo with no education was 499 thousand in 2010, this number reduced in 2020 to 330 thousand. This number shows that many people are now schooling more than before, and Adult Basic Education and Training (ABET) has also helped the adults to go to school and learn how to read and write.

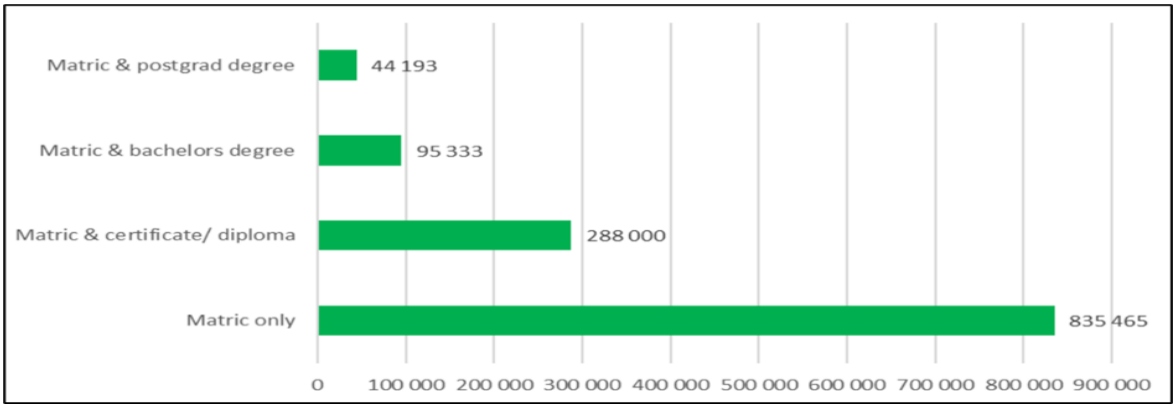

Figure 23: Limpopo Education

Limpopo province is dominated by people with matric only, these people amounted to 835 thousand in 2020 followed by those with matric and certificate / diploma (288 thousand). Only 44 thousand people in Limpopo have matric and postgraduate degree.

Income inequality continues to be a challenge that is facing not only the country, but also in the province and districts in Limpopo. In recent times, the province has been experiencing an increase in the number of unemployed persons, as a result unemployment is also considered one of the factors of income inequality. Low level of education and skills limit people's ability to access decent jobs for themselves and to also participate fully in the society.

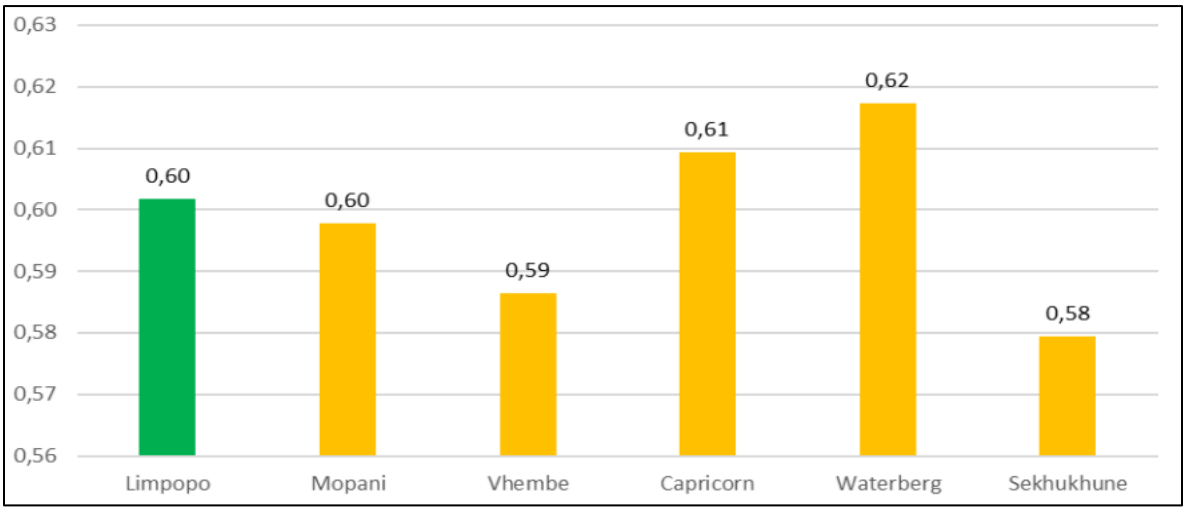

Figure 24: Limpopo Gini Coefficient

Limpopo province recorded a Gini Coefficient of 0.60 percent, there is no significant changes between 2019- and 2020-income inequality. Waterberg and Capricorn district recorded the highest income inequality amongst the districts in the province at 0.62 and 0.61 respectively, this is an affirming that the rich are getting richer while poor citizens are becoming poorer. Sekhukhune and Vhembe districts respectively recorded 0.58 and 0.59 percent in 2020.

The number of people living below the lower poverty line has been increasing since 2012 to 2020. The COVID-19 pandemic has contributed in this increase as many people have lost their jobs and some businesses closed down. In 2012 Limpopo province recorded 2.6 million people living below the lower poverty line, the number increased in 2020 significantly to 3.3 million.

The share of people living below the lower poverty line increased by 10.4 percent from 46.5 percent in 2011 to 56.9 percent in 2020.

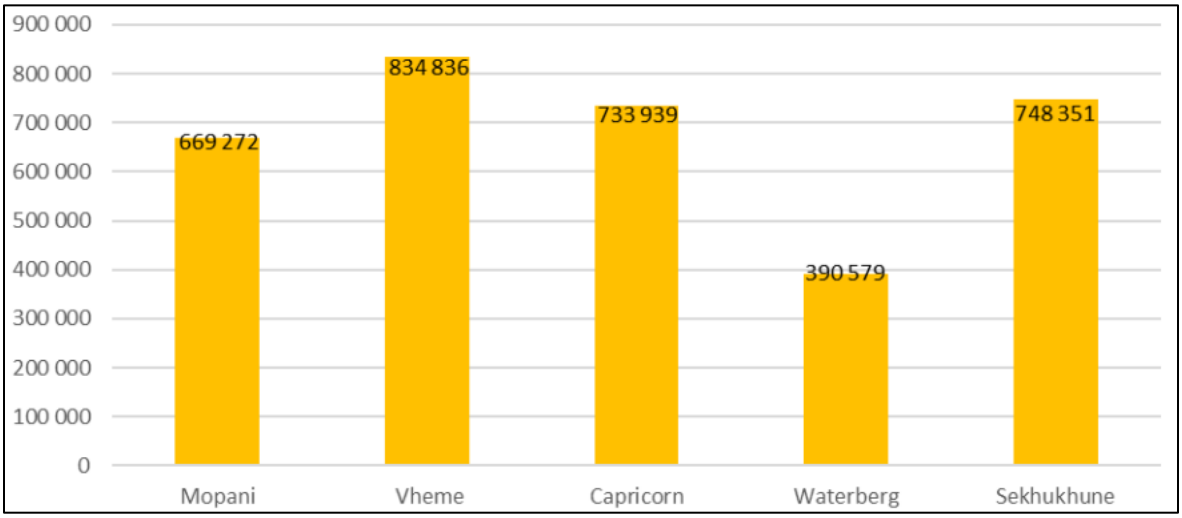

Figure 25: Limpopo People Living Below the Lower Poverty Line Per District

Vhembe district had the highest number of people living below the poverty line of 834 thousand followed by Sekhukhune district at 748 thousand. Waterberg district recorded the least number of 390 thousand people living below the lower poverty line.

6.4 District Municipalities Overview

The demographics of the 3 districts and through which the transmission line passes, will now be discussed, and compared. This comparison is undertaken, based on data gathered during Census 2011 and is the most recent data available from Statistics South Africa at a municipal level.

Of the three districts that are traversed by the power line, at 21 705 km^2 Capricorn covers the 2nd largest geographical area and, with a population of 1 4 million people living within 342 838 households in 2011, Capricorn has a population density of 58.12/km^2 and a household density of. Greater Sekhukhune, which covers a geographical area of 13 528 km^2 and has a population of 1.2million people living within 263 802 households making it the 3rd most densely populated district, with a population density of 79.60/km^2 and household density of 19.50/km. The Waterberg municipality is the biggest district in the province, making up just more than a third of its geographical area (44 914km^2) as of 2016 the population size was 745 758 with 211 471 households.

The population distribution across all three district municipalities is illustrated in the table below:

District Municipality	Population Size
Capricorn District Municipality	1 330 436

Waterberg District Municipality	745 758
Sekhukhune District Municipality	1 169 762

In terms of the district distribution of the 3-district population, majority of the population resides in Capricorn, Sekhukhune and districts with a population size of 1.4 million and1.2 Million, Million respectively. The lowest population in the province is found in Waterberg district with a population size of 768 thousand people.

The Limpopo Districts GDP has been on decline over the years from 2010. Capricorn District has been the leading district in terms of GDP growth in the province from 2010 to 2016, and. In 2020 all the districts suffered a negative growth due to the impact of Covid-19. The hardest hit districts were Waterberg and Sekhukhune, experiencing a negative growth of -9.9 and -9.4 percent respectively. Capricorn district experienced a negative growth of -6.8 percent.

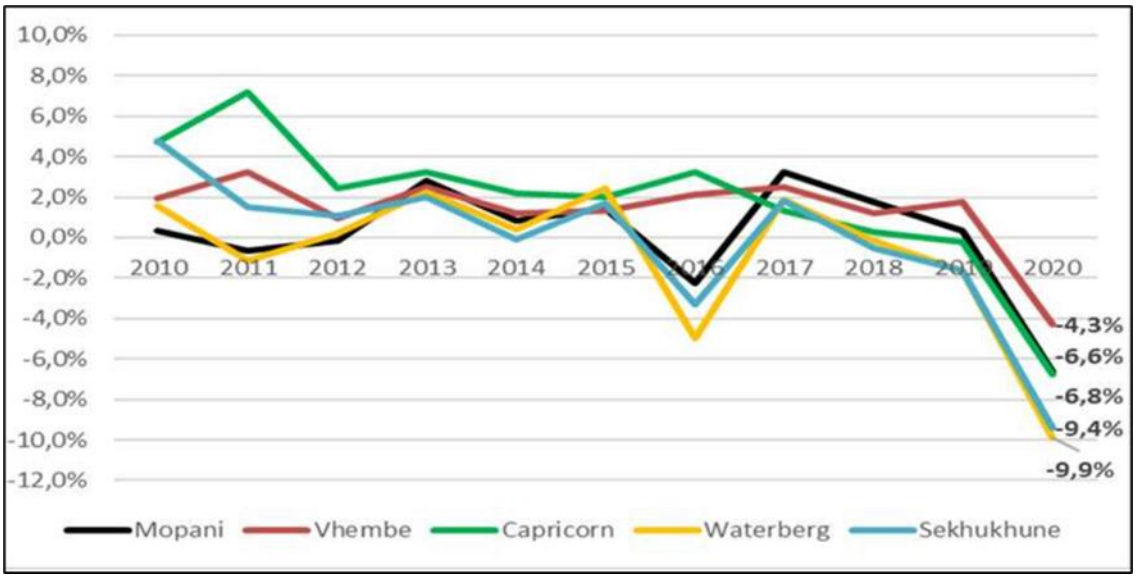

Figure 26: Limpopo District Economic Growth

Mining, agriculture and tourism are the major economic contributors within the Waterberg district municipality. Community services and finance were identified as major Economy contributors in the Capricorn District. Within the Greater Sekhukhune district municipality Community services and Mining are the major contributors with agriculture only contributing 9.7% of the Municipalities Economy.

The number of formally employed people in Sekhukhune District Municipality counted 108 000 in 2017, which is about 70.64% of the total employment, while the number of people employed in the informal sector counted 45 000 or 29.36% of the total employment. Informal employment in Sekhukhune increased from 26 700 in 2007 to an estimated 45 000 in 2017.

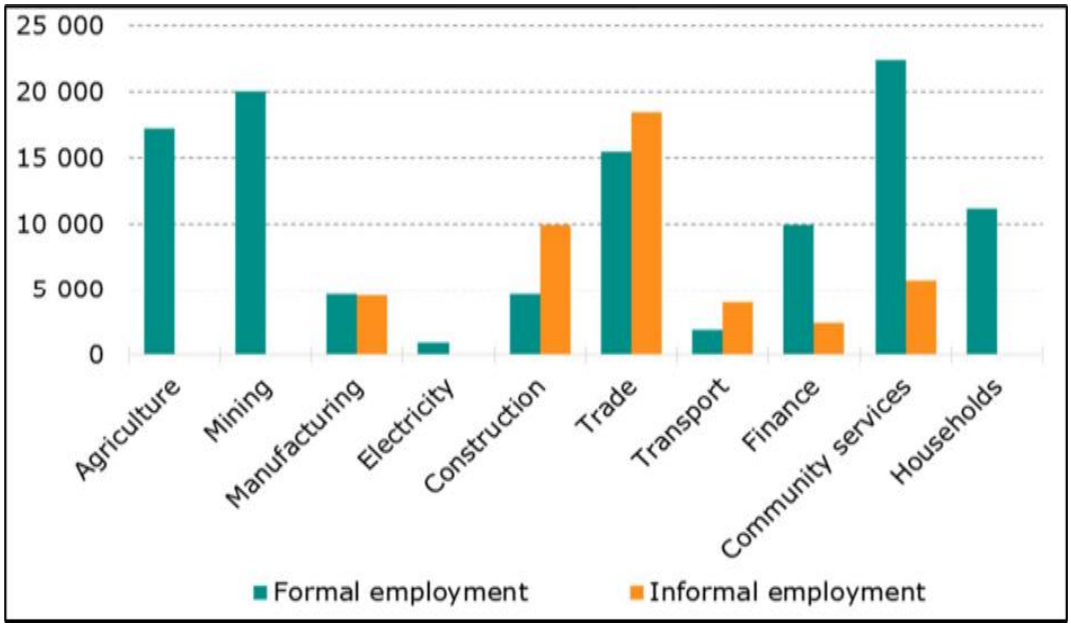

Figure 27: Formal and Informal Employment by Broad Economic Sector - Sekhukhune District Municipality, 2017

In 2016, the Capricorn economy employed a total number of 354 357 people, comprising of 24.6% from the Informal Sector and 75.4% from the formal sector. The informal sector employed a total number of 87 258 people in 2016, with the Trade Sector being the largest employer of people (employing 41.3% of the informal economy). The sector that contributed the most to employment (both formal and informal) was Community Services (26.6%), while the least contributing sector was Electricity (1.0%).

Table 7: Employment in Formal and Informal Sector in 2016

Sector	Number	Total (%)
Informal Sector	87 258	24.6%
Formal Sector	267 099	75.4%
Total	**354 357**	**100%**

The Waterberg economic status has placed it at high level of competitiveness in the Limpopo Province. While the municipality is a region still plagued with high levels of poverty and unemployment it has substantial opportunities for cooperative development in mining, agriculture, and tourism. The development of cooperative is implemented in the context of developing SMME and the two are over lapping. According to LIBSA there are 124 cooperatives in Waterberg. Their activities range mainly from catering to farming. They do not take advantage of other economic sectors mainly because of funding.

In terms of the HDI for each of the regions within the Capricorn District Municipality, Polokwane Local Municipality has the highest HDI, with an index value of 0.62. The lowest can be observed in the Blouberg Local Municipality with an index value of 0.54.

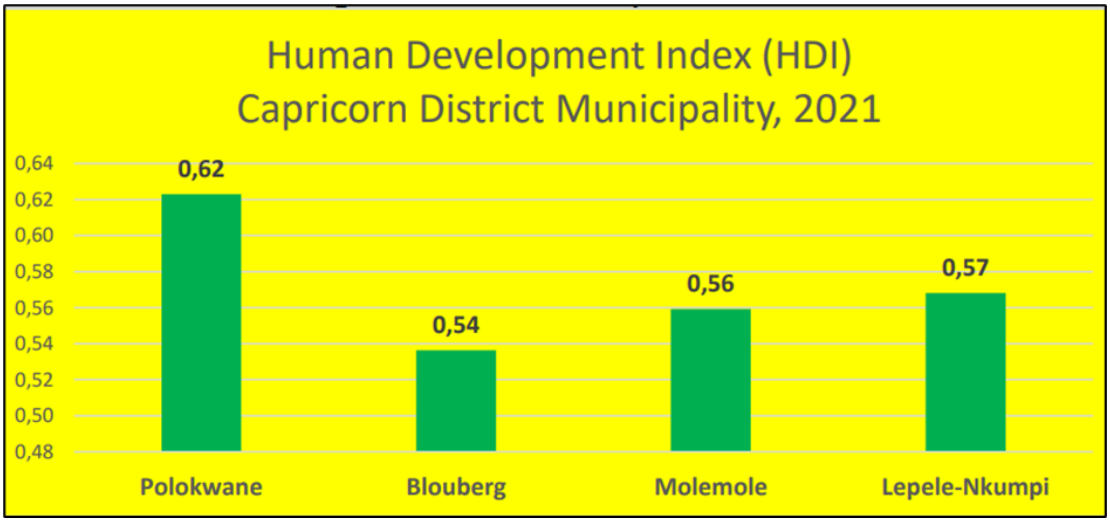

Figure 28: Capricorn Human Development Index

In 2018 Sekhukhune District Municipality had an HDI of 0.569 compared to the Limpopo with a HDI of 0.595 and 0.657 of National Total as a whole. Seeing that South Africa recorded a higher HDI in 2018 when compared to Sekhukhune District Municipality which translates to worse human development for Sekhukhune District Municipality compared to South Africa. South Africa's HDI increased at an average annual growth rate of 1.65% and this increase is lower than that of Sekhukhune District Municipality (2.48%).

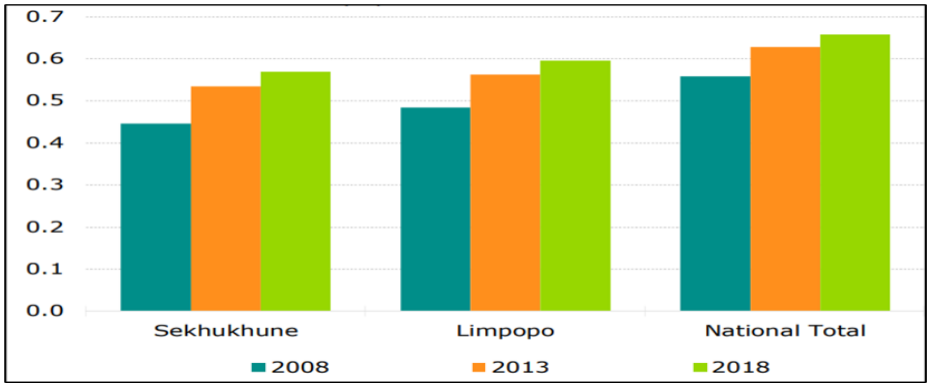

Figure 29: Sekhukhune Human Development Index

Compared to the other 2 municipalities the Capricorn district has the highest number of schools 1377 followed by Sekhukhune district with 928 and Waterberg district municipality with 381. The Capricorn district has a huge shortage of schools and classrooms due to the development of residential areas and in Pietersburg Circuit given the influx to the provincial city. In terms of the

norms and standard for public schools' ratio of teacher learner: Primary; 1:40 and Secondary; 1:35. The total walking distance to and from the school may not exceed 10 km and learners residing outside the determined radius may be provided with transport. Majority of tertiary institutions are concentrated in and around Polokwane.

Local Municipalities	Secondary schools	Primary schools	Combined schools	Special Schools	ECD Centers	Higher Institutions
Blouberg	73 schools - 23 476 Learners	120 schools - 38 625 Learners	1 schools - 317 Learners	2 schools	99	1 TVET (Senwabarwana)
Lepelle-Nkumpi	72 schools - 27 007 Learners	104 schools - 47 707 Learners	1 schools - 506 Learners	2 schools	133	1 TVET (Lebowakgomo)
Molemole	41 schools - 18 118 Learners	64 schools - 27 115 Learners	1 schools - 676 Learners	1 school	49	1 TVET (Ramokgopa)
Polokwane	156 schools - 70 770 Learners	253 schools - 118 100 Learners	2 schools - 2 549 Learners	9 schools	208	16 FET Colleges 2 Universities (Limpopo & Unisa) 1 Technicon (TUT)
Capricorn	**342**	**541**	**5**	**14**	**489**	**22**

Figure 30: Educational Facilities

When it comes to schools in the district, there is a total of 924 schools in the district. The table below show the numbers per each local municipality. Fetakgomo Tubatse Local Municipality has the highest number of schools in the district with 375 and Ephraim Mogale has the lowest number with 81.

Municipality	Number of Primary Schools	Number of Secondary Schools	Number of Combined Schools	Number of Special Schools	TVET Colleges	Number of Private Schools	TOTAL
Fetakgomo Tubatse	106	129	9	1	2	11	**377**
Ephraim Mogale	49	29	2	0	1	3	**82**
Elias Motsoaledi	99	63	32	3	1	10	**205**
Makhudumathamaga	100	98	4	2	0	3	**264**
TOTAL	**414**	**319**	**47**	**6**	**4**	**37**	**928**

Figure 31: Number of Schools in Sekhukhune District Municipality

When it comes to schools in the Waterberg district, there is a total of 440 schools in the district. The table below show the numbers per each local municipality. Mogalakwena Local Municipality

has the highest number of schools in the district with 270 and Bela-Bela has the lowest number with 24.

Table 8: Number of Schools in Waterberg District

Municipality	No of Circuit	Secondary	Primary	Lisen	Combined
Mogalakwena	9	98	148	1	12
Lephalale	3	29	48	1	3
Mokgophong	3	9	28	1	6
Bela-Bela	1	6	13	1	3
Thabadzimbi	2	6	12	1	6
Total	18	138	249	5	30

6.5 Local Municipalities Overview

With 797,127 residents, Polokwane is the most populated municipality among those listed, making it an important urban hub in the area. Lepelle Nkumpi, which has a population of 235,380, comes in second, suggesting a substantial population. Despite being smaller in size, Mokgophong, with 107,699 residents, nonetheless constitutes a sizable community. There are also sizable populations in Mokgalakwena and Greater Tubatse, with respective populations of 325,292 and 289,902.

Table 9: Population by Municipality

Local Municipality	Population
Polokwane Local Municipality	797 127
Lepelle Nkupi Local Municipality	235 380
Mokgophong Local Municipality	107 699
Mokgalakwena Local Municipality	325 292
Greater Tubatse Local Municipality	289 902

With 10.1% of its 28,977 households without access to electricity, Mokgophong has the highest rate of households without this basic utility. By comparison, Lepelle Nkupi has a significantly

smaller percentage—just 1.8% of its 61,303 households do not have access to power. In the more urbanised district of Polokwane, 3.1% of the 239,116 households are reported to be without electricity. 4.4% of households in Mokgalakwena and 4.1% of households in Greater Tubatse lack access to electricity.

Table 10: Number of Households vs No Access to Electricity

Local Municipality	Number of Households	No Access to electricity
Lepelle Nkupi	61 303	1.8%
Polokwane	239 116	3.1%
Mokgophong	28 977	10.1%
Mokgalakwena	82 674	4.4%
Greater Tubatse	125 363	4.1%

There are significant differences in educational attainment between the municipalities. With 47% of the population having finished matriculation, Polokwane LM stands out as having the greatest percentage and a comparatively better level of education. 34.3% of the people living in Lepelle Nkupi LM have finished matriculation. Similar matric completion rates of 34.8% are reported by Mokgophong LM and somewhat lower at 32.9% by Mokgalakwena LM. The matriculation completion percentage in Greater Tubatse LM is 30%, which is indicative of the local educational environment.

Table 11: Educational Attainment per Municipality

Local Municipality	Matric Completion rate
Lepelle Nkupi	34.3%
Polokwane	47%
Mokgophong	34.8%
Mokgalakwena	32.9%
Greater Tubatse	30%

In Lepelle Nkupi LM, there are 21.2% employed people and 21% unemployed people. The employment rate in Polokwane is 18%, while the unemployment rate is 35.8%. Mokgophong has a 14% employment rate and a 36% unemployment rate. In Mokgalakwena, employment is 18%

and unemployment is 26%. Finally, Greater Tubatse is notable for having a higher employment rate of 25% together with a comparatively high rate of 23% unemployment.

Table 12: Employment vs Unemployment per Municipality

Local Municipality	Employment	Unemployment
Lepelle Nkupi	21.2%	21%
Polokwane	18%	35%
Mokgophong	14%	36%
Mokgalakwena	18%	26%
Greater Tubatse	25%	23%

The population figures vary significantly among the municipalities, with Polokwane being the most populous. This demographic diversity suggests varying levels of urbanization and development across these areas. The completion rates for matric (high school) education vary, with Polokwane having the highest rate at 47%. This suggests a potentially higher level of educational attainment and access to educational resources in Polokwane compared to the other municipalities. In contrast, municipalities with lower matric completion rates may face challenges in terms of educational access and quality.

The employment and unemployment rates provide insights into the labour market dynamics in these areas. High unemployment rates in some municipalities, such as Mokgophong and Polokwane, may indicate economic challenges and the need for job creation initiatives. Lower unemployment rates, as in Greater Tubatse, suggest a more stable labour market. The percentage of households without access to electricity varies among the municipalities. Mokgophong has a notably high percentage of households without access at 10.1%, indicating potential disparities in basic services. In contrast, Lepelle Nkupi has a lower percentage, which might reflect better infrastructure coverage.

The installation of the Proposed Eskom Borutho-Silimela 400 kV Transmission Lines can have significant social benefits, including improved access to electricity, job creation, economic development, enhanced educational and healthcare facilities, better social services, and support for rural development. However, it's crucial to consider environmental and social impact assessments to mitigate any potential negative consequences and ensure that the project aligns with the specific needs and goals of each municipality.

Photograph 1: Infrastructure noted along the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 2: Road and Eskom Infrastructure along the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 3: Infrastructure noted surrounding the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 4: Landscape within the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 5: Road and Eskom Infrastructure along the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 6: Commercial area along the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 7: Informal Businesses within the surrounding area of the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 8: Telecommunications and Eskom Infrastructure along the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 9: Example of Housing Infrastructure within the surrounding area of the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 10: Example of Housing Infrastructure within the surrounding area of the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 11: Example of a Farm within the surrounding area of the Borutho-Silimela 400 kV Transmission Line Development Area

Photograph 12: School within surrounding area of the Borutho-Silimela 400 kV Transmission Line Development Area

6.6 Stakeholder Engagement

Stakeholder engagement is a critical component of the Social Impact Assessment process. It provides an opportunity for stakeholders to express their views, concerns, and suggestions regarding the proposed project. The engagement process for this report was designed to be inclusive, transparent, and respectful of all participants.

The stakeholder engagement process for this report included the following steps:

- **Stakeholder Identification:** We began by identifying a comprehensive list of stakeholders who could potentially be affected by or have an interest in the proposed project. This list included local community members, local and regional government officials, representatives from the mining and renewable energy sectors, environmental and socio-economic advocacy groups, and others.
- **Information Dissemination:** We disseminated information about the proposed project and the Socio-economic impact assessment process to identified stakeholders. This was done through various means, including community meetings, public notices, and direct communications.
- **Stakeholder Consultation:** We conducted stakeholder consultation meetings to gather feedback on the proposed project. These meetings provided a platform for stakeholders to express their views, concerns, and suggestions.
- **Feedback Incorporation:** We carefully reviewed all feedback received during the stakeholder consultation process. This feedback was used to inform the Socio-Economic Impact Assessment and to develop appropriate mitigation strategies.
- **Ongoing Engagement:** We are committed to maintaining an open dialogue with stakeholders throughout the project lifecycle. We will continue to provide updates on the project's progress and to seek feedback on proposed mitigation strategies.

The stakeholder engagement process for this report was conducted in accordance with the International Finance Corporation's (IFC) Performance Standard 1 on Assessment and Management of Environmental and Socio-economic Risks and Impacts, which emphasizes the importance of effective stakeholder engagement in managing environmental and Socio-economic risks.

7 Key Social Impacts

This This section highlights the key social issues identified during the SIA study. The identification of social issues was based on:

- Review of project related information, including other specialist studies;
- Application of relevant legislation from a local to national level;
- Community engagement;
- Experience of the authors of the area and the local conditions; and
- Experience with similar projects.

This assessment considered the following points:

- The nature, extent and significance of the features within the social landscape being considered.
- The existing disturbance already present within the social landscape.

This chapter aims to identify and analyse the key socio-economic issues associated with the proposed project at various levels, including the national, provincial, district, local, and community levels. By delving into these issues, we can gain a comprehensive understanding of the social and economic challenges faced by the community and formulate appropriate strategies to address them.

The findings presented in this chapter are based on a comprehensive stakeholder engagement process, including surveys, interviews, and consultations with community members, local authorities, and other relevant stakeholders. The information gathered from these engagements serves as a foundation for identifying the key socio-economic issues that the project must consider in its planning, implementation, and evaluation stages.

Through a careful analysis of the identified issues, this chapter will provide valuable insights into the socio-economic context of the project area, highlighting the challenges and opportunities that exist. Moreover, it will present suggestions and recommendations on how the proposed project can address these issues, thereby maximizing its positive impacts and ensuring the sustainable development of the community.

Overall, the identification of key socio-economic issues serves as a critical step in the project's socio-economic impact assessment process. It enables us to take a holistic view of the community’s needs, aspirations, and constraints, guiding us in developing effective strategies and interventions that promote social equity, economic growth, and improved quality of life for the residents of the informal settlements.

Social impacts are an inherent part of any development project. Throughout the different phases of the project, including construction, operation, and decommissioning, social impacts are anticipated to occur. These impacts can have either positive or negative consequences for the affected communities.

During the construction phase, the project may bring about positive social impacts such as job creation and economic opportunities for local residents. However, there can also be negative impacts, such as disruptions to daily life, increased traffic, and noise pollution. It is crucial to identify and understand these social impacts to ensure effective management and mitigation measures.

Similarly, during the operational phase, the project may have positive social impacts such as improved access to essential services, enhanced living conditions, and increased community cohesion. However, negative impacts such as changes in the social fabric, gentrification, and affordability challenges may also arise. Careful consideration and planning are necessary to maximize the positive impacts and mitigate any negative consequences.

Even during the decommissioning phase, social impacts may occur. Proper closure and rehabilitation of the project site are essential to minimize any potential negative social effects and ensure a smooth transition for the community.

To address these socio-economic issues, a comprehensive understanding of the impacts and their status is necessary. Depending on whether the impacts are positive or negative, appropriate measures, such as mitigation or enhancement, can be recommended for effective impact management.

By conducting a thorough analysis of the key socio-economic issues associated with the development of the proposed project, we can develop a comprehensive understanding of the socio-economic landscape and the specific needs of the communities involved. This knowledge will serve as the foundation for developing targeted interventions and strategies that aim to address these issues and bring about positive change.

Furthermore, it is important to emphasize that the identification of key socio-economic issues is not a static process. As the project progresses, new challenges and opportunities may emerge, requiring ongoing monitoring and assessment. Regular evaluation and adaptation of strategies will ensure that the project remains responsive to the evolving needs of the community and maximizes its positive impact.

7.1 Assessment Criteria

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

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high).
- The duration, wherein it will be indicated whether:

the lifetime of the impact will be of a very short duration (0 – 1 years) – assigned a score of 1.

the lifetime of the impact will be of a short duration (2 – 5 years) – assigned a score of 2.

medium-term (5 – 15 years) – assigned a score of 3.

long term (> 15 years) – assigned a score of 4; or

permanent – assigned a score of 5.

- The magnitude, quantified on a scale from 0 – 10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The probability of occurrence, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1 – 5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- The significance, which shall be determined a synthesis of the characteristics described above and can be assessed as low, medium, or high.
- The status, which will be described as either positive, negative, or neutral.
- The degree to which the impact can be reversed.
- The degree to which the impact may cause irreplaceable loss of resources.
- The degree to which the impact can be mitigated.

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

S=(E+D+M) P

S = Significance weighting

E = Extent

D = Duration

M=Magnitude

P=Probability

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

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

The summarising of assessment impacts in a prescribed table format including the rating values as per above criteria. Measures for inclusion in the Environmental Management Programme.

7.2 Identification of Key Social Issues

The identification of key socio-economic issues is a crucial component of any development project, as it provides valuable insights into the challenges and needs of the community. In the context of the proposed project for the development of a powerline understanding the socio-economic landscape is essential to ensure that the project effectively addresses the most pressing concerns of the community

The following key socio-economic issues were found to be relevant for the proposed project based on the desktop and literature review done:

National Level:

- Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) (Constitution)
- The National Environmental Management Act (107 of 1998) (NEMA)
- The National Energy Act (34 of 2008)
- The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended.
- National Development Plan (2030)
- White Paper on the Energy Policy of the Republic of South Africa (1998)
- National Integrated Resource Plan for South Africa (2010-2030)
- Strategic Infrastructure Projects (SIPs)
- Social Impact Assessment: Guidance document (2015)
- Guideline for Involving Social Assessment Specialists in EIA Processes (Barbour, 2007)

Provincial Level:

- Limpopo Department of Socio-Economic Development Annual Performance Plan (2023 – 2024);

- Limpopo Socio-Economic Review and Outlook (Sero) (2022/2023);
- Limpopo Provincial Spatial Development Framework (2030).
- Limpopo Development Plan (LDP) (2020 – 2025);

Municipal Level:

- The Capricorn District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024
- The Lepelle-Nkumpi Local Municipality (LNDM) Draft Integrated Development Plan (IDP) 2022/2023
- The Waterberg District Municipality (CDM) Final Integrated Development Plan (IDP) 2023/2024
- Mogalakwena Final Local Municipality Integrated Development Plan IDP (2023/2024)
- Modimolle-Mookgophong Draft Local Municipality Integrated Development Plan IDP (2022/2023)
- Sekhukhune District Municipality (SDM) Final Integrated Development Plan (IDP) (2022/2023)
- Ephraim Mogale Draft Local Municipality Integrated Development Plan IDP (2023/2024)

8 Impacts and Assessment

This chapter aims to rate the significance of the identified potential impacts pre-mitigation and post-mitigation. The potential impacts identified in this section are a result of both the environment in which the Project activity takes place, as well as the activity itself. The identification of potential impacts is performed by determining the potential source, possible pathways, and receptors. In essence, the potential for any change to a resource or receptor (i.e., environmental aspect) brought about by the presence of a Project component or by a Project-related activity has been identified as a potential impact.

The potential impacts are discussed per environmental feature/aspect and according to each phase of the Project i.e., the Construction, Operational and Decommissioning/ Post Closure Phases. The significance, probability and duration of these potential impacts have been assessed based on the detailed specialist studies undertaken on the sensitivity of the receiving environment.

The SIA has been prepared following the guidelines of the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability, which are globally recognized as a benchmark for managing environmental and socio-economic risks in project development. The SIA also adheres to local best practice guidelines, ensuring that the assessment is grounded in the specific socio-economic and cultural context of the Project area.

It is important to note that the Client, has a consistent approach towards socio-economic and labour commitments across its operations.

- The establishment is anticipated to bring both negative and positive impacts. The project creates jobs, promotes sustainability, celebrates local traditions, and offers educational insights. Overall, it contributes to the area's socio-economic well-being and sustainable development. The issues identified in this chapter will be further explored and assessed in the subsequent impact assessment section of the SIA. Finally, the project can contribute to broader economic development goals, such as decarbonization and energy security. By providing a reliable source of renewable energy for the area, the project supports national goals towards decarbonization. Additionally, any excess power generated by the facility could potentially be fed into the national grid, contributing to national energy security, and further supporting economic development at a national level.
- The construction workers for the facility are likely to be sourced from the nearby communities. This could provide short-term employment opportunities for local residents, potentially leading to positive socio-economic impacts such as increased income and improved living standards.

It is important to distinguish between the direct and broader benefits to the surrounding community when considering the project's impact. It should be emphasized that there are positive impacts associated with the project, which outweigh the negative effects, directly benefiting the community in the vicinity.

8.1 Determination of Significance of Impacts

Significance is determined through a synthesis of impact characteristics which include context and intensity of an impact. Context refers to the geographical scale (i.e., site, local, national, or global), whereas intensity is defined by the severity of the impact e.g., the magnitude of deviation from background conditions, the size of the area affected, the duration of the impact and the overall probability of occurrence. Significance is calculated as shown in Section 7.

Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

8.2 Impacts and Risk Assessment

The BA Methodology assists in evaluating the overall effect of a proposed activity on the environment. Determining of the significance of an environmental impact on an environmental parameter is determined through a systematic analysis.

8.2.1 Construction Phase

The construction phase of the Eskom Borutho-Silimela 400 kV Transmission Line project is expected to bring a mix of socio-economic impacts, typical of large-scale infrastructure developments. These impacts, though primarily temporary and concentrated within the estimated 12-month construction period, could extend long-term effects on the local socio-economic environment if not managed properly. It's crucial that the detailed design phase minimizes permanent socio-economic impacts, avoiding poor placement of project components or mismanagement of construction activities.

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

Potential positive impacts:

- Job Creation: Employment opportunities for local workforce and contractors.
- Economic Stimulation: Increased economic activity from the influx of workers and related businesses.
- Infrastructure Development: Improvements in local infrastructure, such as roads and accommodation facilities for workers.
- Skill Development: Enhanced skills and training opportunities for the local workforce due to exposure to construction activities and technologies.

Potential negative impacts:

- Environmental Disturbance: Site clearing and construction equipment could disrupt local ecosystems.

- Social Displacement: Temporary removal of boundary fences and establishment of contractor camps might affect local communities and land use.
- Increased Traffic and Noise: Transportation of materials and equipment could lead to road damage and noise pollution.
- Waste and Pollution: Generation and disposal of waste, including handling hazardous materials, might pose environmental and health risks.
- Water Resource Management: Dewatering activities and potential groundwater abstraction could impact local water resources.

Table 13: Construction Phase Impact Tables for Eskom Borutho-Silimela 400 kV Transmission Line

Impact: Employment of Workforce and Contractors.		
Nature: Employment of local workforce will result in the potential for skills transfer and increased income leading to potential indirect benefits to the local economy. Should labour polices not be fair and suitably protect workers, this could lead to human rights infringements.		
	Without Mitigation	**With Mitigation**
Extent	Local – National (5)	Local – Regional (4)
Duration	Short-term (2)	Short-term (2)
Magnitude	Low (4)	Moderate (6)
Probability	Probable (3)	Definite (5)
Significance	Medium (33)	High Medium (60)
Status	Positive	Positive
Reversibility	Yes – Loss of Employment	Yes – Loss of Employment
Irreplaceable loss of resources?	Impact will improve the Job Market	Impact will improve the Job Market
Can impacts be mitigated?	Enhanced	Enhanced

Enhancement Measures
To enhance the local employment, skills development and business opportunities associated with the construction phase, the following measures should be implemented: • The developers be committed to involving and benefiting the communities surrounding the development, contributing to their development and growth. • It is recommended to conduct structured and proactive engagement sessions within the municipal district, to expose local small, micro, and medium enterprises which will benefit from the proposed development. • Training and skills development programmes should be offered to employees of the development prior to the commencement of the construction phase. • The communities which are most in need of employment on a local level should be considered for employment before outsourcing. • Develop a traffic management plan to manage the increased traffic and potential disruptions associated with the construction phase. • Engage proactively with local stakeholders and implement transparent hiring practices to ensure equitable distribution of employment opportunities.
Cumulative Impact
The combined effect of the project's employment opportunities, skills development, and enhancement measures will result in a strengthened local job market, improved skills base, and overall socio-economic upliftment of the community. The initiatives to eliminate unfair discrimination, targeted training, and development programs, and the emphasis on portable skills training will further enhance the long-term benefits to the community, ensuring sustainability and growth.
Residual Opportunities
• Initiatives to eliminate unfair discrimination in employment. • Recruit and select suitably qualified individuals from the designated groups. • Employees from designated groups who have been identified in the talent pool should be advanced and accelerated through targeted training and development programs. • Assist employees in obtaining an initial vocational education and pre-qualification, as well as additional education and training that refreshes knowledge, skills, work and life competencies that are critical for overall development. • Provide portable skills training to employees who express an interest in obtaining such training, with a special emphasis on employees who have been incapacitated or retrenched, in order for them to remain economically active, employable, or self-sustaining in their communities. • Growth of talent is facilitated, thereby providing opportunities for all employees to contribute to their full potential.

Impact: Economic Multiplier Effects.		
Nature: Economic multiplier effects from the use of local goods and services opportunities include but are not limited to, the provision of construction materials and equipment, and workforce essentials such as services, safety equipment, ablution, accommodation, transportation, and other goods. The increase in demand for goods and services may stimulate local business and local economic development (however locally sourced materials and services may be limited due to availability). There is likely to be a direct increase in industry and indirect increase in secondary businesses.		
	Without Mitigation	**With Mitigation**
Extent	Local – Regional (4)	Local – Regional (4)
Duration	Short-term (2)	Short-term (2)
Magnitude	Low (4)	Moderate (6)
Probability	Probable (3)	Definite (5)
Significance	Low Medium (30)	High Medium (60)
Status	Positive	Positive
Reversibility	Yes – Loss of economic benefits	Yes – Loss of economic benefits
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Enhanced - Yes	Enhanced - Yes

Enhancement Measures

- Preference is given to suppliers that are local to the operation where the service will be consumed.
- Establishing liaison and communication structures with the district and local government structures.
- Liaise with the local governmental structures and municipal authorities in the labour-sending communities to ensure that group development initiatives are integrated into the economic and development plans of those areas.
- The continuous review of the economic development of the project during the implementation process will ensure that the project does not become static but is revised in terms of changing needs and also to ensure sustainability.

• It is recommended that a local procurement policy be adopted by the developer to maximise the benefit to the local economy, where feasible. • Create job opportunities, boost local economies by supporting business activities, and contribute to government tax revenues through the development of the transmission line. • Prior to the start of the construction contractor procurement, a database of local companies, specifically Historically Disadvantaged (HD) companies, that qualify as potential service providers (e.g., construction companies, catering companies, waste collection companies, security companies, etc) should be identified and informed about the tender process and invited to bid on project-related work, if applicable. • Engage with local authorities and business organisations to investigate the feasibility of obtaining construction materials, goods, and products from local suppliers, where possible.
Cumulative Impact
The project's economic multiplier effects, combined with the enhancement measures, will lead to a sustained boost in the local economy. The increased demand for local goods and services will not only benefit primary suppliers but will also have a ripple effect, benefiting secondary businesses and service providers. Over time, this will lead to a more robust and diversified local economy, with increased resilience and capacity for growth.
Residual Opportunities
• Improved local service sector, growth in local business. • Community development and stimulation of the local economy. • Growth in the local markets.

Impact: Influx of Jobseekers and Change in Population.		
Nature: An influx of people looking for employment or other economic opportunities could result in increased pressure being placed on economic and socio-economic infrastructure, and a change in the local population. Population change refers to the size, structure, density as well as demographic profile of the local community. An influx of jobseekers into an area, could lead to a temporary increase in the level of crime, cause socio-economic disruption and put pressure on basic services. It could also potentially create conflict between locals and outsiders due to potential differences in cultural and ethnic composition. A further negative impact that could result due to an influx of jobseekers into an area is an increase in unemployment levels due to an oversupply of available workforce, particularly with respect to semi- and unskilled workers.		
	Without Mitigation	**With Mitigation**
Extent	Local – Regional (3)	Local (2)

Duration	Short-term (2)	Short-term (2)
Magnitude	Low (4)	Low (4)
Probability	Probable (3)	Improbable (2)
Significance	Low (27)	Low (16)
Status	Negative	Negative
Reversibility	Medium	High
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes

Mitigation Measures

- Safety awareness and training as well as positive behaviour reinforcement.
- Improving system monitoring and analysis to improve risk management.
- Making the surrounding landowners aware of the dangers associated with the influx of workers during the construction period.
- Identifying abandoned buildings and utilizing them or ensuring they cannot be used for malicious activities.
- Ensuring that access cannot be gained to surrounding properties.
- Encourage employees to stop working when a workplace is considered unsafe and/or to prevent unsafe actions.
- Education, Training and Development Services must be implemented.
- Access in and out of the construction area should be strictly controlled.
- The contractor must provide adequate firefighting equipment on site and provide firefighting training to selected construction staff.
- Have clear rules and regulations for access to the proposed site to control loitering.
- A comprehensive employee induction programme would cover land access protocols, fire management and road safety must be prepared.
- A Community Liaison Officer should be appointed.
- A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.

Cumulative Impact
The combined effects of the influx of jobseekers and the change in population, even with mitigation measures in place, could lead to a strain on local resources, potential socio-economic disruptions, and a temporary increase in crime rates. The cumulative impact also encompasses the potential for heightened social tensions due to perceived inequalities in job distribution and benefits from the project. However, with the proposed mitigation measures, the severity of these impacts can be reduced, leading to a more controlled and manageable influx, and ensuring that the local community benefits from the project in a sustainable manner.
Residual Risks
Potential for conflict: If there are perceptions of unfair hiring practices or unequal distribution of project benefits, this could lead to social tensions or conflicts, which could have implications for local safety and security. This is a potential residual impact as it is dependent on perceptions and social dynamics, which can be difficult to fully mitigate.

Impact: Safety and Security Impacts.

Nature: Temporary increase in safety and security concerns associated with the influx of people during the construction phase.

The temporary dismantling of property fences during construction could escalate theft incidents within the project area, involving workers, potential criminals, and others. This increase in movement is likely to increase criminal activities such as house break-ins, and livestock and game theft, causing unplanned financial costs for property owners. Additionally, the project's intent to hire locally might not prevent the migration of job seekers from surrounding communities, which could put local communities, subsistence farms, and residential settlements at risk, temporarily elevating crime levels, causing social disruption, and pressuring basic services.

	Without Mitigation	**With Mitigation**
Extent	Local – Regional (2)	Local (2)
Duration	Short-term (2)	Short-term (2)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Improbable (2)
Significance	Low Medium (30)	Low (16)

Status	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes

Mitigation Measures

- Safety awareness and training as well as positive behaviour reinforcement.
- Improving system monitoring and analysis to improve risk management.
- Making the surrounding landowners aware of the dangers associated with the influx of workers during the construction period.
- Identifying abandoned buildings and utilizing them or ensuring they cannot be used for malicious activities.
- Ensuring that access cannot be gained to surrounding properties.
- Encourage employees to stop working when a workplace is considered unsafe and/or to prevent unsafe actions.
- Education, Training and Development Services must be implemented.
- Access in and out of the construction area should be strictly controlled.
- The contractor must provide adequate firefighting equipment on site and provide firefighting training to selected construction staff.
- Have clear rules and regulations for access to the proposed site to control loitering.
- A comprehensive employee induction programme would cover land access protocols, fire management and road safety must be prepared.
- A Community Liaison Officer should be appointed.
- A method of communication should be implemented whereby procedures to lodge complaints are set out in order for the local community to express any complaints or grievances with the construction process.

Cumulative Impact

The combined effects of the construction activities, especially the movement of heavy vehicles and influx of workers, can lead to heightened safety and security concerns in the area. This includes potential increases in crime rates, disturbances to local communities, and strain on local infrastructure. Even with mitigation measures in place, the cumulative impact of these activities can lead to a perceived decrease in the safety and security of the area, affecting the well-being and peace of mind of local residents.

Residual Risks
• Potential for increased crime: Despite mitigation measures, there's always a risk of a temporary spike in crime rates due to the influx of outsiders and increased activity in the area. • Disturbance to local communities: The presence of construction activities and workers can lead to disturbances in daily life, affecting the well-being of local residents. • Strain on local infrastructure: The increased activity can put a strain on local roads, utilities, and other infrastructure, leading to wear and tear or potential breakdowns.

Impact: Increased Pressure on Local Services / Resources		
Nature: Increased demand on existing local infrastructure and services due to the influx of construction workers and associated personnel. This can result in increased pressure on healthcare, education, transportation, and utility systems, which may struggle to meet the increased consumption and demand.		
	Without Mitigation	**With Mitigation**
Extent	Local – Regional (2)	Local (2)
Duration	Short-term (2)	Short-term (2)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Improbable (3)
Significance	Low Medium (30)	Low (16)
Status	Negative	Negative
Reversibility	Medium	High
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes
Mitigation Measures		

• It is necessary to appoint a Community Liaison Officer. A method of communication should be implemented, with procedures for filing complaints outlined, so that the local community can express any complaints or grievances about the construction process. • Strategic Planning: Collaborate with local authorities to forecast service needs and develop a strategic plan to bolster local services where deemed necessary in anticipation of increased demand. • Community Investment: Invest in local infrastructure improvements where possible that will benefit both the project and the community in the long term. • Temporary Facilities: Establish temporary facilities when required to cater to the needs of the construction workforce without straining local services. • Traffic Management: Implement traffic management plans where possible to mitigate the impact of additional vehicles and machinery on local transport systems.
Cumulative Impact
The cumulative impact of increased pressure on local services and resources during the construction phase can be multi-faceted, affecting various community sectors both spatially and temporally. Multiple construction projects in the area, combined with the scaling-up of individual projects, can strain local resources such as emergency services, water supply, and waste management. This strain can trigger secondary environmental impacts and may necessitate local government to adjust budget and planning, potentially affecting other civic priorities. Over time, these compounded effects can degrade the quality of life for local residents, causing social tensions and potentially leading to long-term issues like reduced property values or out-migration. In essence, the incremental pressures on local services and resources can collectively reach a tipping point, affecting the community's well-being and environmental sustainability.
Residual Risks
Possibility of outside workers remaining in the area after construction is completed and subsequent pressures on local infrastructure.

Impact: Increased Probability of Fire Risk		
Nature: Risk from accidental or intentional fire being set to the surrounding area which then spreads to the adjacent properties.		
	Without Mitigation	**With Mitigation**
Extent	Local – Regional (2)	Local (2)
Duration	Short-term (2)	Short-term (2)

Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Improbable (2)
Significance	Low Medium (30)	Low (16)
Status	Negative	Negative
Reversibility	High	High
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes

Mitigation Measures

- Ensure training is given to employees on the risks of fires.
- Ensure that firefighting equipment is present and working.
- No fires are to be made on site for any reason.
- No hunting or cooking of any animals or plants in or around the development footprint.

Cumulative Impact

The cumulative impact of an increased probability of fire risk during the construction phase is a matter of grave concern, not just for the immediate vicinity but also for broader ecosystems and communities. The combination of various fire-prone activities—such as welding, electrical work, and the use of flammable materials—across multiple construction sites can substantially elevate the fire risk level. When this is aggregated over multiple construction projects and durations, the cumulative effect can severely strain local fire-fighting resources and emergency services. Additionally, recurring incidents could lead to a degradation of local air quality due to smoke and pollutants, impact local flora and fauna, and contribute to long-term environmental degradation. Furthermore, the psychological toll on local residents from elevated fire risks could result in reduced property values and an increased desire to relocate, affecting the social fabric of the community. Overall, the cumulative impact of increased fire risk during construction is a complex interplay of environmental, social, and economic factors that could have lasting repercussions.

Residual Risks

None identified.

Impact: Nuisance Impacts (Noise and Dust)		
Nature: The construction activities, including the use of heavy machinery, movement of vehicles, and site clearing, are expected to generate significant levels of noise and dust. These nuisance impacts could affect the well-being and quality of life of nearby residents and sensitive ecosystems.		
	Without Mitigation	**With Mitigation**
Extent	Local (2)	Local (1)
Duration	Short-term (2)	Short-term (2)
Magnitude	Moderate (6)	Low (4)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (40)	Low (21)
Status	Negative	Negative
Reversibility	High	High
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes

Mitigation Measures

- During construction, care should be taken to ensure that noise from construction vehicles and plant equipment does not intrude on the farms and residential areas nearby. Plant equipment such as generators, compressors, concrete mixers, and vehicles should be kept in good working order and, where possible, equipped with effective exhaust mufflers.
- The movement of construction vehicles on the site should be confined to agreed access road/s.
- Heavy vehicle movement during the construction phase should be timed (where possible) to avoid times of the week, such as weekends, when the volume of traffic on the access roads may be higher.
- Dust suppression measures must be implemented on a regular basis and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers.

Cumulative Impact
The combined effects of noise and dust from construction activities can lead to a significant disturbance for local residents and other sensitive receptors. Over time, these nuisances can accumulate, leading to a decrease in the quality of life for those living or working nearby. The cumulative impact of these nuisances can also affect local ecosystems, particularly if dust settles on nearby water sources or vegetation.
Residual Risks
Noise and dust generation will remain an issue irrespective of the construction of the transmission line.

8.2.2 Operational Phase

It is anticipated that the Borutho-Silimela 400 kV Transmission Line will operate for approximately 25 years or as long as required by the development.

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

- Direct and indirect employment opportunities.
- Development of non-polluting, renewable energy infrastructure.
- Contribution to local economic development and socio-economic upliftment; and
- Impacts associated with the loss of agricultural land.

Table 14: Operational Phase Impact Tables for Eskom Borutho-Silimela 400 kV Transmission Line

Impact: Direct and Indirect Employment Opportunities.		
Nature: During the operational phase, the project continues to offer employment opportunities, although at a reduced scale compared to the construction phase. Direct employment largely involves roles related to maintenance, monitoring, and management of the transmission line and its facilities. These roles are essential for ensuring the smooth and efficient functioning of the transmission infrastructure and include activities like routine inspections, repairs, and necessary upgrades. Indirect employment opportunities are also generated, supporting local businesses and industries that provide ancillary services and supplies for the operational needs of the transmission line. These roles may include local supply of maintenance materials, logistical support, and specialized technical services.		
	Without Mitigation	**With Mitigation**
Extent	Regional (3)	Regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Moderate (6)
Probability	Highly Probable (4)	Definite (5)
Significance	Medium (44)	High (65)
Status	Positive	Positive

Reversibility	Low	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Enhanced - Yes	Enhanced - Yes

Enhancement Measures

- Local Hiring: Prioritize hiring from the local community for all available positions. This will ensure that the benefits of employment are directly felt within the local community.
- Skills Transfer: In cases where highly skilled expertise is required, provide provisions for skills transfer. This will facilitate knowledge sharing within the local workforce and enhance the overall skill level of the community.
- Support for Local Businesses: Encourage the involvement of local businesses in providing materials, goods, and services during the operational phase of the project. This can stimulate entrepreneurial growth and create indirect job opportunities.
- Community Engagement: Maintain open lines of communication with the local community through the development's existing community liaison officer. This will ensure that job opportunities are communicated effectively and that local residents are given fair consideration in the hiring process.
- Fair Labour Practices: Align the project with the development's social labour plan to ensure fair labour practices and safe working conditions for all workers.

Cumulative Impact

The sustained employment opportunities during the operational phase will lead to long-term economic stability and growth in the region. The direct and indirect job opportunities will not only benefit the immediate families of the employed but will also have a ripple effect on the local economy. As more individuals gain employment, there will be an increase in disposable income, leading to higher consumer spending, which can stimulate other sectors of the local economy.

Residual Opportunities

- Economic Upliftment: The consistent employment opportunities during the operational phase will lead to an upliftment in the overall economic status of the region. This can result in improved living standards, better access to education, and healthcare for the local community.
- Skills Development: The emphasis on skills transfer and training will ensure that the local workforce is better equipped for future job opportunities, even beyond the lifespan of the project. This can lead to a more skilled and competitive workforce in the region.
- Entrepreneurial Growth: With the support for local businesses and the increase in consumer spending, there's potential for entrepreneurial growth. Local entrepreneurs can capitalize on the increased

demand for goods and services, leading to the establishment of new businesses and further job creation.

Impact: Economic Multiplier Effects.		
Nature: Economic multiplier effects from the sustained operation and maintenance of the transmission line present numerous opportunities. These include, but are not limited to, the provision of maintenance materials and equipment, ongoing workforce essentials such as services, safety equipment, ablution, accommodation, transportation, and so forth. The consistent demand for goods and services can bolster local businesses and foster local economic development. However, the sourcing of local materials and services might face constraints due to availability.		
	Without Mitigation	**With Mitigation**
Extent	Local – Regional (3)	Local – Regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Low (4)
Probability	Probable (3)	Definite (5)
Significance	Medium (33)	Medium (55)
Status	Positive	Positive
Reversibility	Yes – Loss of economic benefits	Yes – Loss of economic benefits
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Enhanced - Yes	Enhanced - Yes
Enhancement Measures		
• Local Supplier Engagement and Development: Actively engage with local suppliers to understand their capabilities and limitations. Offer support and development programs to help them meet the project's needs. This could include training in specific skills, quality standards, or business management. • Community Liaison Officers (CLOs): Employ CLOs to facilitate communication between the project and local businesses, ensuring that the needs of both are met and that opportunities are fairly distributed.		

- Investment in Local Capacity Building: Invest in local infrastructure and capacity building to enable local businesses to scale up and meet the operational or maintenance demands of the project. This could include financial support, technology transfer, or infrastructure improvements.
- Long-term Community Development Plans: Work with local authorities and community groups to develop and implement long-term economic development plans that align with the project's long term presence and potential for economic stimulation.
- Transparent Procurement Processes: Establish transparent and fair procurement processes that give local businesses a fair chance to compete for services required such as maintenance contracts, ensuring equitable opportunity distribution.

Cumulative Impact

The project's economic multiplier effects, combined with the enhancement measures, will lead to a sustained boost in the local economy. The increased demand for local goods and services will not only benefit primary suppliers but will also have a ripple effect, benefiting secondary businesses and service providers. Over time, this will lead to a more robust and diversified local economy, with increased resilience and capacity for growth.

Residual Opportunities

- Improved local service sector, growth in local business.
- Community development and stimulation of the local economy.
- Growth in the local markets.

Impact: Strengthening of Power Grid and Rural Electrification.

Nature: The operational phase of the Eskom Borutho-Silimela 400 kV Transmission Line project is set to provide a significant boost to rural electrification efforts, catalysing socio-economic development. This expansion facilitates improved access to reliable electricity, which is a cornerstone for healthcare services, educational facilities, and digital connectivity. The stable power supply can unlock new opportunities for local businesses, support enhancement of agricultural productivity through modern farming techniques.

	Without Mitigation	**With Mitigation**
Extent	Regional (3)	Regional (3)
Duration	Long Term (4)	Long Term (4)
Magnitude	Moderate (6)	High (8)
Probability	Probable (3)	Highly Probable (4)

Significance	Medium (39)	High Medium (60)
Status	Positive	Positive
Reversibility	Low	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Enhanced - Yes	Enhanced - Yes

Enhancement Measures

- Local Business Partnerships: Forge partnerships with local businesses to supply materials and services required for ongoing operations, thereby fostering local enterprise development.
- Educational Programs: Launch educational programs and workshops on energy efficiency and safe electricity practices to increase local understanding and capability.
- Capacity Building Initiatives: Support capacity building in local governance to manage and maintain rural electrification efforts sustainably..

Cumulative Impact

The cumulative impact of the operational phase is the progressive strengthening of local socio-economic structures. Reliable electricity access can lead to improved educational outcomes, higher quality healthcare services, and burgeoning local businesses, cumulatively enhancing the standard of living and economic vitality of the region.

Residual Opportunities

- Long-Term Employment Growth: The demand for maintenance and operational expertise can contribute to long-term employment growth in sectors directly and indirectly associated with the energy industry.
- Technological Advancements: As local businesses and services modernize with reliable electricity, this can lead to increased adoption of new technologies, fostering innovation and potentially attracting new industries to the area.
- Community Development: With improved infrastructure, there can be a significant uplift in community development initiatives, including new educational facilities, healthcare services, and community centers, which in turn can spur further job creation and economic activities for Future Growth: As global trends move towards sustainability and renewable energy; the region will be well-positioned to attract future investments and partnerships in the green energy sector.

Impact: Handling and Storage of Hazardous Materials		
Nature: Handling and storage of hazardous materials, such as transformer oil during maintenance activities, are crucial in preventing environmental contamination and safeguarding community health. Proper management is essential to avoid detrimental impacts on local ecosystems and community resources.		
	Without Mitigation	**With Mitigation**
Extent	Local (2)	Local (2)
Duration	Long Term (4)	Long Term (4)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Unlikely (2)
Significance	Medium (36)	Low (20)
Status	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes
Mitigation Measures		
• Implement strict storage and handling protocols for hazardous materials in line with international best practices. • Conduct regular training for personnel on the handling of hazardous materials to prevent accidental releases. • Establish emergency response procedures for any incidents involving hazardous materials. • Perform regular audits and inspections to ensure compliance with storage and handling regulations.		
Cumulative Impact		
With effective mitigation, the long-term cumulative impact on the environment and public health from hazardous materials is minimized, contributing to the project's overall sustainability and the well-being of the local community.		

Residual Opportunities
• Continuous improvement of handling procedures can lead to innovations in safety and environmental protection practices. • Development of local expertise in hazardous material management can offer additional professional job opportunities in the region. • Enhanced environmental health and safety standards can serve as a model for other projects, elevating regional industry standards.

Impact: Transmission Lines, Conductors, and Towers		
Nature: The operation of the transmission lines can result in noise pollution, primarily from corona discharge, and can affect wildlife through collisions and habitat alteration. The physical presence of the infrastructure may disrupt animal behaviour and lead to habitat loss or fragmentation.		
	Without Mitigation	**With Mitigation**
Extent	Local (2)	Local (2)
Duration	Long Term (4)	Long Term (4)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Unlikely (2)
Significance	Medium (36)	Low (20)
Status	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes
Mitigation Measures		
• Install bird diverters on powerlines to prevent bird strikes.		

• Maintain vegetation in servitude areas to create wildlife-friendly habitats and prevent flashovers. • Implement noise reduction technologies or materials to minimize corona discharge noise. • Regularly monitor wildlife activity and adjust management practices to minimize disturbances.
Cumulative Impact
When mitigation measures are consistently applied, the cumulative impact on wildlife and noise levels can be significantly reduced, promoting coexistence between the operational powerline and the surrounding environment.
Residual Opportunities
• Conservation partnerships could be established to create or improve wildlife corridors. • Long-term ecological studies could be initiated to monitor the impacts and effectiveness of mitigation measures. • Educational programs could be developed to raise awareness about the importance of protecting wildlife in powerline areas.

8.2.3 Decommissioning Phase

For the decommissioning phase of the Eskom Borutho-Silimela 400 kV Transmission Line project, the focus would be on the careful dismantling of infrastructure while minimizing social and environmental impacts. Key considerations include:

- **Community Engagement**: Proactively communicate with local stakeholders about the decommissioning process, timelines, and expected changes.
- **Employment Transition**: Develop strategies for the re-employment or retraining of workers affected by the decommissioning.
- **Land Rehabilitation**: Plan for the restoration of land used for the project, ensuring it's returned to a state suitable for future use, whether for ecological, agricultural, or community purposes.
- Environmental Protection: Implement measures to minimize environmental impacts during the dismantling process, including waste management and pollution prevention.

This approach ensures the decommissioning phase is managed responsibly, aligning with Eskom's sustainability goals and community expectations.

8.2.4 Cumulative Impact

The potential cumulative impacts of the Eskom Borutho-Silimela 400 kV Transmission Line project on the area's sense of place and landscape will be primarily linked to visual and land use changes. Key considerations include:

- **Combined Visibility**: Assessing whether multiple sections of the transmission line will be visible from single or multiple locations, and how this influences the landscape character.
- **Sequential Visibility**: Evaluating the visual impact experienced by individuals traveling along routes that parallel or cross the transmission line, such as roads or walking trails.
- **Visual Compatibility**: Determining the visual compatibility of the transmission line infrastructure with the surrounding environment, including natural landscapes and built environments.
- **Perceived or Actual Change in Land Use**: Analyzing the impact of the transmission line on overall land use and character of the area, including changes in land accessibility and use patterns.
- **Loss of Characteristic Elements**: Considering the potential loss of specific landscape features or characteristics due to the presence of the transmission line.

These impacts call for both dynamic and static considerations. The cumulative visual impact should be perceived as a dynamic sequence of sights and visual impacts along travel routes, rather than just the cumulative impact of the infrastructure in one area.

The establishment of the Eskom Borutho-Silimela project is expected to have transformative effects on the community and local municipality, leading to various impacts:

- People:
  - Skills development and training opportunities.
  - Employment opportunities during construction and maintenance phases.
  - Improved socio-economic outcomes due to investments in community development:
    - Health improvements.
    - Education enhancements.
    - Increased economic participation.

    Socio-economic cohesion among community beneficiaries.

    Increased sense of prestige for the community and town.

- **Planet**:
  - Contribution to the national power grid with minimal environmental disruption.
  - Implementation of environmental management plans to mitigate impacts on local ecosystems.
- **Profit**:
  - Increased revenue opportunities for the local municipality.
  - Increased economic activity in the local community and broader municipality.
  - Investment in socio-economic and commercial infrastructure to stimulate economic growth.

The cumulative impacts of the Eskom Borutho-Silimela project, particularly when considered in conjunction with other regional developments, offer socio-economic prospects for the area. These include job creation, skill development, and enhanced local services. The project's presence can benefit the local, regional, and national economies through various economic activities related to construction, operation, and maintenance. The cumulative impact at the municipal level can be positive, with potential for operations and maintenance companies to focus on education and training initiatives, contributing to the long-term development of the local workforce.

Table 15: Cumulative Impact Tables for Eskom Borutho-Silimela 400 kV Transmission Line

Nature: An increase in employment opportunities, skills development, and business opportunities with the establishment of the Eskom Borutho-Silimela 400 kV Transmission Line .		
	Overall Impact of the Proposed Project Considered in Isolation	**Cumulative Impact of the Project and Other Projects in the Area**
Extent	Local – Regional (3)	Local-regional (3)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Moderate (6)
Probability	Probable (3)	Probable (3)
Significance	Medium (33)	Medium (39)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A

Irreplaceable loss of resources?	N/A	N/A
Can impacts be mitigated?	Yes	Yes
Confidence in findings: High.		
Enhancement Measures		
• Adopt local employment policies to ensure that job creation benefits the community surrounding the transmission line. • Utilize local service providers for construction, maintenance, and operational needs to enhance business opportunities in the area. • Implement skills development programs in partnership with local educational institutions and technical training centers to prepare the local workforce for opportunities arising from the project and other similar developments in the region.		

Nature: Negative impacts and change to the local economy with an in-migration of labourers, businesses, and jobseekers to the project area.		
	Overall Impact of the Proposed Project Considered in Isolation	**Cumulative Impact of the Project and Other Projects in the Area**
Extent	Local – Regional (3)	Local (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	Low (4)	Minor (2)
Probability	Improbable (2)	Very Improbable (1)
Significance	Low (22)	Low (8)
Status (positive or negative)	Negative	Negative
Reversibility	Yes	
Irreplaceable loss of resources?	No	
Can impacts be mitigated?	Yes	
Confidence in findings: High.		

Mitigation Measures
• Develop and enforce a local recruitment policy to prioritize hiring from the surrounding communities, thereby reducing the need for extensive in-migration. • Collaborate with local government agencies and community organizations to align the project's development with the local area's needs, ensuring that service provisions meet the requirements of both existing residents and newcomers. • Establish joint ventures or partnerships with community organizations, potentially through Trusts, to provide tangible benefits to local communities, including employment opportunities and essential services. • Formulate and distribute a clear recruitment protocol in partnership with the local municipality and community leaders, ensuring transparent communication about employment processes.

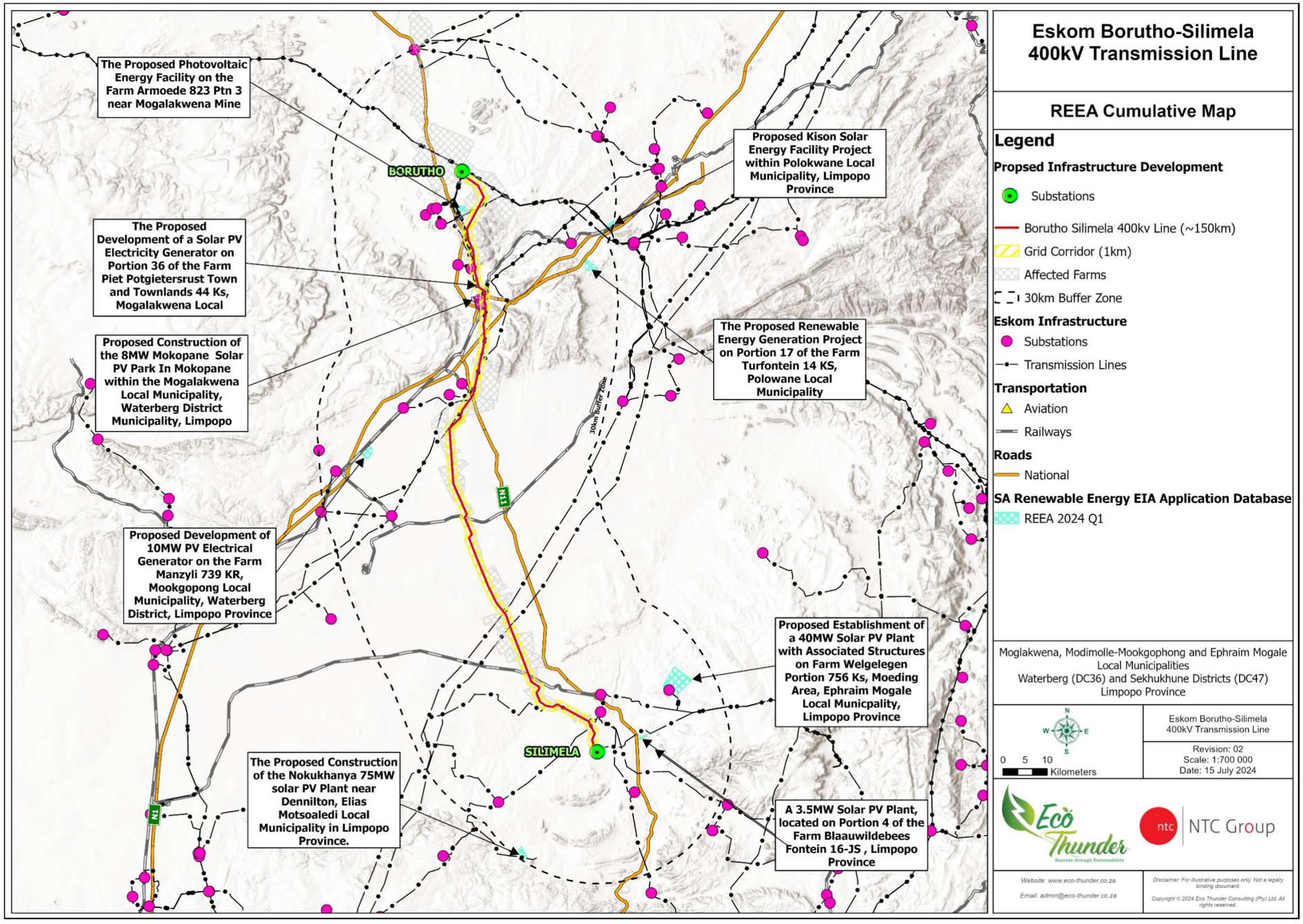

Figure 32: Cumulative Map

8.3 Issues Associated with the No-Go Option

The No-Go option, which involves not proceeding with the Eskom Borutho-Silimela 400 kV Transmission Line project, presents several issues and missed opportunities for the region:

- **Lack of Infrastructure Improvement**: The absence of the transmission line means that the planned improvements in electrical infrastructure will not materialize. This could lead to continued or worsened energy supply issues in the region, potentially affecting residential, commercial, and industrial users.
- **Economic Opportunities**: Not proceeding with the project would mean a loss of potential economic opportunities. The construction and maintenance of the transmission line are expected to create jobs and stimulate local businesses. The No-Go option would result in these opportunities being unrealized.
- **Energy Efficiency and Capacity**: The new transmission line is designed to improve energy efficiency and capacity within the region. The No-Go option would mean continuing with the existing, possibly less efficient, infrastructure, which could be less capable of meeting growing energy demands.
- **Impact on Renewable Energy Integration**: Part of the rationale for the new transmission line may be to facilitate the integration of renewable energy sources into the grid. Not proceeding with the project could hinder these efforts and slow down the transition to cleaner energy sources.
- **Developmental Delay**: The No-Go option might lead to a delay in overall infrastructural and socio-economic development in the area, potentially impacting long-term regional growth and sustainability.
- **Environmental Considerations**: While the construction of the transmission line has associated environmental impacts, its operation, particularly if integrated with renewable energy sources, could have long-term environmental benefits. The No-Go option would miss out on these potential benefits.
- **Social Impact**: The project likely includes components of community development and engagement. The No-Go option would mean these planned community benefits, such as improved infrastructure, community programs, or educational initiatives, would not be realized.

In conclusion, while the No-Go option avoids the environmental and social impacts associated with the construction and operation of the Eskom Borutho-Silimela 400 kV Transmission Line, it also forgoes the potential benefits in terms of improved energy infrastructure, economic development, renewable energy integration, and social advancement. This option may leave existing challenges unaddressed and miss out on significant opportunities for regional development.

9 Monitoring and Compliance (EMPr)

9.1 Construction Phase

Table 16: Construction Phase Social Impact Assessments inputs for EMPr

Impact	Monitoring Action	Responsible Party	Compliance Indicator	Frequency
Employment of Workforce and Contractors	Monitor the number and proportion of local hires vs. total workforce.	Holder of the EA	Ratio of local hires.	Monthly
	Review adherence to labour policies and worker rights.	Holder of the EA	Compliance with labour laws and ethical hiring practices.	Monthly
	Assess the impact of employment on local economic development.	Holder of the EA	Increase in local economic activity.	Quarterly
Economic Multiplier Effects	Track local procurement of goods and services.	EPC	Percentage of local procurement.	Bi-monthly

	Assess the impact on local business growth.	EPC	Number of local businesses benefiting from the project.	Bi-monthly
	Evaluate the development of new local enterprises related to the project.	Holder of the EA	Number of new businesses established.	Quarterly
Influx of Jobseekers and Population Change	Monitor changes in local population and employment levels.	Community Liaison Officer	Changes in local population demographics; unemployment rates.	Quarterly
	Assess the impact on local services (health, education, etc.).	Community Liaison Officer	Service demand levels.	Quarterly
	Evaluate social cohesion and potential for conflict due to population change.	Holder of the EA	Incidents of social unrest or conflict.	Qu

Safety and Security Impacts	Record incidents of theft, vandalism, or other criminal activities.	EPC	Number of reported incidents.	Weekly
	Conduct regular security assessments and update measures as needed.	EPC	Effectiveness and adequacy of security measures.	Monthly
	Collaborate with local law enforcement and community watch groups.	EPC	Level of cooperation with local authorities.	Monthly
Pressure on Local Services/Resources	Assess the strain on local infrastructure and services (healthcare, education, transportation).	EPC	Status reports on local infrastructure and service capacity.	Monthly
	Monitor feedback from local service providers on demand and capacity issues.	Holder of the EA /Community Liaison Officer	Feedback from service providers.	Bi-monthly
	Evaluate the effectiveness of measures to support overstretched services.	EPC	Effectiveness of support strategies.	Quarterly

Fire Risk	Monitor and record any fire incidents.	EPC	Number of fire incidents.	As incidents occur
	Ensure adherence to fire safety protocols.	EPC	Compliance with fire safety protocols.	As incidents occur
	Conduct fire risk assessments and update prevention strategies.	EPC	Effectiveness of fire prevention measures.	Bi-monthly
Nuisance Impacts (Noise and Dust)	Regular monitoring of noise and dust levels.	Environmental Officer	Noise and dust measurements.	Weekly
	Assess impact on residents and ecosystems.	Environmental Officer	Community feedback; ecological impact assessments.	Bi-monthly
	Implement and evaluate effectiveness of noise and dust control measures.	Environmental Officer	Effectiveness of control measures.	Monthly

9.2 Operational Phase

Table 17: Operational Phase Social Impact Assessments inputs for EMPr

Impact	Monitoring Action	Responsible Party	Compliance Indicator	Frequency
Direct and Indirect Employment Opportunities	Monitor employment levels and assess direct and indirect employment generated by the project.	Holder of the EA	Employment statistics.	Quarterly
	Assess local business growth and impact on local businesses providing services.	Holder of the EA	Growth in local businesses.	Quarterly
	Review effectiveness of skills development and training programs.	Holder of the EA	Success rates and feedback of training programs.	Quarterly
Economic Multiplier Effects	Track procurement of local goods and services.	EPC	Local procurement statistics.	Bi-monthly
	Evaluate broader economic impact on local and regional economy.	EPC	Economic impact assessments.	Bi-monthly
	Maintain communication with local businesses for emerging needs/opportunities.	EPC	Records of engagement and feedback.	Bi-monthly
Strengthening of Power Grid and Rural Electrification	Monitor improvements in electricity supply reliability and reach.	Eskom	Electricity supply metrics.	Bi-annually
	Assess socio-economic benefits from improved electrification.	Eskom	Socio-economic impact studies.	Bi-annually
	Monitor impact on agricultural productivity due to electrification.	Eskom	Agricultural productivity reports.	Bi-annually

Transmission Lines, Conductors, and Towers	Regularly measure noise levels from transmission lines.	Environmental Officer	Noise level measurements.	Monthly
	Assess impacts on local wildlife and implement mitigation measures.	Environmental Officer	Wildlife monitoring reports.	Monthly
	Monitor and manage vegetation in servitude areas for habitat protection.	Environmental Officer	Vegetation management reports.	Mo

10 Environmental Impact Statement

10.1 Key Findings

From a social perspective it is concluded that the project is supported, but that mitigation measures should be implemented and adhered to. Positive and negative social impacts have been identified. The assessment of the key issues indicated that there are no negative impacts that can be classified as fatal flaws, and which are of such significance that it cannot be successfully mitigated. Positive impacts could be enhanced by implementing appropriate enhancement measures and through careful planning.

Based on the social assessment, the following general conclusions and findings can be made:

- The development of an overhead powerline is a critical step in addressing the socio-economic challenges faced by residents. The assessment identified key issues such as inadequate access to water, electricity, sanitation, and safety concerns. By developing these services, the project aims to improve living conditions, enhance safety, and provide equal opportunities for all residents.
- The proposed development aligns with the national, provincial, and local policy frameworks, emphasizing the importance of inclusive housing development, improved service delivery, and sustainable urban development. It supports the goals outlined in the National Development Plan and various housing policies, which prioritize the provision of basic services and the enhancement of living conditions in informal settlements.
- The development of an overhead powerline will have positive socio-economic impacts. Job creation is expected during the construction phase, stimulating local economic activity through the procurement of construction materials and services. It also offers opportunities for skills development and training for the local labour force, contributing to improved employment prospects and income generation. The project will result in enhanced access to basic services and amenities, improving the standard of living and quality of life for affected communities.
- The stakeholder engagement process played a vital role in shaping the project. Community members and other stakeholders provided valuable insights and feedback, highlighting the importance of basic services, job opportunities, and addressing major social issues. The overwhelming support for the proposed development underscores the recognition of its potential benefits in improving the socio-economic well-being of the community.
- The deviation from the original route for the Borutho-Silimela 400kV transmission line was a necessary adjustment to address various environmental, social, and technical considerations. The deviation is expected to enhance environmental protection by circumventing ecologically sensitive areas, thus preserving biodiversity and protecting critical habitats. It also improves stakeholder relations by addressing landowner and community concerns, fostering better cooperation and support for the project. Additionally, the adjusted route ensures safety and

feasibility by mitigating technical challenges and safety risks associated with the original path, contributing to a more robust and reliable infrastructure. Mitigation measures are necessary to address potential negative impacts associated with the construction and operational phases. Temporary inconveniences and disruptions during construction should be minimized through effective project management and communication. Challenges in managing and maintaining the formalized services effectively require the implementation of efficient management practices, ongoing monitoring, and community engagement. Measures should also be in place to manage and resolve potential conflicts or disputes related to the allocation of formalized services.

- The cumulative impacts of the project can contribute to sustained economic growth, improved infrastructure development, and enhanced local services. Economic growth will be driven by job creation, increased business activity, and revenue generation. Infrastructure development will result in improved transportation networks, utilities, and community facilities, enhancing access to services.
- However, the cumulative impacts also present challenges that need to be addressed. The increased demand on resources, including water, energy, and land, must be managed efficiently to prevent scarcity and environmental degradation. Measures should be in place to minimize social displacement and avoid exacerbating socio-economic inequalities. Environmental degradation, including habitat loss, pollution, and resource depletion, must be mitigated through robust environmental management strategies.
- The cumulative impact assessment concludes that the proposed Borutho-Silimela 400kV transmission line can proceed, provided that all identified mitigation measures are implemented effectively. The project is expected to enhance infrastructure robustness while minimising adverse environmental and social impacts through careful planning and stakeholder engagement.
- By considering diverse viewpoints and suggestions, the final Socio-Economic Impact Assessment (SIA) will provide a comprehensive analysis of potential socio-economic impacts. This will ensure that decision-makers have a complete understanding of the project's implications, enabling them to make informed decisions that maximize benefits and minimize adverse effects.
- The proposed Eskom Burotho-Silimela development in the Limpopo area is a crucial step in addressing socio-economic challenges, enhancing quality of life, promoting equitable development, and creating sustainable opportunities for the community. By considering affordability, implementing mitigation measures, and engaging stakeholders, the project can maximize its positive impacts while minimizing any negative consequences. The project's alignment with policy frameworks and its potential to contribute to sustained economic growth, improved infrastructure, and enhanced local services make it a promising endeavour for the socio-economic development of the area.

10.2 Recommendations

The following recommendations are made based on the SIA and a thorough review of the concerns and suggestions raised by stakeholders and interested and affected parties during the stakeholder engagement process. The proposed mitigation measures should be implemented to limit the negative impacts and enhance the positive impacts. Based on the social assessment, the following recommendations are made:

- **Employment and Economic Stimulation:** Given the scarcity of job opportunities for the unskilled and semi-skilled in the study area, it is recommended that local labour be utilized to enhance the positive impact of employment creation. This will also mitigate potential negative impacts associated with the inflow of outsiders to the area, increased pressure on infrastructure and services, and safety and security concerns. Local businesses should be involved in construction activities where possible.
- **Local Supplier Inclusion:** To enhance the multiplier effect, locals should be allowed an opportunity to be included in a list of possible local suppliers and service providers. This will further stimulate the local economy and offer valuable income opportunities for local residents.
- **Infrastructure and Land Use:** The project's location amidst active agricultural and mining lands means that collaboration with local farmers and industries is essential. A plan that minimizes disruptions to agricultural activities, especially in the farms listed under the project's purview, should be developed. Additionally, leveraging existing infrastructure, such as roads, can reduce both environmental and social impacts, ensuring that the project integrates seamlessly into the existing landscape. Given the potential increase in demand for local services such as housing, healthcare, transportation, and education, it is recommended that the project collaborates with local authorities and stakeholders to develop plans and support mechanisms to address these needs. This could include initiatives such as housing plans, healthcare capacity enhancement, transportation infrastructure upgrades, and educational planning and investment.
- **Mitigation of Construction Impacts:** Measures should be put in place to carefully mitigate impacts associated with the construction period, such as dust and noise pollution. This will ensure minimal disruption to the local community and environment. Apply recommended mitigation measures to minimise any residual impacts of the deviation on the environment and local communities.
- **Safety and Security:** Safety and security concerns should be considered during the planning and construction phases of the proposed project. Given that the mine is access controlled and has safety and security measures in place, these should be extended to the overhead powerline development.
- **Agricultural Collaboration:** Engage with local farmers to explore opportunities for dual land use. For instance, certain crops or livestock might coexist with the transmission lines, allowing

farmers to continue agricultural activities while also benefiting from the Borutho-Silimela 400 kV Transmission Line project.

- **Community Engagement:** The facility should work through a community liaison officer to ensure that the local community is kept informed about the project and any potential impacts. This will also provide a channel for addressing any concerns or grievances that may arise.

By implementing these recommendations, the proposed development can ensure that it contributes positively to the local community and economy, while minimizing any potential negative impacts.

10.3 Conclusion

During the Assessment Phase of the Socio-Economic Impact Assessment (SIA), a comprehensive site visit was conducted to gather valuable insights and engage with key stakeholders and interested and affected parties. The site visit involved conducting semi-structured interviews to ensure a systematic and informative exchange of information.

The primary objective of the site visit was to provide stakeholders with a clear understanding of the proposed development, including its location, scope, and planned activities during both the construction and operational phases. To facilitate effective communication, visual aids such as maps and diagrams were utilized to illustrate the project's spatial aspects and provide stakeholders with a tangible representation of the planned development.

Through the semi-structured interviews, key stakeholders had the opportunity to express their opinions, concerns, and perceptions regarding the project's social impacts. The discussions during the site visit aimed to capture a broad range of perspectives and ensure that stakeholders' voices were heard and considered in the assessment process.

The feedback received from the site visit/interviews plays a crucial role in informing the analysis of the project's social impacts. By incorporating stakeholder perceptions and concerns, the assessment can provide a comprehensive understanding of the potential positive and negative socio-economic effects associated with the proposed development.

Through a rigorous review of policies, stakeholder engagement processes, and data analysis, this assessment has identified key socio-economic issues at various levels and examined the positive and negative impacts during the construction and operational phases.

At the district and local levels, the assessment identified challenges related to infrastructure, basic service provision, economic opportunities, and community development. These findings highlight the importance of coordination, capacity building, and effective implementation at the local level. By engaging with local municipalities, addressing land tenure issues, and ensuring transparency and accountability, the project can promote sustainable development and enhance the quality of life in the target communities.

The assessment also acknowledged the significance of enhanced access to basic services, amenities, and infrastructure development in informal settlements. These positive impacts can lead to improved living conditions, increased social inclusion, and enhanced community development. However, it is crucial to address potential challenges such as temporary inconveniences, disruptions to local businesses, and the risk of short-term social and economic challenges for affected residents. By implementing mitigation measures, such as effective project scheduling, stakeholder engagement, and support mechanisms, these negative impacts can be minimized.

The findings of this assessment underscore the importance of stakeholder engagement, transparency, and coordination among relevant government departments and agencies. The involvement of stakeholders throughout the assessment process has ensured that diverse perspectives, concerns, and aspirations have been considered. Mitigation and enhancement measures specific to the project have been identified to address the identified impacts and maximize the project's positive outcomes.

The socio-economic impact assessment has provided a comprehensive understanding of the potential social and economic effects associated with the development of a powerline. By identifying key issues, assessing impacts, and recommending mitigation measures, the assessment serves as a valuable tool for decision-making, policy development, and project implementation. The project, when effectively executed with the incorporation of mitigation measures, has the potential to address socio-economic disparities, enhance quality of life, and promote sustainable development in the target communities.

The proposed project is unlikely to result in permanent damaging social impacts. From a social perspective it is concluded that the project is acceptable subject to the implementation of the recommended mitigation and enhancement measures and management actions identified for the project. Considering the findings of the report and the potential for mitigation and management of impacts, it is the reasoned opinion of the specialist that the project can be authorised.

11 References

Department of Energy (DoE). (2008). National Energy Act (No. 34 of 2008). Republic of South Africa.

Department of Energy (DoE). (2011). National Integrated Resource Plan for Electricity 2010-2030. Republic of South Africa.

Department of Energy (DoE). (2003). White Paper on Renewable Energy. Republic of South Africa.

Department of Environmental Affairs (DEA). (1998). National Environmental Management Act 107 of 1998 (No. 107 of 1998). Republic of South Africa.

Department of Environmental Affairs (DEA). (2010). National Climate Change Response Green Paper. Republic of South Africa.

Department of Justice (DoJ). (1996). The Constitution of the Republic of South Africa (Act 108 of 1996). ISBN 978-0-621-39063-6. Republic of South Africa.

Department of Developmentrals and Energy (DME). (1998). White Paper on Energy Policy of the Republic of South Africa. Republic of South Africa.

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

National Development Agency (NDA). (2014). Beyond 10 years of unlocking potential. Available from: http://www.nda.org.za/?option=3&id=1&com_id=198 &parent_id= 186&com_task=1

National Planning Commission. (2012). National Development Plan 2030. ISBN: 978-0-621-41180-5. Republic of South Africa.

Statistics South Africa. (2022). Census 2022 Community Profiles Database. Pretoria.

United Nations Environment Programme (UNEP). (2002). EIA Training Resource Manual. 2nd Ed. UNEP.

United Nations Economic and Socio-economic Commission for ASIA and the Pacific (UN). (2001). Guidelines for Stakeholders: Participation in Strategic Environmental Management. New York, NY: United Nations.

Vanclay, F. (2003). Conceptual and methodological advances in Socio-economic Impact Assessment. In Vanclay, F. & Becker, H.A. 2003. The International Handbook for Socio-economic Impact Assessment. Cheltenham: Edward Elgar Publishing Limited.

Appendix A: Survey Templates

Appendix B: CVs and Qualification Certificates