Socio- Economic Impact Assessment of

Proposed Abbotsdale to Wesbank Powerline

May 2024 and

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Socio-Economic Statement:

Proposed Abbotsdale to Wesbank 132kV Powerline

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EXECUTIVE SUMMARY

Proposed Abbotsdale to Westbank 132kV Powerline

Purpose of Socio-Economic Statement
The Socio-Economic statement highlights the intended (direct and indirect impacts) and unintended (residual) consequences on the human and natural environment caused by the proposed powerline. Management measures are proposed to mitigate these consequences.

Proposed Powerline
The proposed 132kV powerline, approximately 4,9km long, connects the ESKOM grid east of the Diep River and Abbotsdale to two substations west of the Diep River and south of Westbank (Saamstaan). The two substations include the existing ESKOM and proposed municipal substations, each of nearly half a hectare in extent. These two substations will serve the catalytic De Hoop residential and mixed use development and the surrounding areas. The proposed 132kV powerline is a high voltage line.

The powerline route transverse agricultural land, pass Abbotsdale along a portion of its northern boundary, run parallel with the N7, cross the N7 and reach the substation below Saamstaan.

The installed powerline includes the following components:
- Access roads;
- Concrete pylon foundations;
- Steel frames or pylons;
- High voltage cables.

Receiving Community
In 2020 the Swartland population of 147 225 people represented 39 929 households with and average household size of 3.5 people. Malmesbury has 47 930 residents representing 33% of the Swartland population.

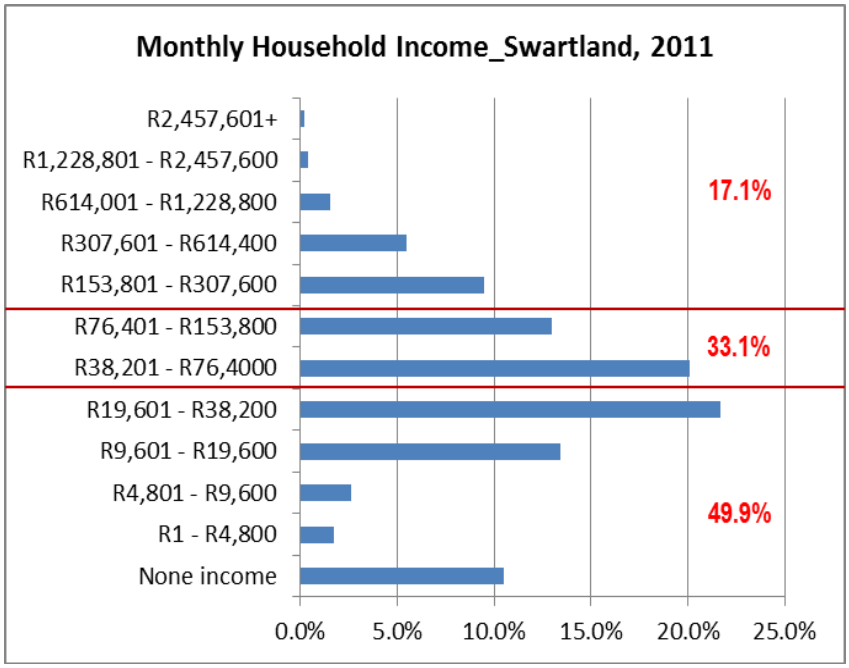
The population is fairly equally distributed in terms of gender with 50.4% females and 49.6% males. Thus, 60% of households are single parents in one way or another (never married, widowed, separated or divorced) and 28.5% female-headed households. The population of the Swartland is relatively young as the Youth (0-14) represents 25%, the working-age population (15 – 64) represents 69.1% and the Elderly (65+) 5.9% of the total population.

According to StatsSA (2011) half (49.8% or 14 603) of the households within the municipal area earned less than R3 500 per month and qualify for subsidized housing and indigent services provision.

In Swartland, basic services are accessed by the 90.9% households that live in formal dwellings.

More than half (51%) of the working-age (15-64) Swartland population are employed, 39% are not economically active while 8% are unemployed and 2% are discouraged work-seekers (StatsSA 2011).

In 2017 the Swartland unemployment rate of 10.4% was slightly less that of the West Coast District unemployment rate of 11.1% (StatsSA) and the youth unemployment rate was 17.9%.



The decrease in employment opportunities in agriculture, forestry and fishing will most likely cause discomfort for the 50.1% of the workforce that is low-skilled and the 34.6% of the workforce that is semi-skilled. The growth in the secondary economic sector such as wholesale, retail and trade and tertiary economic sectors such as financial and business services will most likely favour the 15.2% of the population that are skilled (Quantec Research, 2018).

The competitive strengths of the region reside in its food value chain (processing), including a stable Agricultural sector producing for the export and local market, as well as associated agricultural industries. However, a reliable and constant power supply is key for the agri-industrial activities.

The Swartland has the second largest economy in the WCD, with a regional gross domestic product (GDPR) of R7.4 billion in 2016 with Malmesbury comprising the economic hub. Though income disparity, and hence the poverty rate is high, the community is stable and resilient.

Approach and Assumptions

The approach to the study, directed by the requirements for Environmental Impact Assessments and the Guidelines for Social Impact Assessments (SIA) and Economic Impact Assessments (EIA), includes:

- Reviews the social status of the receiving community;
- Identifies development impacts and state significance of impacts based on experience and communication with the develop, specialists and key project team members;
- Recommends likely management and mitigation measures;
- Concludes the assessment result.

This socio-economic statement considers the development alternative proposed as the preferred alternative and refers to the no-go alternative. Furthermore, the following assumptions and limitations shaped the assessment:

(a) There is a high degree of certainty that a powerline will take place;
(b) The event of a complete demolition is unlikely and therefore has not been assessed;

(c) Calculation of the number of jobs created was based on limited information sources, i.e. estimates and indicative data from specialist reports only;
(d) Interviews are limited to the developer's representatives and specialists.

Policy and Planning Context
An analysis of the compatibility of the proposed project with the relevant sector policies and development plans concluded that the proposed powerline is compatible with the relevant National and Provincial plans and policies.

Impacts, Direct, Indirect and Residual: All Phases
Overall, the impacts generated by the proposed powerline are:

Construction Phase:

Direct and Positive Impacts during the Construction Phase are tabulated below:

Table: A summary of direct and positive impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
A	Increased employment opportunities & skills	Economic	Working age people find employment temporarily: 64 job opportunities generated and employees' employability improve. Influx of construction workers.	Individual & families	Low, Positive	Low, Positive
B	Increased income	Economic	Income of households increases as working age people are employed: R2 million wage bill of which R1.6 million should benefit the locals.	Family	Low, Positive	Low, Positive
C	Increased Local Sales and GGP	Economic	Increased expenditure enhance local sales and economy (increased income and spending power): <1% contribution to Swartland GDP.	Community	Low, Positive	Low, Positive

Direct and Negative Impacts during the Construction Phase are tabulated below:

Table: A summary of direct and negative impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
D	Increased Use of Social Amenities & Service	Social & Economic	Diminishing social amenity and services capacity (Within norms).	Community	Low, Negative	Low, Negative
E	Disruption of traffic	Economic	Slow moving and non-motorized traffic levels increase and road are temporarily closed.	Individuals & Community	Low, Negative	Low, Negative
F	Increased noise & dust levels	Social (Health) & Environmental	Living condition turn harsh with increased dust and noise.	Individuals & Family	Low, Negative	Low, Negative

G	Change in sense of place	Social	Living environment within areas of interest change temporarily due to medium level of activity and movement of large vehicles on agricultural fields.	Community members	Low, Negative	Low, Negative

Indirect and Negative Impacts during the Construction Phase are tabulated below:

Table: A summary of indirect and negative impacts, Construction Phase

	Impact (s)	***Environment***	***Experienced as***	***Population Unit***	***Rating***	***Mitigated***
H	Decreased community stability & safety	Social	Influx of people (employed and unemployed) permanently or semi-permanently looking for employment.	Individual, Family, Community	Low, Negative	Low Negative

Residual and Positive Impacts during the Construction Phase are tabulated below:

Table: A summary of residual and positive impacts, Construction Phase

	Impact (s)	***Environment***	***Experienced as***	***Population Unit***	***Rating***	***Mitigated***
I	Employment of vulnerable groups	Social	Youth & women find employment and develop self-confidence.	Family	Low, Positive	Low, Positive

Overall the impacts during the Construction Phase that are:

Positive and:

Direct are:

- The creation of 64 opportunities with a wage bill of R2 million over 18 months and R1.6 million benefitting the 51 locals, providing 32 unskilled and 12 semi-skilled and 7 skilled people employment opportunities and contributing <1% to the Swartland GDP.

Residual are:

- Improved family coherence as youth and women are employed and being held in high-esteem.

Negative and

Direct are, within limits,

- Increased use of social amenities and services, disruption of traffic and decreased road safety and increased noise and dust.
- A change in the sense of place during construction.

Indirect are:

- Community stability decrease as the perception of work cause an influx of employed and unemployed people.

Operational Phase:
Overall, the operational phase brings about some direct and positive impacts, direct and negative impacts and indirect positive and negative impacts.

Direct and Positive Impacts during the Operational Phase are tabulated below:

Table: A summary of direct and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
A	Increased employment opportunities, skills and income.	Economic	Working age people find part-time employment and contribute to household income.	Individual & family	Low, Positive	Low, Positive
B	Economic growth & increased local sales and GGP	Economic	Increased expenditure enhance local sales and economy (increased income and spending power).	Community	Low, Positive	Low, Positive
C	Enhanced supply of bulk services	Economic	Electricity generated gets distributed and more households have access to electricity.	Community	High, Positive	No mitigation

Direct and Negative Impacts during the Operational Phase are tabulated below:

Table: A summary of direct and negative impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
D	Changed sense of place	Social	The total powerline will not be visible from a specific point, but will be visible from areas of interest.	Individuals & Community	Medium, Negative	Low, Negative
E	Loss of Agricultural Land (food security potential)	Economic	High productive agricultural land is avoided and foundations are placed on fallow land. No jobs will be lost.	Community	Low, Negative	No mitigation
F	Loss of biodiversity	Natural	Degrading and transformation of biodiversity increase and alien vegetation establish.	Community	Low, Negative	Low, Negative
G	Deterioration of ecological infrastructure (water courses).	Natural	Decline in fresh water quality and volumes.	Community	Medium, Negative	Low, Negative
H	Property values decrease	Economic	Anticipated lower sales prices and long term health issues.	Family	Medium, Negative	Low, Negative

Indirect and Positive Impacts during the Operational Phase are tabulated below:

Table: A summary of indirect and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
I	Economic growth and increased SMME participation Economic Injection because of bulk service	Economic	Energy as a resource, is accessible to operate business or industry and increased economic participation by individual small business owners.	Community	Low, Positive	Low, Positive

Residual and Positive Impacts during the Operational Phase are tabulated below:

Table: A summary of residual and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
J	Employment equity of vulnerable groups	Social	Women and Youth find part-time employment and having electricity at home improve their social-well-being.	Community and Individuals	Medium, Positive	Medium, Positive

Overall, the impacts during the Operational Phase are:

Positive and

Direct are:

- Increased part-time employment is generated.
- Increased GDP results from the contributions by the wage and maintenance bill and selling electricity.
- Increased access to bulk electricity.

Indirect are:

- Economic growth and increased business, industry and SMME participation as energy as resources is accessible to conduct business.

Residual are:

- Employment equity of vulnerable groups improves social standing within the community.

Negative and

Direct are:

- A slightly changed living environment as the total powerline will not be visible from a specific point of view, but be visible form areas of interest.
- Minimal loss of biodiversity.
- Decreased property values for some Abbotsdale residence if not being mitigated.

Decommissioning Phase:

The decommissioning phase will last for 4 - 6 months whilst it is estimated that slightly fewer workers than the number of construction workers, will be employed to demolish the plant. The truckloads of the demolished material to be transported have yet to be determined. The impacts of the decommissioning phase will be similar than that of the construction phase and were not assessed.

The proposed powerline has an average life span of 30 years, whereafter the line will be replaced or demolished. The replacement will be a new project and will not be assessed as such.

Overall, the impacts during the decommissioning phase that are:

Positive and Direct are:

- The creation of temporary job opportunities and x jobs with a wage bill for 1 -2 months, and 80% benefitting the locals, providing local people employment opportunities and contributing <1% to the Swartland GDP.
- The return of the sense of place after decommissioning as the area return to agricultural land.

Negative and Direct are:

- Within limits, though negative, increased use of social amenities and services, decreased road safety and increased noise and dust.

Negative and Residual are:

- Diversification of culture because of the influx of people to find work or to conduct business (entrepreneurs).

Cumulative Impacts

The cumulative impacts associated with the proposed solar energy facility are:

a) Job creation and improved income drive economic growth (and growth in SMMEs and self-esteem).
    - Unemployment levels decrease and income and spending power increase;
    - Investors establish businesses and industry and entrepreneurs render services, all benefitting locals.

    The impact are further enhanced by mitigation measures that keep the benefits of the proposed powerline local, for example giving preference to employ locals and use the services of local service providers.

b) Bulk infrastructure/ alternative energy generation contributes to the national goal of access to services.

No Go Alternative

The No-Go Alternative would lose an opportunity for Swartland to support access to electricity /energy. No access to basic electricity hampers social well-being at home and economic growth.

Furthermore, the No-Go Alternative will also result in:

(a) A loss of employment opportunities generated during construction and operations.
(b) No access to bulk electricity and a decrease in social well-being.
(c) Slowed economic growth.

This alternative represents a negative social cost particularly for the local community. The No Go alternative cannot be considered as the proposed development is viewed as a strategic infrastructure project.

Recommendation

The proposed powerline is deemed acceptable as it is:

- *Generating 64 temporary employment opportunities for 1.5 year during the construction phase and some part-time jobs during the operational phase to benefit the locals*
- *Enhancing access to bulk energy during operations.*

The remaining mitigation measures to be included into the EMPR are summarized in Section 4 of the Assessment.

The proposed powerline as a whole should be authorized.

Positive, direct impacts are:

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
	12/12/20/
File Reference Number:	DEAT/EIA/
NEAS Reference	

Application for authorization in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

Proposed Abbotsdale to Westbank 132kV Powerline

Specialist: Contact person:	Anelia Coetzee (MURP & MBA)		
	Anelia Coetzee		
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The specialist appointed in terms of the Regulations_

I, Anelia **Coetzee**, declare that

I act as the independent specialist in this application

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

All the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms

Signature of the specialist:

Leap Sustainable Development cc (BEE Level Four Contributor)

Name of company (if applicable):

Date: 25 October 2024

Socio-Economic Statement:

Proposed Abbotsdale to Wesbank 132kV Powerline

Section 1: Project Overview and Assessment Scope

1.1 Introduction

EnviroAfrica cc was appointed by Swartland Municipality as Environmental Assessment Practitioners to undertake an Environmental Impact Assessment for a proposed 132kV powerline of 4,9km in length. The powerline connects the Eskom grid to a shared substation to transmit electricity to the catalytic De Hoop subsidized housing project and its surroundings. Leap Sustainable Development was appointed by EnviroAfrica cc to undertake a specialist Socio-economic statement (SES) as part of the Environmental Impact Assessment application.

1.2 Description of Proposed Development and Alternatives

The proposed 132kV powerline, approximately 4,9km long, connects the ESKOM grid east of the Diep River and Abbotsdale to two substations west of the Diep River and south of Westbank (Saamstaan). The two substations include the existing ESKOM and proposed municipal substations, each of nearly half a hectare in extent. These two substations will serve the catalytic De Hoop residential and mixed use development and the surrounding areas. The proposed 132kV powerline is a high voltage line.

Figure 1: Proposed powerline locality

The powerline route transverse agricultural land, pass Abbotsdale along a portion of its northern boundary, run parallel with the N7, cross the N7 and reach the substation below Saamstaan.

The installed powerline includes the following components:

- Access roads;
- Concrete pylon foundations;
- Steel frames or pylons;
- High voltage cables.

No alternatives are proposed except for the no go alternative.

1.3 Purpose of the Assessment

A Socio-Economic Statement predict and reflect the intended and unintended consequences on the human environment of planned interventions (policies, programmes, plans and projects) and any social change processes involved by those interventions so as to bring about a more sustainable and equitable biophysical and human environment (Vanclay, 2002).

At a broad level the impacts on the overall welfare of a community should be reflected considering the efficiency, equity and sustainability of the project as well as the trade-offs or 'opportunity cost' the various alternatives will yield.

1.4 Approach

The approach to the study, data used and expertise required, is directed by the requirements of

a) the overall SIA goal i.e. to identify and assess the likely social and economic impacts on the receiving community and environment due to the construction and operation of the 132kV transmission power. The SIA Report will inform the EIA Report being submitted to the competent authority and being DEADP for decision and should authorization be granted, the conditions thereof; and

b) Environmental Impact Assessments and the Guidelines for Social Impact Assessments (SIA) and Economic Impact Assessments commissioned by DEA&DP; and

c) Appendix 6 of the EIA Regulation, 2014 (amended) and Section 1(e) and the description of the methodology adopted in preparing the report or carrying out the specialized process inclusive of equipment and modelling used; i.e.:

   - Conduct detailed studies as identified during the Scoping Phase, thereby refining the scope of the assessment of the probable socio-economic impacts of the project on the receiving community;
   - Reviews the social status and needs of the receiving community;
   - Describe the anticipated socio-economic impacts generated by the proposed development and expected socio-economic change processes based on research, experience and communication with the developer, specialists and key project team members;
   - Rate the identified impacts according to their significance prior to and after mitigation measures are applied. A rating scale giving an indication of the magnitude of the identified impacts is described in Addendum A;

- Based on the magnitude of the impact, identify mitigation measures that serve to either prevent or minimise the effect of negative impacts or maximise positive impacts and recommends likely management and mitigation measures;
- Upon completion of the study, identify and describe limitations of the study, and list any assumptions that was made during the course of the study and the reason(s) why such an assumption were made; and
- Based on the result of the detailed assessments; and to conclude the assessment results, make specific recommendations on the way forward given the social impacts associated with the various phases of the project.

d) According to Appendix 6 of the EIA Regulations, 2014 (as amended) and Section 1 (c)(cA) an indication of the quality and age of the data used for the specialist report follows and is stated in the list of References; Primary and secondary data sources were used. Secondary data collection methods included desktop studies and where the receiving community could not be reached, discussions with project team members who were tasked to deal with the receiving community:

- A site visit during the third week of April 2024;
- Cape farm mapper maps of the relevant properties;
- Secondary data from meetings with affected landowners after being visited and consulted to discussed the line;
- Secondary data from meetings with officials of Swartland Municipality;
- Swartland Municipality Spatial Development Framework, 2023-2027.
- Swartland Municipality Human Settlement Plan, 2017 – 2022
- Integrated Development Plan, May 2023.
- Socio-Economic Profile, Swartland Municipality, 2022.
- Statistics South Africa: Census 2011 and Community Survey 2016.

Information relevant to the receiving community was identified and assessed from these sources within the context of the construction, operational, and decommissioning phases of the proposed project.

According to Appendix 6 of the EIA Regulations, 2014 (as amended) and Section 1 (a)(ii) the expertise of the specialist to compile a specialist report including a curriculum vitae is filed in Addendum B.

1.5 Assumptions & Limitations

The following risks and level thereof, are inherent to the proposed development.

Table 1: Inherent Risk Overview Matrix_ Abbotsdale powerline

	In case of such a risk, its scope is:					Aspects the risk will impact on:	Vs Impact of proposed development
Risks	**Extend**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Element**	**Proposed Powerline**
Inequality	Local Direct	Perm	Low	Unlikely	Mod	Employment. Opportunities to operate related businesses. Access to household energy.	No risk: no exclusions. Benefits all income (low, middle and high) and gender groups i.t.o employment, business opportunities and access to energy.
Social Fabric	Local Indirect	Temp	Low	Unlikely	Mod	Labour force and their families.	Very limited risk. Construction Phase: Labour travel to site daily and are not temporarily located on site.
Livelihoods	Local Direct	Perm	Med	Likely	High	Income generation opportunity (ies).	Create reliable energy transmission.
Vulnerable communities	Local Indirect	Perm	Med	Likely	Mod	Vulnerable community members (and absence of concentration of): women, elderly, children, dependents.	Does create reliable energy transmission that enable community to be less vulnerable and ultimately decrease vulnerability of vulnerable groups.
Critical resources	Local Direct	Perm	Low	Likely	Mod	Water, energy and clean air.	No risk: Implemented and operated according to national and international standards, and contribute to reliable & safe use of natural resource.
Economic vulnerability	Local Indirect	Perm	Med	Likely	Mod	Population size, merchandise export concentration, share of agriculture in GDP. homelessness (natural disasters). instability of agricultural production, instability of exports of goods and services, (Human Asset Index): - Health (<5 & maternal mortality rate, stunting) and - Education (gross secondary school enrolment & gender parity, adult literacy).	Reliable transmission. Stable. Enable export concentration. Expansion of major (3rd biggest) contributor. Provide additional capacity. Stable. Indirect stable. Access to health services & education enhanced.
Sustainability	Local Direct	Perm	Med	Likely	Mod	Balance between social, economic and natural; Able to meet present needs without negatively impacting on future.	Contributes to economic development and meeting present needs, whilst managing future impacts.
Extend: Local or Regional, Duration: Short, Medium and Long term and Perm – Permanent, Intensity: Low, Med – Medium and High. Probability: Likely, Perhaps, Unl – Unlikely, Confidence: Con – Confidence, Directly or Indirectly							

The above matrix aid to avoid risk and be cautious. The impacts of the risks considered, is local (limited to the settlement of Malmesbury including Abbotsdale, Wesbank and Ilinge Lethu and surrounding settlements and rural areas), permanent and mostly moderate in intensity where there is a direct risk. Their permanency maintains a positive contribution in future.

The following assumptions and limitations shaped the impact assessment:

Assumptions:
This socio-economic impact assumes that:

(a) No change of land use is required though the impact is permanent.
(b) A job has the following duration: Construction: 18 months, Operations: 3 years or more, Demolition: 12 months. Where a phase is shorter than the duration assumed, the opportunities are added and the number of jobs is calculated accordingly.
(c) The proposed route is technically suitable for the establishment of a power line. Where route alignments may be proposed in this report, only the social and economic acceptability of such alignments are considered and the technical feasibility of such alignments or feasibility of other specialist impact areas such as visual impacts, agricultural impacts, fauna and flora impacts, etc. was not considered.

The gaps in current knowledge are as follows:

(a) Alternative and traditional energy transmission have similar environmental impacts. For that reason, zoning laws are more likely to permit bulk transmission of energy at appropriate distances from residential areas (O'Sullivan, 2003 adjusted).[1]
(b) Number of people employed directly from Malmesbury in building the proposed powerline, is not guaranteed. Mitigation could direct employment opportunities to favour inhabitants of Malmesbury.
(c) Quantification of economic impacts to inform significance was not possible for most impacts, nor considered necessary, for all impacts. Where possible, quantification focused on impacts considered to be most important in the overall assessment. Assessments of impact significance made without quantification (and based on a consideration of the likely magnitudes of impacts and/or expert judgements) are, however, considered adequate unless otherwise specified.

Limitations:

(a) Assessment of alternatives is limited.
The alternatives assessed in the Socio- Economic Impact Assessment are limited to the proposed route and the no-go alternative.
(b) Calculation of the number of jobs created is limited.
The number of jobs created was based on information obtained from similar assessments. No other job generation benchmarks were considered.
b) Demographic data was obtained from DEADP's Mid-Year Population Estimates and apportioned to settlements according to the 2011 Census data per remuneration area. This data was used as the socio-economic baseline to inform the SIA.

1.6 Specialist details

The author of this report is an independent specialist with 10 years' experience in the field of rural development, 7 years in community education, 14 years in project management and coordination, 20 years in town and regional planning (Reg. no: A/1369/2010) and 12 years in socio-economic research.

1.7 Declaration of Independence

This is to confirm that Anelia Coetzee, responsible for preparing the Socio-Economic Statement, is independent and has no vested or financial interests in the proposed development being either approved or rejected.

1.8 Report Outline

The report is divided into four sections, namely:

- Section 1: Project Overview.
- Section 2: Socio- Economic Overview of Study Area and Applicable Legal Context.
- Section 3: Statement of Impacts: Construction, Operations and Decommissioning Phases.
- Section 4: Management guidelines to address socio-economic impact.

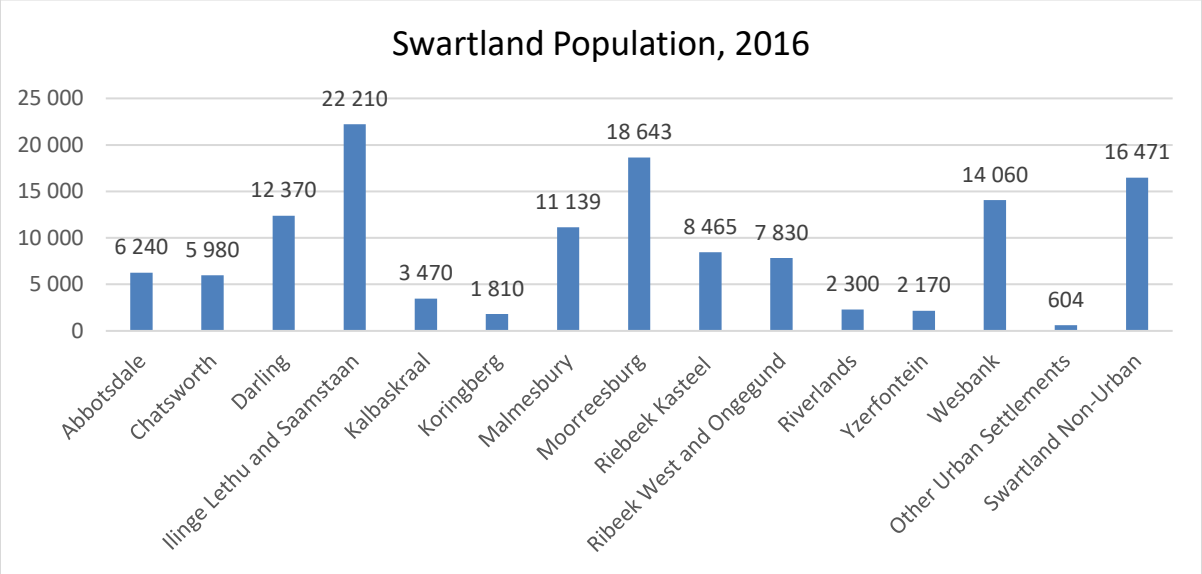
Section 2: Socio- Economic Overview of Study Area and Applicable Legal Context

This section provides an overview of the baseline socio-economic conditions of the receiving environment and the policy context.

2.1 Socio-Economic overview of Swartland

Demographics:

In 2022, the Swartland population of 140 697 people represented 32 515 households with and average household size of 4.2 people. The graph below reflects the population in 2016 per settlement.



Graph 1: Swartland Population, 2016 (Swartland IDP 2023)

Three-quarters of the total population live in urban areas, while slightly more than a quarter resides in rural areas. The community profile of Swartland households living in the municipal area according to StatsSA 2011 and the 2022 Socio-Economic Profile for Swartland, is tabulated below.

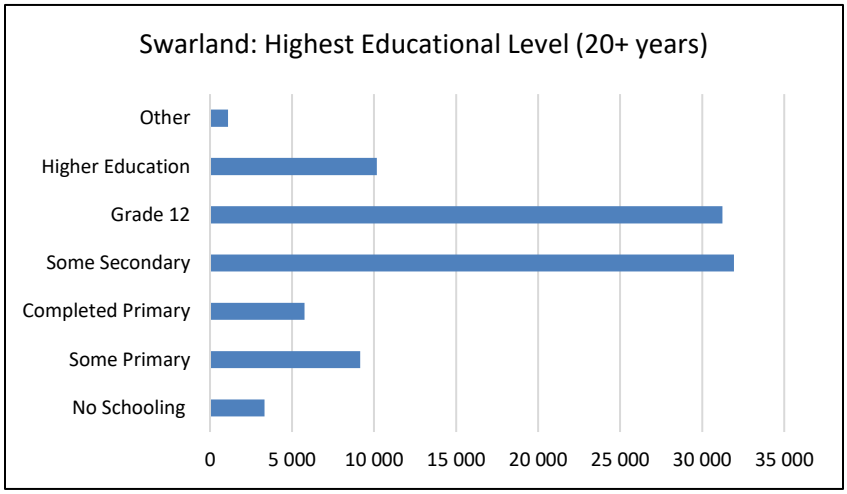
Table 2: Swartland Population and Households 2011 (Source: StatsSA, 2011)

		2011	2022
Population	Total Population	113 782	140 697
	Population Growth Rate	4.56%	3.3%
	15-64 years of age	78 610 (69.1%)	98 193 (69.8%)
Households	Number of Households	29 324	32 515
	Average Household Size	3.9	4.2
	Female-Headed Households	8 384 (29%)	
	Housing Owned / Paying off	15 547 (52%)	
	Formal Dwellings	26 068 (91%)	29 647 (91.2%)

According to the 2022 Socio-Economic Profile for Swartland, the average annual growth rate of the Swartland population is calculated as 3.3%. The population is fairly equally distributed in terms of gender with 50.3% females and 49.7% males. Of note are the 28.5% female-headed households, whilst 39.2% of households have partners who are married or live as married partners. Thus, 60% of households are single parents in one way or another (never married, widowed, separated or divorced). The population of the Swartland is relatively young as the Youth (0-14) represents 25.2%, the working-age population (15 – 64) represents 69.8% and the Elderly (65+) 5% of the total population.

Education:

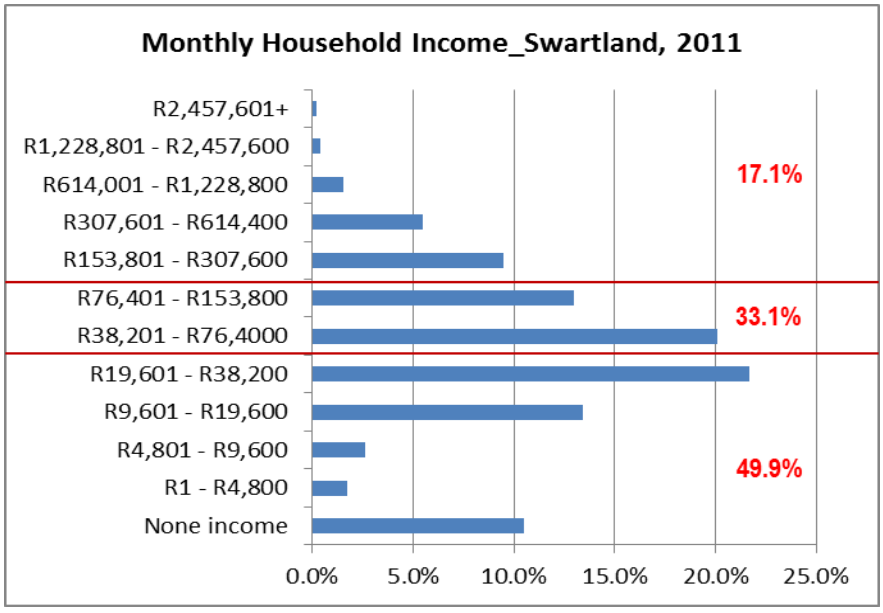
According to the Socio-Economic Profile for Swartland, 2022, learner enrolment in Swartland has increased consistently between 2019 and 2021, with increases ranging between 381 and 504 additional learners per year for this period. In 2019, 2020 and 2021, the learner enrolment numbers were 18 269, 18 650 and 19 154 respectively. There was a consistent decline in the Grade 12 dropout rate with 25.9% in 2019, 25.3% in 2018 and 23.9% in 2021. The matric pass rate increased from 84% in 2018 to 85.8% in 2020 and remained unchanged in 2021. The learner-teacher ratio is 32.9.



Graph 2: Highest level of Education Achieved, Swartland (Census 2022)

The Labour Market:

According to StatsSA, 2011 half (49.8% or 14 603) of the households within the municipal area earned less than R3 500 per month and as indigent households, qualify for subsidized housing and free civil and electrical services provision.

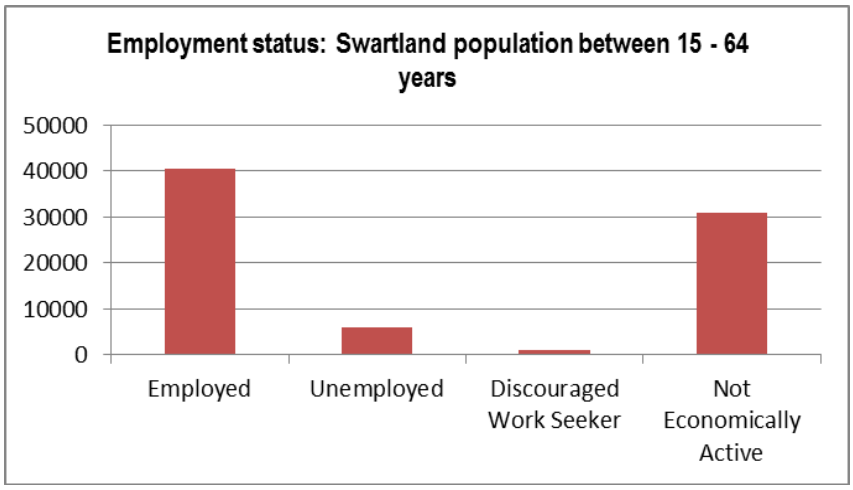


Graph 3: Monthly Household Income, Swartland (StatsSA 2011)

The dependency ratio is 43.3% meaning that for every dependent non-working aged person there are two working-age persons. However, adding the number of people that are unemployed, discouraged work seekers and those not actively involved in the economy, the dependency ratio changes to 93% meaning that for every person actively involved in the economy there is a person that is not involved.

More than half (51%) of the working-age (15 -64) Swartland population are employed, 39% are not economically active while 8% are unemployed and 2% are discouraged work-seekers (StatsSA, 2011).

In 2017 the unemployment rate for the West Coast District was 11.1% (StatsSA) and the youth unemployment rate was 17.9%.



Graph 4: Swartland Employment Status of Working Age Population (StatsSA 2011)

Table 3: Labour market summary

Working Age Population	78 610
Employed	40 651
Unemployed	5 928
Discouraged Work Seeker	1 197
Not Economically Active	30 854

With a population of 113 762 in 2011, and the working-age population (15 -64) representing 69.1% of the population, a third of the population is of non-working age: Youth (0-14) (25%) and the Elderly (65+) (5.9%). Of the working-age population of 78 610 persons, 8% are not in employment and 2% are discouraged work-seekers totalling 7 125 persons whilst nearly fourty percent (39.3% or 30 854 persons) of the working-age population are not economically active. The nearly 41 000 persons (51.7%) of working age that are employed are mainly employed in the formal sector.

Over the last decade, the unemployment rate[1] has been rising steadily. Unemployment in the Swartland municipal area is estimated at 14.6% in 2021. Swartland's unemployment rate in 2021 is just slightly lower than that of the District's 16% as well as that of the Province's 18.2 per cent.

Table 4: Unemployment rate 20211 – 2021, SEP, 2018

Area	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Swartland	9.4	9.2	8.9	9.5	8.5	9.3	10.1	10.2	11.1	11.8	14.6
West Coast District	10.6	10.2	9.7	10.3	9.1	10	10.9	11.1	12.1	129	16

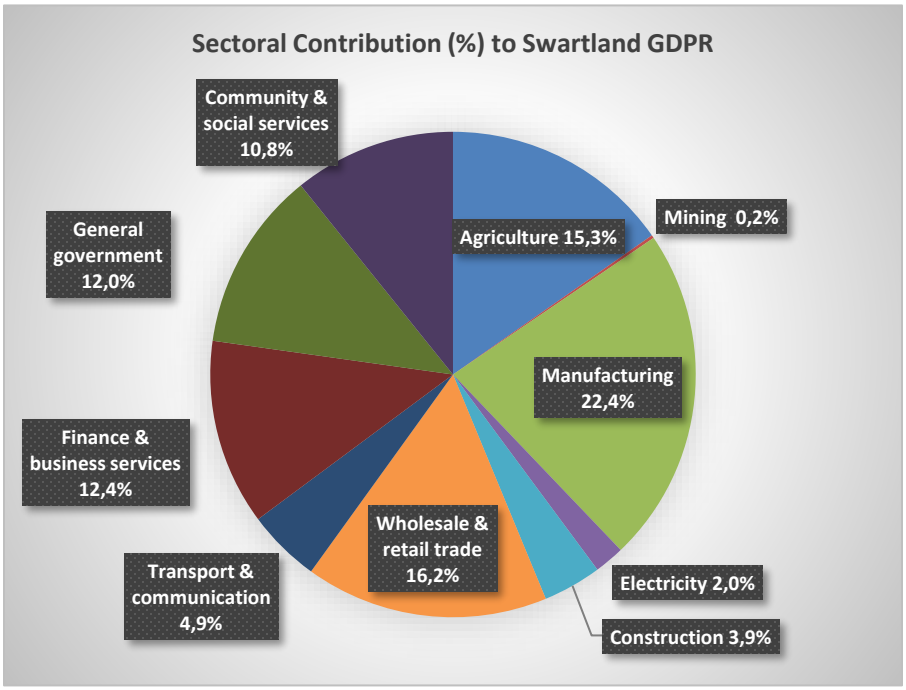
The tertiary sector (24 211 jobs) was the largest contributor to employment in 2020, followed by the primary sector (12 212 jobs) and the secondary sector (6 777 jobs). The municipal areas lost 296 jobs annually between 2016 and 2020 owing to the large number of jobs shed in 2020 as a result of the COVID-19 pandemic. The only sectors that created jobs between 2016 and 2020 were the manufacturing sector (8 jobs), the trade sector (75 jobs), the finance sector (82 jobs) and the general government sector, which created 54 jobs annually. Due to the large contribution to employment from the agriculture, forestry and fishing sector

[1] Narrow definition: Percentage of people that is able/ willing to work, but unable to find employment. In turn, broad definition refers to people that are able to work, but not actively seeking employment. Broad definition is more difficult to accurately measure/calculate.

(28.2%), the majority of formally employed workers in the Swartland municipal area are low-skilled (49.3%). The agriculture, forestry and fishing sector in the Swartland area reported the largest average decrease in the number of jobs (-460) between 2016 and 2020. Most of the formally employed (35 541) consisted of low-skilled (49.3%) and semi-skilled (54.5%) workers. Although the skilled category only contributed 17.2% to total formal employment (2020), it outpaced the other two categories in terms of average annual growth – between 2016 and 2020. Evidently, the demand for skilled labour is on the rise which implies the need to capacitate and empower low-skilled and semi-skilled workers.

Economy:

The Swartland Municipal area has the second largest economy in the WCD, with a GDPR of R8.9 billion in 2020 with Malmesbury comprising the economic hub. More than three quarters (78.3%) of the contribution to Swartland's economy comes from the five main sectors that are manufacturing (R2 010.3 million or 22.4%), wholesale and retail, catering and accommodation (R1 450.9 million or 16.2%) and agriculture, forestry and fishing (R1 378.1 million or 15.3%). Finance, insurance, real estate and business services are the fourth biggest contributor (R1 115.6 million or 12.4%) whilst Government services (R1 075.6 million or 12%) follows as the fifth biggest contributor.



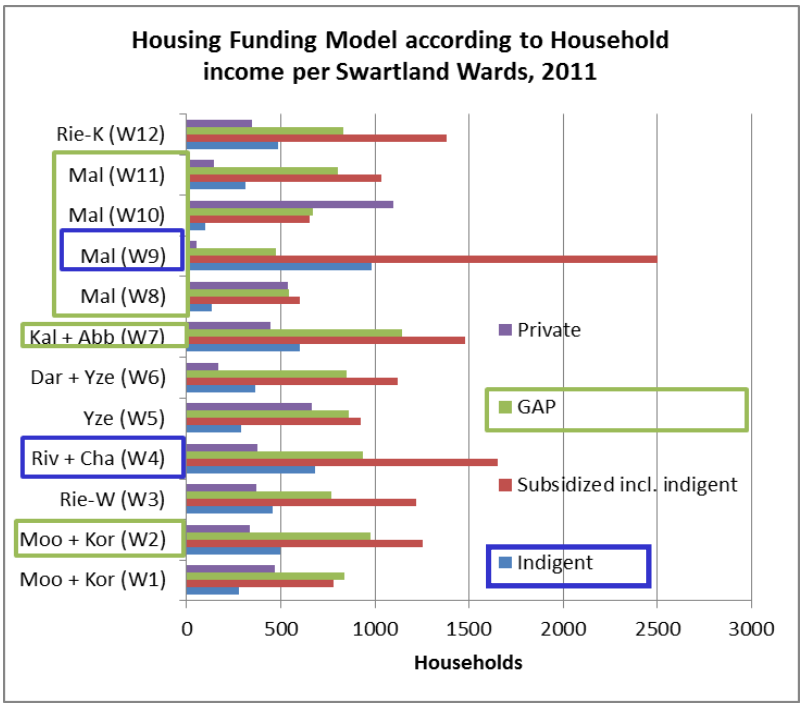
Graph 5: Economic Sector Contributions to the Swartland GDPR, 2020

The economic growth rate is contributed to by agriculture forestry and fishing and in manufacturing whilst the tertiary sector experienced a slower growth. These trends are not driven from within the municipal area or the region but by the national economy.

Historical trends between 2016 and 2020 indicates that the municipal economy grew marginally at an average annual growth rate of 0.1%. Although the secondary sector contracted, the primary and tertiary sectors continued to grow at 2.1 and 0.3% respectively. The growth can be attributed to the good growth in the agriculture, forestry & fishing sector (2.1%) as well as relatively strong growth in the finance, insurance, real estate & business services (2.0%) and general government (2.3%) sectors. The biggest contractions occurred in the construction sector (-6.1%), the transport, storage and communication sector (-3.5%) and the electricity, gas and water sector (-3.3%). The 2020 recession made a substantial dent in the average growth rate over the period, but load shedding and the drought within the Province also played a major role in prior years.

Housing Typologies:

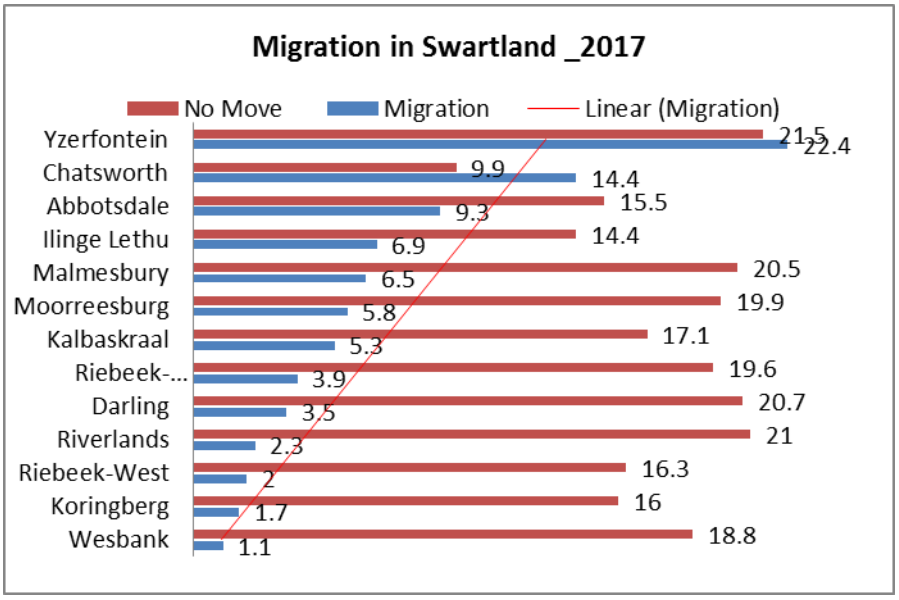
Educational levels impact on household income which in turn determines house typologies and government funding models. Hence Ilinge lethu (W9) and Chatsworth (W4) have the highest need for Subsidized housing while Moorreesburg (W2), Abbotsdale (W7), Riebeek Kasteel (W7), Kalbaskraal (W7) and Malmesbury (W8-11) have the highest need for GAP housing.



Graph 6: Housing topologies required per Swartland Wards, 2011

The towns with the highest number of households living in informal backyard structures are Malmesbury and in particular Wards 9 and 11 (Ilinge Lethu and Saamstaan) followed by Abbotsdale and Kalbaskraal (Ward 7).

A potential 54% of the households on the waiting list in Abbotsdale and Kalbaskraal are accommodated in formalized accommodation that is secondary to the main dwelling on the property however it is unlikely they are connected to services. There are informal precincts in Pola Park in Malmesbury on Erven 7456 and 9895. Formalizing the informal structures has been prioritized.



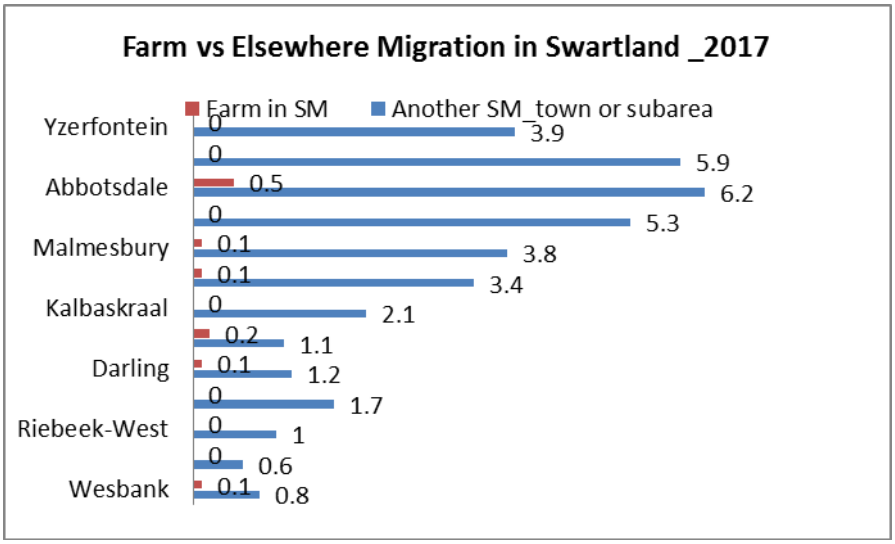
Graph 7: Migration in Swartland, 2017 (Municipal Census Survey, 2016)

Development trends in the region and at neighbouring municipalities cause migration. On average 18.8% of Swartland households have not moved for a period of 5 years and more. Yzerfontein, Darling, Riverlands and Malmesbury are the settlements with the most (20% and more) households that did not move in the last five years. Contrary, Yzerfontein and Chatsworth are the exceptions as more households (22.4%) and (14.4%) moved into these settlements than those staying there for 5 years and more.

There are 2 416 agricultural households in rural Swartland (StatsSA 2011) representing 6% of the total Swartland households. The migration trends of agricultural households urbanizing compared to settlement inhabitants moving within Swartland settlements are low. This can be attributed to the majority of farms

practicing extensive agricultural cultivation and being home to a few households per farm. Abbotsdale and Riebeek Kasteel are the preferred settlements for farmworkers to relocate.

Intensive agricultural areas of the Swartland, in comparison with extensive agricultural areas, contribute the most to farm households urbanizing. Intensive agriculture can be divided into two categories i.e. growing fruit and wine making or intensive agriculture (dairies) and feedlots. There are three areas in the Swartland that practice intensive agriculture: Darling, Riebeek Valley and along the Berg River (Broodkraal). These areas are more labour intensive than extensive agriculture e.g. growing grain. According to the Swartland Human Settlement Plan, 2017 – 2022, the need for either on or off farm housing is inferred in the population and/or marriageable-age population growth rate trends in Riebeek Valley, Nuwedorp in Darling and Koringberg. The need for housing for farmworkers is illustrated by the migration of farmworkers into Riebeek Kasteel and Abbotsdale as per the graph above.



Graph 8: Farm worker vs within and between settlement migration, Swartland, 2017

Surrounding municipalities i.e. Cape Metropole, Drakenstein and Saldanha Bay have high migration rates which may result in Swartland absorbing some of those households. Malmesbury in particular is a place of transit (North to South) and an alternative to settling in Cape Town.

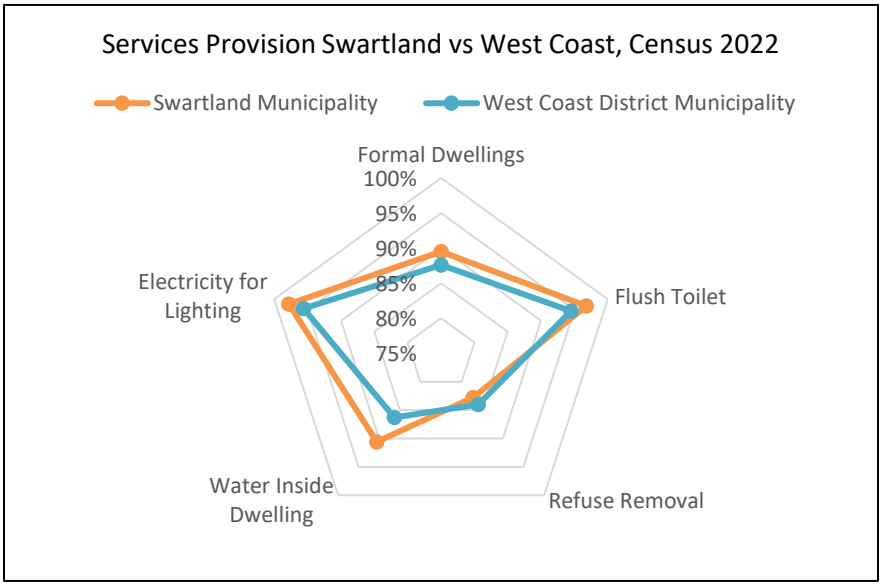
Access to basic services:

Table 5: Access of Swartland Households to basic services vs West Coast Households

Socio-Economic Profile 2022	Swartland Households	Swartland % of Households	West Coast District Households	West Coast District % Households
Total No of Households	32 515	100%	124 952	100%
Formal main dwelling	29 647	91.2%	109 822	87.9%
Water (piped inside dwelling / within 200m)	32 352	99.5%	123 827	99.1%
Electricity (primary source of lighting)	31 995	98.4%	119 954	96%
Sanitation (flush/ chemi)	31 605	97.2%	121 078	96.9%
Refuse removal (weekly)	25 459	78.3%	103 085	82.5%

According to the Census, 2022, in Swartland, basic services is accessed by most of the 44 856 households:

- Water (piped water inside the dwelling): 90.6%.
- Energy / Electricity for lighting: 97.8%.
- Sanitation: Flush toilet connects to sewerage: 96.8%.
- Weekly refuse removal: 82.8%.
- Housing (formal dwelling): 89.5%%.



Graph 9: Services Provision Swartland vs West Coast District, 2022

Health & Health Facilities:

In 2021/22, Swartland had a total of 5 primary health care facilities, comprising of 4 clinics and one (1) community day center, as well as, 9 additional mobile clinics, and 1 district Hospital. There are 14 ART clinics serving 3 058 (2021/22) patients and 15 TB clinics serving 651 TB patients in 2021/22.

Child Health or the health of new born up to children under 5 years of age has declined in Swartland from 2020/21 to 2021/22 as:

- The immunization rate declined from 64.4% to 63.5%.
- The number of malnourished children under five years increased from 1.0 to 1.5 per 100 000 people.
- Neonatal mortality rate (NMR measures the number of deaths within the first 28 days of age per 1000 live births) 2.1 to 4.9 per 1 000 live births.
- Low birth weight indicator (babies born weighing less than 2.5kg) decreased from 12.1% to 11.5%.

Maternal health has improved in Swartland from 2020/21 to 2021/22 as:

- Maternal mortality (deaths per 100 000 live births) decreased from 211.9 to 0.
- The delivery rate of women under 20 years of age decreased from 15.8% to 14.8%.
- The termination of pregnancy rate remained unchanged at 0.2%.

Safety and security:

Drug related crimes and residential burglaries are the most prevalent in Swartland and are trending upwards since the late 2000s. The actual number of reported cases in 2021/22 are 1 226 and 525 respectively.

Settlement Needs (per Ward):

According to the IDP, 2019/2020 and prioritizing the top five needs in each ward, resulted in the following settlement making related needs:

Housing in Moorreesburg (W2), Riebeek West (W3), Chatsworth & Riverlands (W4), Darling (W6), Kalbaskraal & Abbotsdale, Riebeek Kasteel (W7), Saamstaan (W11) and Riebeek Kasteel (W12), including housing for backyard dwellers in Saamstaan.

Recreational facilities: in all wards in need of housing with the exception of Saamstaan (W11) and Riebeek Kasteel (W12).

Educational facilities in all wards: Schools, upgrading of schools and crèches in all wards with the exception of Moorreesburg (W2) and Saamstaan (W11): High schools in both Darling (W6) and Riebeek Kasteel (W12).

Multipurpose centers in Riebeek West (W3), Riverlands and Chatsworth (W4) and Kalbaskraal (W7).
A rehabilitation center in Malmesbury (W8).

Of note is an Old Age Homes in Koringberg (W1), Riebeek West (W3) and Malmesbury (W8) of which the former two settlements are settlements to where farmworkers migrate to. Most likely these farm workers are retired.

Poverty:
Living condition (standard of living) are measured by means of indicators including **GDP per capita**, **income inequality** and **human development (HDI)** to show the current reality of households residing in the Swartland municipal area based on most recent data including Global Insight and Quantec.

Economic theory suggests that when an **economy prospers** its households are expected to enjoy an improved standard of living. The deteriorating financial health of households and individuals, specifically between 2011 and 2015, has resulted in an increase in the poverty levels, according to Statistics South Africa (Poverty Trends in South Africa report, 2017). Rising unemployment levels, low commodity prices, higher consumer prices, and lower investment levels, household dependency on credit and grants, and policy uncertainty are key contributors to economic decline in South Africa.

As per definition, the Upper Bound Poverty Line (UBPL) is the proportion of the population living below the UBPL i.e. that cannot afford to purchase adequate levels of food and non-food items, an individual living in South Africa with less than R1 227 (in April 2019 prices) per person per month was considered poor. In 2021, 57.73% of Swartland's population fell below the UBPL. This figure improved somewhat from the 59.87% and 59.60% recorded for the periods 2015 and 2018, respectively.

An **increase in real GDPR per capita**, i.e. GDPR per person, is experienced only if the **real economic growth rate exceeds the population growth rate**. Even though real GDP per capita reflects changes in the overall well-being of the population, not everyone within an economy will earn the same amount of money as estimated by the real GDPR per capita indicator. At R58 884 in 2021, Swartland municipal area's real GDPR per capita was marginally below that of the West Coast District's figure of R61 352 as well as below that of the Western Cape's R81 650.

The National Development Plan set a target of reducing income inequality in South Africa from a **Gini coefficient[2] of 0.7** in 2010 to 0.6 by 2030 whilst in the Swartland, it measured 0.61 in 2021.

The Human Development Index (HDI)[3] is used to benchmark the relative level of socio-economic development in countries. Indicators used to measure human development including education, housing, access to basic services and health indicators. Per capita income is the **average income per person** of the population per year; per capita income does not represent individual income within the population. The life expectancy and infant mortality rates are other important criteria for measuring development. There has been a general increase in the HDI of Swartland Municipality, the West Coast District as well as for the Western Cape since 2008. However, Swartland's HDI has decreased slightly to 0.679 in 2021. Naturally, per capita income as per definition did mimic the HDI trend.

Sense of place:
The Swartland municipal area has 13 settlements having each a role, an economic base and locational advantages. Malmesbury is viewed as the breadbasket of the Western Cape, and the long ago church town and settlement are now performing the role of the regional and administrative center. Malmesbury is performing the role of administrative hub and regional service centre for the Swartland region. Its locational advantage is that it is in close proximity to Cape Town and easily accessible from the N7. Towns with regional roles and locational advantages have the highest potential for future growth and to sustain such growth. Towns such as Malmesbury and Darling have a very high potential score and are prioritized for future settlement development and in particular subsidized housing.
Regional developments that do and will impact on the role of Swartland towns and their growth potential are:

a) The upgrade of the N7 (linking Cape Town and Namibia into Africa).
b) The development of the Industrial Development Zone in Saldanha.

The key initial insights of the social status of the receiving community are that:
Similar to other rural municipalities, Swartland also experiences common challenges such as a lack of skills, skew patterns of wealth distribution, relatively high levels of unemployment yet still low levels of crime. Despite the relatively positive economic growth it is quite evident that not all sectors of society share in the benefit resulting from this. In fact, it seems that the gap between rich and poor is actually widening as poverty stays prevalent. The challenge stays to increase the participation of emerging entrepreneurs in the mainstream economy and to bring the first and second economy closer together.

The key initial insights of the social status of the receiving community are that:

- Unemployment is high and keeps rising. Yet at the same time foreign entrepreneurs, commenting at the lower end of the income scale, pose a continuous challenge.
- Economic growth is slow.

[2] **Gini index** < 0.2 represents perfect income equality, 0.2–**0.3** relative equality, **0.3**–0.4 adequate equality, 0.4–0.5 big income gap, and above 0.5 represents severe income gap.

[3] Human Development Index is a statistic composite index of life expectancy, education, and per capita income indicators. A value above 0.800 is very high, between 0.700 and 0.799 high, 0.550 to 0.699 as medium and below 0.550 as low.

- Financial Sustainability of the tax base of municipalities, is a challenge if there is a strong dependency on grants.
- Housing and ownership are a need and desire to provide housing to backyarders whom constitute the biggest segment of the housing waiting list.
- Quality of the living environment including municipal services: Older residents want peace and quietness, which most subsidized development does not bring about.
- Cultural and heritage resources need protection to keep tourism growing. The character of the Swartland landscape include the rolling wheat fields, vineyards, patches of Renosterbos and views of Table Mountain. The landscape should be protected through mitigation.
- Safety and social well-being kids are a concern as the number and Street kids has increase.
- Decreased maternal and child health amongst women and children: Health care should become a focus of future community spaces and institutions.
- Affordable opportunities to access Further Education and Skills Development that result in employment are a challenge. Work shadowing and – replacement programmes offered by the college and university will enable the desired educational and skills development.
- Rehabilitation support / family relief as there is a large percentage of the working population that is at home and is not economically active. However, working population at home play a vital role in caring for family members that h unable to do so themselves.

Overall there is a strong sense that a vibrant living environment is required for the social well-being of the community and for the growth of the economy. The balance between conservation, cultural and heritage resources and development in particular can go a long way to address a vibrant living environment that will provide shelter, security and safety whilst enhancing the economy to grow. Hence agri-industrial development outside the urban area contributes to keeping a vibrant living environment whilst sustainably growing the economy.

2.2 Policy and Planning Context

An analysis of the compatibility of the proposed project with the relevant sector policies and development plans concluded that the proposed powerline is compatible with the following National and Provincial plans and policies:

- White Paper on Energy Policy for the RSA (1998);
- White Paper on Renewable Energy (2003);
- National Energy Act (2008);
- National Alternative Energy Strategy (2009);
- National Spatial Development Framework (2006);
- Western Cape Provincial Spatial Development Framework (PSDF), March 2014 revised 2019;
- Swartland Spatial Development Framework;
- Swartland IDP;
- Swartland Human Settlement Plan.

The proposed development represents a powerline with amenities and employment opportunities within walking distance from Malmesbury.

2.2.1 National Level

White Paper on Energy Policy for the RSA (1998)

The White Paper on Energy Policy for South Africa (December 1998) give recognition to "renewable energy sources in their own right; are not limited to small-scale and remote applications, and have significant medium and long-term commercial potential". "Renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future". As South Africa has a very attractive range of renewable resources, particularly solar and wind, the fact that renewable applications are the least costly particularly when social and environmental costs are considered, is strongly emphasized.

The proposed Abbotsdale powerline transmitting energy, is in line with the principles of the White Paper on Energy Policy for South Africa.

White Paper on Renewable Energy (2003)

As signatory to the Kyoto Protocol, Government is determined to, by means of the White Paper on Renewable Energy (November, 2003):

(a) Make good the country's commitment to reduce greenhouse gas emissions and
(b) Ensure energy security through diversification of supply (National Energy Act).

Government's long-term goal is to establish a renewable energy industry that will offer in future sustainable, fully non-subsidized alternatives to fossil fuels. The medium-term (10-year) target set in the White Paper is *10 000 GWh renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar and small-scale hydro electrical plants.* This target constitutes 4% of the total projected demand. The proposed Abbotsdale powerline supports government's medium and long term renewable energy goals as it will transmit renewable energy generated by the surrounding alternative energy facilities to make good the country's greenhouse gas emissions and ensure energy security.

National Energy Act (2008)

Again, the National Energy Act (Act 34 of 2008) promotes diversification of energy sources and supply including renewable resources, i.e. solar and wind. The diversified energy resources have to be available in sustainable quantities at affordable prices and should support economic growth, poverty alleviation and consider the preservation of the environment.

As the proposed Abbotsdale powerline enhances energy transmission and distribution, it is thus in line with the National Energy Act and support economic growth and poverty alleviation.

National Alternative Energy Strategy

South Africa's government has identified around 20GW of pure renewable energy capacity and 4GW of cogeneration technologies that may form part of its renewable energy procurement plan under the region's feed-in tariff programme. Concentrated solar power accounted ten percent (10%) of proposed capacity (NewsNet, 2010). The proposed powerline contributes to this capacity.

National Spatial Development Framework, 2006 (NSDF)

To National Spatial Development Framework serves as instrument to coordinate all government action and to align social, economic and environmental goals. The National Spatial Development Framework provides

the basis to maximize the overall social and economic impact of government development investment through interpreting the strategic direction, policy coordination and combining government action into a continuous spatial framework of reference.

The ultimate goal is to provide basic services, to ameliorate poverty and undo uneven and ineffective spatial patterns and address the additional burden on poor people.

The proposed Abbotsdale powerline complies with the normative principles of the National Spatial Development Framework as follows:

NSDF Principles	**Proposed Abbotsdale powerline**
a) Economic growth is a prerequisite to achieve policy objectives.	The proposed powerline will contribute positively to the GGP of the province.
b) Government spending on fixed investment should therefore be focused on localities of economic growth or economic potential.	Malmesbury, Moorreesburg, Darling and Riebeek Valley are earmarked as growth nodes (of different rankings) and government spending are earmarked on these localities of economic growth. The proposed powerline is one example of government spending on fixed investment.
c) Efforts to address past and current social inequalities should focus on people not places.	The proposed powerline create employment and skills development opportunities.
d) To overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channeled into corridors and nodes that are adjacent to or link the main economic growth centers. e) Future urban and rural development in the province should change the current pattern of resource application and investment significantly to ensure a sustainable environment for the future. Infrastructure investment and development spending should primarily support localities that will become major growth nodes in South Africa.	The proposed powerline will provide economic development opportunities aligned with being located at a growth node. Malmesbury is the main town centre and growth node for the Swartland and the alternative for the City of Cape Town. Darling is the main town for the western Swartland region (Wards 5 and 6) and a residential alternative for City of Cape Town.

The proposed powerline is in line with the principles of the National Spatial Development Framework as it promotes energy transmission within Malmesbury, the main economic growth node of the Swartland.

National and Western Cape Policies and Directives

The proposed development supports the following plans and frameworks that give effect to the PSDF:

Table 6: Plans and frameworks supported and given effect to by the PSDF

National Development Plan (NDP) of 2012	Proposed development
- Strives to eliminate poverty and reduce inequality by creating jobs and livelihoods, - Transform urban spaces, - Expand infrastructure, provide capable public services, etc.	Supports the NDP initiative by transmitting energy to a suitable location (growth node) maximizing efficient use of infrastructure, creating jobs and livelihoods and transform urban spaces.
OneCape 2040	Propose development
Intends: • An enabling spatial framework. • Integrated neighbourhoods. • Healthy and caring living areas. • Settlements that addresses resource scarcity and quality living through design. • Integrated services planning & provision. • Mostly low-carbon resource use. Limited toxic use. • Healthy, accessible, liveable, multi-opportunity communities. • Social value capture. • High level of local connectivity and global market fluency. • High innovation opportunity.	Support OneCape vision as it: • Gives effect to the Swartland SDF without limiting future uses whilst enhancing sustainability. • Ensure living conditions connecting economic and social opportunities. • Generates local economic opportunities whilst attracting international investors. • Enhance intensification of use in appropriate locations aligned with resources and space economy. • Provides affordable services as existing services are extended. Thus spatially aligned infrastructure planning, prioritisation and investment. • Creates variety of employment, livelihood and income opportunities in close proximity to residential areas. • Proactively manages economic assets (community resources) i.e. energy/ electricity distribution.
Western Cape Infrastructure Framework (2013)	Proposed development
Prioritises: • Invest in public transport and non-motorised transport (NMT) infrastructure, particularly in larger urban centres. • Continue to provide basic services to achieve national targets. • Diversify the housing programme. • Integrate settlement development, prioritising public service facilities in previously neglected areas. • Improve energy efficiency in buildings through design standards. • Distribute health and education facilities equitably.	Complies as it: • *Continue to provide basic services to achieve national targets.* • *Integrate settlement development in previously neglected areas.* • *Improve energy efficiency.* • *Can introduce improved energy efficiency in building by means of design standards.* • Ensure energy distribution to education and health facilities.

The proposed power line focus on transmitting energy to an integrated sustainable settlement precinct. The location of the land promote service efficiency to ensure the sustainable use of service resources. In-turn, and as national and provincial plans and frameworks giving effect to the PSDF are supported, the principles of the Provincial Spatial Development Framework are supported by the proposed power line.

Table 7: Compliance of proposed powerline with PSDF

A. Western Cape SDF (2014) principles	Proposed development
Policy R1: Protect Biodiversity and Ecosystem services: o Divert urban growth pressures away from critical biodiversity areas.	*Proposed powerline is outside the urban edge of Malmesbury.* Where the power line cross conservation or ecological support areas and transverse water courses, impacts are minimized. The proposed power line falls within the category earmarked infrastructure, that can be located in Buffer 2 areas.
Policy R2: Safeguard inland and coastal water resources, and manage the sustainable use of water: o Given current water deficits, practice a 'water wise' planning and design approach. o Protect and rehabilitate river systems and high yielding groundwater recharge areas, particularly in areas of intensive land use.	*Facility will have its own storm water system that is either re-used or disposed. Storm water run-off will be discharged away from water courses (drainage channels and streams) during construction and* augmented during operations and used as needed.
Policy R3: Safeguard the Western Cape's Agricultural and Mineral resources, and manage their sustainable use: o Reconcile ecosystem requirements with conflicting land development pressures.	*The proposed development will complement the rehabilitation of the medium high potential agricultural soil.*
Policy R4: Recycle and recover waste, deliver clean sources of energy to urban consumers, shift from private to public transport, and adapt to mitigate against climate change: o Provide low-income areas with access to electricity and systematically upgrade informal settlements. o Avoid developing new residential areas in proximity of agricultural crop spraying. o Pursue energy diversification and energy efficiency and delink economic growth from energy use. o Support emergent Independent Power Producers. o Address climate change mitigation measures in Municipal SDFs. o Encourage and support renewable energy generation at scale.	*Operational guidelines should include guidelines and requirements for recycling and recovering of waste;*
Policy R5: Safeguard cultural and scenic assets: o Include townscape and landscape making considerations into municipal SDF's, land use management systems and infrastructure development programmes. o Protect heritage and scenic assets from inappropriate development and land use change. o The delineation of urban edges to safeguard scenery and natural and cultural landscapes.	The development is outside the urban edge footprint and along the Klipkoppie Renosterbos Conservation area and visible from the R45 (Malmesbury – Paarl Road). Hence the interface of the proposed powerline has to be integrated with the surrounding environment and planting endemic species for screening has been recommended together with natural colouration of fencing and structures and good planting maintenance.
Policy E1: Use regional infrastructure investment to leverage economic growth: o Develop the renewable energy sector. o Reduce reliance of transport on liquid fuels.	*Job opportunities are provided within walking distance.*

o Invest in public transport and non-motorised transport (NMT) infrastructure. o Promote denser settlement patterns, reduce the need for travel and create walkable neighbourhoods. o Designing human settlements to accommodate infrastructural smart grids.	
Policy E3: Revitalise and strengthen urban space-economies as the engine of growth: o Renewable energy (low job creation potential) – on farms subject to consistency with biodiversity, heritage, scenic and agricultural requirements.	Increases intensification of use in appropriate locations aligned with resources and space economy.
Policy S1: Protect, manage and enhance the sense of place, cultural and scenic landscape: o Prevent settlement encroachment into viable agricultural areas, scenic landscapes and biodiversity areas. o Promote smart growth ensuring efficient use of land and infrastructure, containing urban sprawl and prioritising infill. o Enhance an economically, socially and spatially meaningful settlement hierarchy while preserving structural hierarchy of towns, villages, hamlets and farmsteads in relation to historical settlement patterns.	*The endemic species screening will integrate the agricultural sense in the design of the proposed powerline and keep the essence of agricultural production of the area part of the proposed development.* - *The development is outside the urban edge.* - *The development takes place on medium high potential agricultural soil.* - The infrastructure development enhances settlement hierarchy (service centre) while preserving historical structural hierarchy of settlements in relation to historical settlement patterns.
Policy S2: Improve provincial, Inter and Intra-regional accessibility: o Develop human settlement patterns that are compact and accessible so that they can all access the opportunities of urban environments. o Built environment projects should focus on compacting and connecting urban development and clustering public facilities along these connections.	- *The development will be accessible from the surrounding urban areas as well as regionally.*
Policy S3: Promote compact, industrial and integrated settlements: o Secure a more sustainable future settlement plan by means of higher densities and compact settlements save people time and money. o Promote functional integration and industrial as a key component of achieving improved levels of settlement liveability and counter apartheid spatial patterns and decentralization through densification and infill development. o Locate and package integrated land development packages, infrastructure and services as critical inputs to business establishment and expansion in places that capture efficiencies associated with agglomeration.	- *The powerline area represents a more intensified use.* More intensified use and compact development design save people time and money. - Promote solar intensification (and energy reliability) and proximity as a key component of achieving improved levels of settlement liveability. - Represents a well-located integrated land development and business development and expansion that capture efficiencies associated with agglomeration such as infrastructure and services.

○ **Policy S4: Balance and coordinate the delivery of facilities and social services:** ○ Balance sustainable service delivery and equitable access to education and health services. ○ Apply the principles of space utilization efficiency, multi-functionality and clustering to all facility provision projects. ○ Ensure that developments take place in a holistic, integrated and sustainable manner, equitable and accessible distribution of social services and facilities is required.	- *The powerline area is located next to a main route and easily accessible.* - Existing social services and amenities is close by and within walking distance.
Policy S5: Promote sustainable, integrated and inclusive housing in formal and informal markets: ○ Investment in housing ensures optimal and sustainable use of all resources, including financial, land, social and infrastructure components. ○ Provide a wide choice of housing typologies and tenure options, based on economic, fiscal, and social affordability. ○ Incremental housing development to be pursued, with phased service provision to accelerate housing provision. ○ Provide households with the residential environments, mobility and access to opportunities that support productive activities. ○ Achieve a wider range of housing opportunities and options.	*Afford entrepreneurs the opportunity to offer their businesses services.*

2.2.2 Swartland Spatial Development Framework

The proposed development is located outside the urban edge of Malmesbury in rural area and on the northern periphery of Abbotsdale and south of Saamstaan. Energy transmission contributing to achieve sustainable settlements is a main strategy of the SDF and the proposed powerline supports the principles of the Swartland Spatial Development Framework (See Table 8):

Table 8: Compliance of proposed powerline with Swartland SDF

A. Swartland SDF (2023 - 2027) principles	Compliance by proposed powerline
Adhere to four bioregional planning categories of which settlement is one category.	The proposed powerline falls within the category earmarked infrastructure, that can be located in Buffer 2 areas. The route transverse agricultural areas and bugger 2 areas.
Walking distance as primary measure for access (20min, 1000m or 1km).	The power line enable domestic energy within dwellings instead of alternative domestic energy generation that could be time consuming (e.g. collecting wood).
Integration of urban activities: At least 50% of the activities found in an urban area should be in walking distance.	
Socio-economic integration: complete socio-economic cross section should be within 1km from urban center.	Sustainable development bringing about socio-economic integration is promoted as more households will have access to domestic energy.

Social gradient should be low (small differences between abutting community layers especially in income).	
Enhance densification within the urban edge and of vacant and under-utilized land; Densify along major routes.	Proposed powerline will bring about intensification of use at the destination precincts such as the De Hoop housing development.
Create pleasant interfaces.	The route location, balance technicality, visual impact and health perceptions.
Employ service roads to densify along major roads: Promote such roads as activity streets and corridors.	Energy transmission support densification and intensification along activity streets, corridors and connector roads.
Development to seek to optimize public transportation and avoid cramming/ Preserve well located open spaces and promote open space networks.	Energy transmission optimize public transportation and avoid open spaces (threatened Renosterbos). Powerline not in conflict with conservation and can be part of climate change corridors.
Local economic development to address in-migration.	SMMEs enhanced to offer services.
Integrate the 1st and 2nd economy spatially Enhance CBDs.	The provision of bulk services address economic integration in the long term (20 Years +) as outlined in the SDF.
Protect historic core and layout of settlements.	Historic ore of settlement precincts are is not affected. Infrastructure rather enhance lighting at night to emphasize layout and historic resources.

Ultimately the SDF aims to establish well **performing** settlements and regions within Livable Environments and Sustainable Settlements Qualities. The proposed powerline enhances these characteristics.

Section 3: Assessment Impacts

The chapter provides a description of impacts assessed according to standard assessment measures (Addendum A). Impacts are classified firstly according to the environment (as per built environment) they impact upon, the formality of the impact, the unit of people or receptors involved (individual, family or community) and having a direct, indirect, residual or cumulative result.

Table 9: Impact classification Matrix

Environment	Level of Formality	Population unit	Directness
Built Environment (Natural) Social Economic	Informal: Individual & family Life/ Relational/ Social Formal (Regulated): Institutional/ Social	Individual Family Community	Direct Indirect Residual Cumulative

Direct impacts occur as a direct result of an action at the same time **and** location as the action. **Indirect impacts** are reasonably foreseeable **and** occur as a result of an action, but occur later in time or are removed from the action location.

Residual impacts are the result(s) of a project or action, secondary to the main purpose of the project that is nonetheless impacting on the surroundings and the community (https://bizfluent.com, September 2017). Residual Impacts are defined as those impacts that remain following the implementation of mitigation measures (Seagrave Road Environmental Statement Addendum Vol1).

Cumulative Impacts are the **impact** which results from the action when added to other past, present, and reasonably foreseeable future actions which include proposed project activities, other similar activities and unregulated background pressures and trends. The analysis of a project's incremental impacts combined with the effects of other projects can often give a more accurate understanding of the likely results of the project's presence than just considering its impacts in isolation (Business Biodiversity and Offsets Programme (BBOP) 2012). The combined effect of individual impacts occurs when a receptor is affected by more than one impact during any phase of development (Seagrave Road Environmental Statement Addendum Vol1).

The assessment of impacts will be reflected according to the following ratings as per standard assessment measures.

Table 10: Impact rating scale

Rating	Score -	Score +
Low	0 to – 40	0 to 40
Medium	- 41 to – 80	- 41 to 80
High	- 81 to – 120	- 81 to 120
Very High	> - 120	> 120

3.1 Construction Phase:

The construction phase will include the following broad activities:
Following main work areas:

- Final design works.
- Procurement and manufacture of equipment.
- Site access.
- Security.
- Foundation construction.
- Mounting frame construction.
- Module installation.
- Substation construction.
- Electrical site works.
- Grid interconnection works.
- Commissioning and testing.

The construction of civil and electrical infrastructure such as road and bulk services will first take place and followed by the construction of structures and buildings. The construction phase will include the following broad activities:

Activity	Skills required
1. Prepare site	Vegetation and topsoil will be cleared to make way for project infrastructure and access roads to the proposed route, service roads and laydown yard, etc. Topsoil will be stockpiled and stored for site rehabilitation purposes.
2. Transportation of equipment	Equipment will be transported by national, provincial and district roads. Equipment includes, but is not limited to, 10-ton trucks with cranes, compacting equipment, construction material, etc.
3. Site establishment works	Temporary laydown areas and an office for the construction contractor will be established. Electricity supply infrastructure e.g. generators and fuel storage, conforming to acceptable measures to avoid harm to the environment will be stored on site.
4. Prepare access road	Building road to access (and fire breaks) facility and a 5m management single track. Earthworks (to provide a firm, stable foundation); and where required installing embankments, levelling, fill, compacting, drainage; placing gravel on bed before a final series of compactions to reach the desired height; throughout employing soil stabilization and dust control.
5. Excavate and install reticulation network	Excavation, trenching, concrete work should any be required and electrical assembly of connections with sub-power station and steelwork assembly.
6. Site rehabilitation	Once all the construction activities are completed, all temporary structures and facilities will be removed and the site will be rehabilitated to the extent possible.

The impacts identified, are considered based on assessments of similar developments and powerline routes. Mitigation measures are suggested for the various impacts considered.

3.1.1 Direct and Positive Impacts during the Construction Phase

a) Employment opportunities increase

Experienced as: Working-age people find employment temporarily and household income increase.

According to similar facilities, an estimated Capital Expenditure of ±R2 million per km will be required to develop the powerline. The expected value of construction and employment over approximately eighteen (±18) months is ±R10 million and ±R2 million respectively. Effort should be made that locals and previously disadvantaged individuals should benefit at least ±R1.6 million of the wage bill. The number of employment opportunities (direct) generated during the construction period of ±18 months, was calculated as sixty four (64) opportunities. Of these who does construction work 63% (or 40 people) are unskilled, 23% (or 15 people) are semi-skilled and 14% (9 people) are skilled. The concrete contractor are most likely from the Western Cape. These jobs include, but are not limited to site clearing, general construction work (boxing, concrete mixing and casting), digging trenches, creation of fire breaks and operating the construction vehicles. The no go alternative has no impact on the population of Malmesbury and its immediate surroundings.

A breakdown of the jobs generated to construct 20MW follows below:

No of jobs:	***Duration of contract***	***Skills levels Required***	***Value of employment opportunities***	***Involvement of locals***
±*64* opportunities	*18 months*	*40 unskilled* *15 semi-skilled* *9 skilled*	*R2million*	*Moderate, locals lack skills required*

The generation of job and contract opportunities may cause an influx of construction and maintenance workers. Applying the directive that at least 80% of those employed should be local, 51 opportunities should be reserved for locals of whom 32 would be unskilled, 12 would be semi-skilled and 7 would be skilled.

Given the Swartland municipal trend of employed, unemployed, discouraged work seekers and economically not active people, the same trend should apply in Malmesbury including Abbotsdale and Wesbank. Though a large percentage of employment opportunities in construction consists of short-term contracts, like in this case, it contributes directly to counter unemployment and discouragement to seek work. The community views and rates *creating jobs* as highly significant as unemployment in the municipal area are high.

As education and skills levels in Malmesbury are low (50.1% unskilled, 34.6% semi-skilled and 15.2% skilled), the locals employed, may not have the skills required for the installation and development. Hence opportunity to work and to receive training and develop skills should be created to benefit the community in the short term and long term. As skills levels increase and income will likely increase, economic and material well-being will improve. Obtaining skills will enable community members to find work at future construction projects. Creating skills development opportunities and developing the skills of locals, is viewed significantly positive given the challenge of unemployment in the municipality and in the province. Moreover, skills are a long-term investment.

A summary of the impact follows in the table below.

Table 11: Assessment of impact on employment opportunities: Construction Phase

Impact	**Changes to the economic and material wellbeing of some households as some locals find temporary employment.**			
Nature of Impact	Out of 64 job opportunities, 51 job opportunities will be earmarked for locals. Of those jobs, 40 are unskilled, 15 semi-skilled and 9 skilled jobs. Income of some households increase.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Highly likely	3	No impact	0
Intensity of Impact (D)	High positive	3	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Medium, Positive	42	No impact	0
Level of significance after Mitigation	Degree of confidence: Certain 3 Medium Positive	45	No mitigation	0

Mitigation measures:

- Contractor should be required to employ 80% locals of whom 80% is HDIs and are suitably qualified; Should there be a lack of suitably qualified people, skills transfer should be prioritized whilst construction is taking place.
- The municipality, local community and community organizations should be informed of the project and potential job opportunities by the developer.
- A database of locals including small businesses owned and run by HDIs that qualify as service providers (construction companies, catering companies, waste collection companies, site cleaning companies etc.) should be compiled by the contractor prior to the commencement of the project. These firms should be invited to render services where required.
- Establish a Monitoring Committee for the construction phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the powerline is implemented and completed and that any problems that arise and is associated with this phase, is addressed.
- Require the contractor to enhance formal and informal skills transfer: Such a programme should be offered in liaison with an accredited Further Education and Training College like the West Coast College or University of Technology.

The increase in the number of contract opportunities and development of skills is positive, and the significance of the impact is rated as before and after mitigation as moderate at a local level.

The No go alternative has no impact.

b) Increased Income

Experienced as: Working age people find temporary employment and contribute to household income

The average household income overall is low as 49.9% of the population earns R42 000 (maximum R3 500 per month) and less, whilst 54.1% earns between R 42 000 and R 153 800 (maximum R12 800 per month) and 17% earn more than R12 800 per month:

Annual household income below R42 000	49.9%
Annual household income between R42 001 and R144 000	54.1%
Annual household income above R144 000	17.1%

The construction phase will bring about jobs for some locals that will result in an income for three (3) months. Generally the income earned would be higher than other contract unskilled and semiskilled work. The expected value of employment over 18 months is ±R2 million. The locals and previously disadvantaged individuals should benefit at least ±R1.6 million of the wage bill. Fifty one (51) opportunities should be reserved for locals of whom 40 would be unskilled, 15 would be semi-skilled and 9 would be skilled.

A summary of the impact follows in the table below.

Table 12: Assessment of Impact on income: Construction Phase

Impact	**Some households will experience an increase in income**			
Nature of Impact	The households of the unskilled and semi-skilled locals employed as a result of the proposed powerline will benefit, as a result of increased income during the construction period.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Highly Probable	3	No impact	0
Intensity of Impact (D)	Moderate, positive	2	No impact	0
Degree of confidence (E)	Medium	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Positive	30	No impact	0
Level of significance after Mitigation	Confidence: 3	33	No mitigation	
Mitigation measures: • Developer and contractor to act as reference for locals employed. • Developer and contractor to liaise with existing or future projects to access employment for locals.				

The construction of the proposed powerline will impact positively on the income of households employed locally and regionally. The impact is short-term and the significance of the impact is therefore rated low before and after mitigation.

The No Go alternative has no impact.

c) Improved local Economy and Increased Sales and GGP

Experienced as: Increase expenditure enhance local economy

The improvement of the economy will be measured by the Gross Value Added (GVA) added by the construction industry, a secondary economic sector, and ultimate change in Gross Domestic/ Geographical Product (GGP) of the Swartland Municipal.

It is anticipated that the construction expenditure and powerline materials will be distributed as below:

- On local suppliers: 20%
- On suppliers in Western Cape: 30%
- On national suppliers: 40%
- Import: 20%

The contribution by the proposed powerline to the Swartland Municipal, 2016 GDP of R7.4 billion is ±R10 million of which the wage bill constitutes ±R2 million. The locals should benefit at least ±R1.6 million of the wage bill. As not all purchases representing the expenditure from wages and salaries earned, the total local contribution represents less than 1% to the Swartland GDP and sales.

During the construction phase, the general project purchases i.e. most building materials, fuel and domestic purchases, such as groceries, liquor and restaurant services will be purchased locally. This will cause the sales volumes (direct and indirect) to increase. The pylons and cables and related equipment will be purchased nationally and internationally. The impact on increased international sales is not assessed, as the assessment focused on the local GDP.

A contribution of less than 1% to the GGP is rated as low.

A summary of the impact follows in the table below.

Table 13: Assessment of Impact on GGP: Construction Phase

Impact	**Changes in the economic and material well-being**			
Nature of Impact	Direct and indirect sales volumes will increase which will lead to an increase of the GGP of the local and regional economy. However the sale of some components is highly likely to the benefit the international market and to dilute local sales.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Moderate, positive	2	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Positive	20	No impact	0
Level of significance after Mitigation	Probability: 3 Confidence: 3	33	No mitigation	

Mitigation measures:

- Contractors should be directed by tender criteria to purchase locally and to make use of local service providers.
- Spending money locally purchasing from locals and South African should benefit employees. The proposed development should leverage discount in the local economy of the municipal area and province and employees should be made aware of it.
- Small business should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previous disadvantaged persons should be promoted.
- The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.

The improvement of the economy, measured by the change in Gross Domestic/ Geographical Product (GGP) of the Swartland reflects as low measured against the 2016 GDP, and the impact is low before and after mitigation.

The No Go alternative has a low impact.

3.1.2 Direct and Negative Impacts during the Construction Phase

d) Increased use of Social Amenities and Services

Experienced as: Diminishing social amenity and services capacity

Health amenities, i.e. the local clinic, local doctors and regional ambulances will be utilized should a construction-related accident during work or at home happens. It is anticipated that any serious emergencies will be routed to Cape Town. However the likelihood of emergencies on site occurring is unlikely as national safety standards will have to be adhered to.

The temporary stay of the non-local construction team will add negligible pressure on the demand for basic services i.e. water, sewerage and electricity and removing refuse.

Demand for municipal traffic and administrative services may increase on a sporadic basis as abnormal loads have to be transported or roads have to be temporarily closed in order for the powerline cables to cross the road.

A summary of the impact follows in the table below.

Table 14: Assessment of Impact on services and amenities: Construction Phase

Impact	**Changes in intensity of support provided by the living environment**			
Nature of Impact	Demand for services may increase slightly and emergency capacity may be required to cope with any construction accidents.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low negative	-1	No impact	0
Degree of confidence (E)	Medium	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-4	No impact	0
Level of significance after Mitigation	Improbable	-2	No mitigation	
Mitigation measures: • To adhere to international construction, health and safety standards and precaution measures. • To provide health and social training for the project team and in the community which include HIV/AIDs and Covid awareness training.				

The impact of the temporary construction team on amenities and municipal serves is low, yet the intensity is negative and stay low negative after mitigation.

The No Go alternative has no impact.

e) Disruption of traffic

Experienced as: Slow moving and non-motorized traffic levels increase and roads are temporarily closed.

The construction of the proposed development can be accommodated in the day-to-day traffic and no upgrades will be required as a result of construction traffic added to the existing traffic volumes.

During the construction and assembly phase, construction vehicles (graders, TLB's and concrete trucks etc.) would be used. Most of these vehicles will be transported to site and would stay onsite. Hence their impact on the roads surrounding Malmesbury will be minimal. Vehicles transporting goods, materials and equipment would make use mainly of the N7 and Philadelphia – Abbotsdale road.

As slow-moving delivery vehicles (trucks with loads) and employees on foot (pedestrians) could impact on road safety, road signs, erected to address the impact of the slow-moving vehicles and that of pedestrians on foot, will neutralize this impact.

A summary of the impact follows in the table below.

Table 15: Assessment of Impact on Traffic: Construction Phase

Impact	**The increase in heavy and slow traffic may cause changes in the living environment i.e. safety.**			
Nature of Impact	Slow moving and heavy traffic will increase sporadically. The road infrastructure is capable of accommodating the additional traffic caused by construction & delivery vehicles. Road signals have to be upgraded to decrease conflicting situations and particular pedestrian safety.			
Related impacts	Increased economic opportunity.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Medium term	2	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Medium, negative	-2	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-28	No impact	0
Level of significance after Mitigation	Intensity: Low -1	-12		
Mitigation measures: • Upgrade road signs to address the movement conflict. • Road signs for protecting pedestrians crossing and accessing public roads should be displayed. • Provide transport to decrease pedestrian traffic. • Restrict heavy vehicles to specific hours. • Erect road signs signaling times when heavy vehicles will make use of the road or rads will be closed. • Adhere to national traffic safety standards and precaution measures. • Contractor/ Implementation agent to provide a traffic safety awareness programme amongst the project team and the community, particularly the kids.				

The intensity of the impact caused by the disruption of traffic is negative and of low significance and stay low negative after mitigation.

The No Go alternative will have no impact.

f) Increased noise and dust levels

Experienced as: Living conditions turn harsh with increased dust and noise.

Noise and dust will be generated during the establishment of the construction site, but only for a limited period of time. Excavation activities for building infrastructure foundations, trenches for cabling and piping may affect the noise and dust levels. After preparation and during the building period, noise will be generated by activities such as construction and transport vehicles to and from the site along gravel roads and concrete vibration and steel work. On-site vehicle movement, delivery of materials and equipment and additional traffic will also create noise. These impacts will be of a local nature, and Abbotsdale and Saamstaan (Malmesbury) will be affected for a limited period of time.

A summary of the impact follows in the table below.

Table 16: Assessment of Impact on air and audio quality: Construction Phase

Impact	**Changes in the health and social well-being of the local population as noise and dust levels may increase.**			
Nature of Impact	Dust and noise may impact on the health of employees and, where close to settlements, on inhabitants in immediate proximity and could cause respiratory or psychological illnesses. Increases in the dust and noise levels will occur during the entire construction period for short intervals. Dust and noise suppression can be applied as mitigation measure to maintain the standard of health for employees on site.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low, negative	-1	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-4	No impact	0
Level of significance after Mitigation	Probability: Improbable: 1	-2		
Mitigation measures: • Dust creation must be controlled as per construction management and control code. • Noise creation should be controlled as per construction management and control code. • Appoint an Environmental Control Officer to supervise construction and building. • Adhere to the Environmental Management Plan (EMPr) for the Construction Phase. • All workers and management must undergo an induction course. • Enforce strict operating hours for heavy vehicles and construction activities on site to reduce noise and dust impacts on adjacent landowners. • Implementation of dust suppression measures. • Access must be on recognized routes. • Litter and littering must be strictly controlled. • All construction waste and building rubble must be removed off site.				

The impact of dust and noise is low negative before and after mitigation as it occurs over short intervals and will affect the immediate community of Malmesbury. After mitigation the intensity of the impact, and as a result the likelihood of the impact to occur, decrease.

The No Go alternative has no impact.

g) Change in sense of place

Experienced as: Living environment change

Construction comprises broadly three stages, namely preparing the route by removing any limiting elements, and setting up a site office and lay down area. The second phase is the transport and positioning of the pylons. The final stage is the fixing the cables. All three stages involve a medium level of activity and the movement of large vehicles. This impact is however temporary and not uncommon during construction of infrastructure. The visual impact during construction is therefore low and temporary.

The powerline traverses the residential areas of Abbotsdale and Wesbank, but cuts primarily through farmland. The topography is of an undulating nature, but no strong and unique scenic characteristics or prominent elements exist in the landscape. Hence the landscape has a high level of visual absorption, and the total powerline will not be visible from a specific point. Each viewer will only have a partial view of the powerline. In addition, the linear nature of the powerline, cause areas of interest to be assessed instead of single receptors. The following potential visual receptors were identified according to the *De Hoop 132kV Transmission Line Visual Assessment, 2024.* -

Receptor	Detail
Receptor 1	Wesbank residential area close to powerline
Receptor 2	N7 view in both directions
Receptor 3	
Receptor 4	Abbotsdale
Receptor 5	Rural area

The assessment of the operational line was used to "project" the impact during construction mainly caused by movement of large vehicles. The exposure and obstruction level of the route as construction area, is assessed and rated overall as low.

As the construction route add to space crowding temporarily, it was assessed and rated as low.

The visual impact is overall low. No mitigation measures are deemed necessary.

A summary of the impact follows in the table below.

Table 17: Assessment of Impact on appearance & experience of environment: Construction Phase

Impact	**Temporary changes in the quality of the settlement environment**			
Nature of Impact	A medium level of activity and the movement of large vehicles are experienced as the route is prepared, site office and lay down areas are set up, pylons are transported and positioned and cables are fixed. Areas of interest instead of single receptors are impacted on given the linear nature of the powerline.			
ALTERNATIVES: Preferred	**Sense of place (Local)**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Highly Probable	3	No impact	0
Intensity of Impact (D)	Medium, negative	-2	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-18		
Level of significance after Mitigation	Intensity: low: -1	-4		
Mitigation measures during the construction phase: • Clear all alien vegetation. • Keep disturbed areas to a minimum. • Pilons and similar structures must be in keeping with regional planning policy documents, especially the principles of critical regionalism, namely sense of place, sense of history, sense of nature, sense of craft and sense of limits. • Utilize existing roads and tracks to the maximum extent possible. • Provide pedestrian walkways where desire lines are identified. • At the substations, any outdoor lighting must be strictly controlled so as to prevent light pollution. All lighting must be installed at downward angles. Use only minimum wattage light fixtures. • Site tidiness should be maintained at all times including during construction.				

The construction phase of the powerline, has a low negative visual impact before and after mitigation.

The No Go alternative has no impact.

3.1.3 Indirect and Negative Impacts during the Construction Phase

h) Decreased community stability and safety

Experienced as: Influx of people (employed and unemployed) permanently or semi-permanently looking for work / in anticipation to access employment

The construction phase of the proposed powerline development will impact on the population of Malmesbury and its immediate surroundings and cause an influx of skilled and un-skilled people temporarily and permanently as they come to work for work on the construction site. The influx of people may result in a socially less stable community and higher levels of insecurity. It may also cause decrease safety and increased crime and stock theft.

A summary of the impact follows in the table below.

Table 18: Assessment of Impact on community stability: Construction Phase

Impact effects	**Temporary to permanent increase in the local population**			
Nature of Impact	The presence of skilled and semi-skilled outsiders will increase the population as different job options are introduced to the local community. The influx of skilled and semi-skilled outsiders may cause families to move more frequently instead of settling in the Swartland for a period of 5 years or more, affecting the migration rate within the settlement and the region.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low Intensity	-1	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-4	No impact	0
Level of significance after mitigation	Probability: 1	-2	No mitigation	0
Mitigation measures: • Ensure that the contractor (implementation agent) employ at least 80% locals of whom 80% were previously disadvantaged across all skills categories (unskilled, semi-skilled and skilled). • If not suitably qualified, make an effort to transfer skills on the job. • Establish a Monitoring Committee for the construction phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the proposed powerline is implemented and that any problems that arise and is associated with the demolition of the informal structures and construction phase, is addressed.				

The impact of the influx of people during the construction phase of the proposed powerline is rated before and after mitigation as low negative.

The No-Go Alternative has no impact.

3.1.4 Positive Residual Impacts during the Construction Phase

i) Employment of Vulnerable groups

Experienced as: Young people and women find employment temporarily and their self-esteem improve.

Given the high youth unemployment rate of 17.9% in relation to the unemployment rate of 10.4% (in 2017) there is a need that young people be employed as part of the local component that have to constitute such a project. As the young people may not have the skills, they have little to aspire to and employment is limited to entrance level jobs should they get employed.

Job reservation for youth is a mitigation measure to improve the social wellbeing of the community. The impact of employing youth was assessed as part of the impacts during the Construction Phase. The opportunity afforded to youth to work was assessed as positive. A subsequent impact is that families may start to hold youth in a position of higher esteem than previously. As how youth is viewed changes positively, **family and community life** will be touched and change positively in the long term breaking the cycle of hopelessness of youth in the local and regional community.

As employment equity for women is a national agenda, the employment of women should be dealt with in the same manner as for the youth.

Of the jobs generated per annum, 60% jobs should be earmarked to be taken up by people younger than 35 years of age and slightly more than half of these jobs are earmarked to be taken up by women.

The opportunity afforded to women is positive and will change the social well-being of their families. However the impact is viewed as significantly positive, as it may assist in breaking the cycle of hopelessness within poorer communities.

A summary of the impact follows in the table below.

Table 19: Assessment of impact of employment of vulnerable groups: All Phases

Impact	**Youth and women's social well-being improves, as they find employment.**			
Nature of Impact	Self-esteem of youth and women will increase. Young people and women may lack the skills required and may be excluded from the labour component to be employed. Should young people and women be employed it may assist to break the cycle of hopelessness. The way the community views youth and women changes. The employment opportunities will enable the family income to benefit from their employment.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	Status Quo remains	0
Duration of Impact (B)	Short term	1	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Medium positive	2	No impact	0
Degree of confidence (E)	Medium	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Positive	20	Status Quo remains	0
Level of significance after Mitigation	Highly probable: 3	30	Status Quo Remain	
Mitigation measures: • Reserve 60% jobs for youth and 50% for women: Of the 28 opportunities generated during the construction period, and the 23 opportunities reserved for locals, 17 opportunities should be earmarked to be taken up by people 35 years of age and younger and 14 opportunities by women. • Require contractor to facilitate mechanisms to enable youth to access employment. • Pay youth market related prices for the job. • Require contractor to facilitate that youth gain equal access to training and education opportunities. • Municipality facilitates that youth and women gain equal access to training and education opportunities: Skills development and improvement of educational qualifications should be a project component and youth and women should gain equal access to training and education opportunities. • Municipality to facilitate access to employment for youth and women. • Pay youth and women market related prices and the same as men for the job.				

The improved self-esteem of youth and women will change their social well-being and in turn change the social well-being of the family. Although the significance of the impact is low before and after mitigation, the impact is viewed as significant and positive as it assists to break the local cycle of hopelessness.

The No Go alternative has no impact.

3.1.5 Summary of impacts during the Construction Phase and Conclusion

Overall, the construction phase brings about some direct and positive impacts, direct and negative impacts and indirect positive and negative impacts.

Direct and Positive Impacts during the Construction Phase are tabulated below:

Table 20: A summary of direct and positive impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
A	Increased employment opportunities & skills	Economic	Working age people find employment temporarily: 64 job opportunities generated and employees' employability improve. Influx of construction workers.	Individual & families	Low, Positive	Low, Positive
B	Increased income	Economic	Income of households increases as working age people are employed: R2 million wage bill of which R1.6 million should benefit the locals.	Families	Low, Positive	Low, Positive
C	Increased Local Sales and GGP	Economic	Increased expenditure enhance local sales and economy (increased income and spending power): <1% contribution to Swartland GDP.	Community	Low, Positive	Low, Positive

Direct and Negative Impacts during the Construction Phase are tabulated below:

Table 21: A summary of direct and negative impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
D	Increased Use of Social Amenities & Service	Social & Economic	Diminishing social amenity and services capacity (Within norms).	Community	Low, Negative	Low, Negative
E	Disruption of traffic	Economic	Slow moving and non-motorized traffic levels increase and road are temporarily closed.	Individuals & Community	Low, Negative	Low, Negative
F	Increased noise & dust levels	Social (Health) & Environmental	Living condition turn harsh with increased dust and noise	Individuals & Family	Low, Negative	Low, Negative
G	Change in sense of place	Social	Living environment within areas of interest change temporarily due to medium level of activity and movement of large vehicles on agricultural fields.	Community members	Low, Negative	Low, Negative

Indirect and Negative Impacts during the Construction Phase are tabulated below:

Table 22: A summary of indirect and negative impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
H	Decreased community stability & safety	Social	Influx of people (employed and unemployed) permanently or semi-permanently looking for employment.	Individual, Family, Community	Low, Negative	Low Negative

Residual and Positive Impacts during the Construction Phase are tabulated below:

Table 23: A summary of residual and positive impacts, Construction Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
I	Employment of vulnerable groups	Social	Youth & women find employment and develop self-confidence.	Families	Low, Positive	Low, Positive

Overall the impacts during the Construction Phase that are:

Positive and:

Direct are:

- The creation of 64 opportunities with a wage bill of R2 million over 18 months and R1.6 million benefitting the 51 locals, providing 32 unskilled and 12 semi-skilled and 7 skilled people employment opportunities and contributing <1% to the Swartland GDP.

Residual are:

- Improved family coherence as youth and women are employed and being held in high-esteem.

Negative and

Direct are, within limits,

- Increased use of social amenities and services, disruption of traffic and decreased road safety and increased noise and dust.
- A change in the sense of place during construction.

Indirect are:

- Community stability decrease as the perception of work cause an influx of employed and unemployed people.

3.2 Operational Phase

The impacts during the operational phase are marginal and associated with the maintenance of the powerline. Therefore some impacts during the operational phase are evaluated individually and most are overall rated as minor impacts.:

3.2.1 Direct and Positive Impacts during the Operational Phase

a) Increased Employment and income opportunities

Experienced as: Working age people find part-time employment

During the operational phase, the powerline has to be maintained and kept clear. The generation of transmission of energy is not labour intensive and services will be hired sporadically as required.

The maintenance team will include skilled persons, whilst the clearing contractor will employ unskilled persons. As the generation of employment opportunities is sporadic, the value of the work or number of jobs were not calculated.

The employment of locals would have a consistent positive impact on the economic and material well-being of the local community as the expected value of employment annually contribute to their standard of living. Employing locals will cause the earnings to flow back into the community and being spent most likely inside the municipal area and region.

As nearly half (48.3%) of the population earn less than R3 200 per month and half of the population is unskilled (50.1%) the part-time employment opportunities will contribute to the household income.

The current value of the employment contracts and part-time work for the first ten (10) years was not calculated. Household members getting employed sporadically or contractually contribute to the overall household income.

A summary of the impact follows in the table below.

Table 24: Assessment of impact of job opportunities: Operational Phase

Impact	**Changes to the economic and material well-being of the local households.**			
Nature of Impact	Part-time job opportunities will be created benefitting locals. As these job opportunities are when required, the number of job opportunities were not quantified. These job opportunities should be earmarked for locals and should include unskilled, semi-skilled and skilled jobs. Income of some households increase.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Likely	2	No impact	0
Intensity of Impact(D)	Low positive	1	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Positive	28	No impact	0
Level of significance after Mitigation	Degree of confidence: Certain 3	30	No mitigation	0
Mitigation measures: • Contractors, employing or seeking to employ local HDIs who are suitably qualified, should get preference; • The municipality, local community and local community organizations should be informed of the project and potential job opportunities by the developer; • Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing). • Developer, municipality and business owners to liaise with existing or future projects to enhance employment opportunities for locals. • Developer and contractor to act as reference for locals employed.				

The community perceives job creation, though part-time, as positive and the number of job opportunities created over the entire operational period rates low positive, as locals get employed. The impact rates low positive before and after mitigation.

The operation of the proposed powerline will impact positively on the income of some households locally as member(s) of these households find part-time employment opportunities. The significance of the impact is low positive before and after mitigation.

The No Go option has no impact.

b) Growth of local economy and Increased Sales and GGP

Experienced as: Increase in sales, income and spending

The proposed powerline and energy industry, a tertiary economic sector, will enhance the sale of energy contributing to the Swartland GGP. The sale of energy and the expense to operate the facility will benefit the local community and the region. The increase in sales volume related to the selling of electricity will contribute to the local GGP.

A summary of the impact follows in the table below.

Table 25: Assessment of Impact of GGP: Operational Phase

Impact	**Economic growth and material well-being**			
Nature of Impact	Local GGP will increase. Direct and indirect sales volumes/ spending by employees and vendors will increase which will lead to an increase of the GGP of the local and district economy.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	1	No impact	0
Intensity of Impact (D)	Moderate, positive	2	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E) x C	Low, Positive	26	No impact	0
Level of significance after Mitigation	Intensity: High 3	38	No mitigation	
Mitigation measures: • Business should be directed to purchase locally and to make use of local service providers. • Spending money locally purchasing from locals and South African should benefit merchants. Any discount leveraged in the local economy of the municipal area should benefit locals. • Small business should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previous disadvantaged persons should be promoted. • The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.				

The improvement of the economy, measured by the change in Gross Domestic/ Geographical Product (GGP) of the Swartland is low and the impact is rated as low before and after mitigation.

The No Go alternative has a no impact.

c) Enhanced supply of bulk services

Experienced as: Electricity becomes accessible to businesses, industry and households

Accessing bulk electricity unlocks business and industrial opportunities. Households, that previously did not have access to or had indirect access to electricity, will benefit from the powerline and distribution of electricity.

Without the powerline (No Go alternative), that catalytic De Hoop subsidized and other housing project would not be able to proceed. Neither would any business opportunities have been unlocked.

A summary of the impact follows in the table below.

Table 26: Assessment of impact of demand for& provision of services & amenities: Operational Phase

Impact	**Unlocking business opportunities**			
Nature of Impact	Electricity becomes accessible. The proposed development enables business and industrial development. More households have access to electricity and energy.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	Local	4
Duration of Impact (B)	Long term	3	Long term	3
Probability of occurrence (C)	Highly Probable	3	Unlikely	1
Intensity of Impact (D)	High, positive	3	High negative	-3
Degree of confidence (E)	Likely	2	Uncertain	1
Level of significance (AxBxD+E)xC	High, Positive	114	Low, negative	-35
Level of significance after Mitigation	No mitigation	No rating	No consideration	No rating
Mitigation measures: • None				

The impact of the distribution and transmission of electricity rates high positive and no mitigation is recommended.

The No Go alternative rates moderately negative. In essence, the No Go alternative cannot be considered as the proposed powerline is viewed as a strategic infrastructure project.

3.2.2 Direct and Negative Impacts during the Operational Phase

d) Change in sense of place

Experienced as: Living environment change as the total powerline will not be visible from a specific point, but will be visible from areas of interest.

The powerline traverses the residential areas of Abbotsdale and Wesbank, but cuts primarily through farmland. The topography is of an undulating nature, but no strong and unique scenic characteristics or prominent elements exist in the landscape. Hence the landscape has a high level of visual absorption, and the total powerline will not be visible from a specific point. Each viewer will only have a partial view of the powerline.

Due to the linear nature of the powerline, no single receptors were assessed but rather areas of interest. The following potential visual receptors have been identified according to the *De Hoop 132kV Transmission Line Visual Assessment, 2024*: –

Receptor	Detail
Receptor 1	Wesbank residential area close to powerline
Receptor 2	N7 view in both directions
Receptor 3	
Receptor 4	Abbotsdale
Receptor 5	Rural area

The evaluation of the exposure and obstruction level of the powerline concluded that the overall visual impact is rated as low.

Although the powerline adds to the space crowding component, the scale is low and within acceptable levels of change.

The study concludes that the overall impact is low, and no issues have been identified which require further studies or modelling. No mitigation measures are deemed necessary.

The addition of the 132kV powerline will have little cumulative impact as it is of smaller scale than the existing high voltage lines. It does not create a visual compounding effect due to the alignment.

A summary of the impact follows in the table below.

Table 27: Assessment of Impact on appearance & experience of environment: Operational Phase

Impact	**Changes in the quality of the settlement environment**			
Nature of Impact	Viewers will have partial view of the power line as the landscape has a high level of visual absorption, and the total powerline will not be visible from a specific point. The linear nature of the powerline create areas of interest instead of single receptors. These are: - The residential areas of Abbotsdale and of Wesbank; - The N7; and - Farmland/ rural surroundings.			
ALTERNATIVES: Preferred	**Sense of place (Local)**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Medium, negative	-2	No impact	0
Degree of confidence (E)	Likely	2	No impact	0
Level of significance (AxBxD+E)xC	Medium, Negative	-44	No impact	0
Level of significance after Mitigation	Intensity: low: -1 Significance: Low, Negative	-20	No mitigation	0

Mitigation measures during the construction phase:

- Keep disturbed areas to a minimum.
- Utilize existing roads and tracks to the maximum extent possible.

Before mitigation the impact is rated as moderately negative and become low negative after mitigation.

The No Go alternative has no impact.

e) Loss of Agricultural Potential and land

Experienced as: Decline in food security potential

The Environmental Screening Report (ESR) generated through the National Web-based Screening Tool identifies the study area as having a high sensitivity according to the Agricultural theme.

Findings from the *Compliance Statement for De Hoop Housing Malmesbury Powerline – Agricultural Assessment, 2023*, a desktop assessment conducted were:

- The study area is partially situated within a Western Cape Protected Agricultural Area.
- A portion of field crop boundaries are recorded in the study area.
- The climate capability of the area was classified as moderate due to the very low mean annual rainfall and arid environment.
- A large portion along the study area has a soil capability that is moderate (Ac, Db and Fa broad land types), while some portions have a low - moderate soil capability.
- Area had a Low to High terrain capability that is scattered along the study area.
- The overall land capability ranges from Low - Moderate to Moderate – High, with the low – moderate capability representing the minimum area of the route.
- The grazing capacity of the study area was moderate (36 ha/LSU).

Therefore, the desktop assessment aligns with the screening tool of high agricultural sensitivity. Due to the linear nature the proposed powerline will have a low impact on existing agricultural activities.

No jobs in agriculture will be lost.

A summary of the impact follows in the table below.

Table 28: Assessment of impact of the loss of agricultural land: Operational Phase

Impact	Agricultural potential of the land gets diminished slightly when the powerline development proceed.			
Nature of Impact	Minimal decrease in food security as cultivatable land is avoided and foundations are placed on fallow land. No jobs will be lost.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low, negative	-1	No impact	0
Degree of confidence (E)	Moderate	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-20	No impact	0
Level of significance after mitigation	Probability: Unlikely: 1 Low, Negative	-10	No mitigation	

Mitigation measures:

- Reliable and good fencing is used during construction.
- Pylon footprints inside agricultural fields is kept to a minimum.
- Implement an effective system of storm water run-off control at any point where run-off water might accumulate. The system must effectively collect and safely disseminate any run-off water from all accumulation points and it must prevent any potential down slope erosion.
- Any occurrences of erosion must be attended to immediately and the integrity of the erosion control system at that point must be amended to prevent further erosion from occurring there.
- Maintain where possible all vegetation cover and facilitate re-vegetation of denuded areas throughout the site, to stabilize disturbed soil against erosion, and to reduce dust formation.
- If an activity will mechanically disturb the soil below surface in any way, then any available topsoil should first be stripped from the entire surface to be disturbed and stockpiled for re-spreading during rehabilitation. During rehabilitation, the stockpiled topsoil must be evenly spread over the entire disturbed surface, and then stabilized by facilitating vegetation cover.
- Enhance on-site conservation where appropriate.

The development will not have a significant impact on agricultural activities in the area and poses no threat to food security. In terms of agricultural sensitivity, the development should thus be allowed to proceed as the impact is low before and after mitigation.

The No Go alternative has no impact.

f) Loss of Biodiversity

Experienced as: Deterioration of natural environment

The historical composition of the Project Area of Influence (PAOI) included Swartland Shale Renosterveld, Swartland Alluvium Fynbos, and Swartland Granite Renosterveld, each facing distinct conservation challenges. However, no intact remnants of these vegetation types were observed within the PAOI.

Consequently, the habitat conditions range from moderately degraded watercourses with some restoration potential to highly degraded areas with low restoration potential and transformed habitats with no restoration potential.

According to the *Terrestrial Biodiversity Assessment, Dehoop housing Substation, 2023* The impact significance for the proposed development, leading to terrestrial habitat loss, is deemed to be low negative. The development directly affects Critical Biodiversity Areas (CBA1: Aquatic, CBA1: Terrestrial, CBA2: Terrestrial) and Ecological Support Areas (ESA1: Aquatic, ESA2: Watercourse) outlined in the Western Cape Biodiversity Spatial Plan. While crucial for biodiversity maintenance, the actual impact is limited to a relatively small portion of the Diep River degraded watercourse, resulting in a defined medium negative significance.

The direct Impacts of the 132kV power line are thus:

- Loss of highly degraded and transformed habitat.
- Loss of degraded watercourse habitat.

During the operational phase the impacts are:

- Continued encroachment of disturbed areas by Invasive Alien Plants (IAPs).

A summary of the impact follows in the table below.

Table 29: Assessment of impact of the loss of Biodiversity: Operational Phase

Impact	Loss of biodiversity add to deterioration of natural environment (terrestrial and aquatic vegetation).			
Nature of Impact	Increased degrading and transformation of biodiversity and alien vegetation establish.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low, negative	-1	No impact	0
Degree of confidence (E)	Moderate	2	No impact	0
Level of significance (AxBxD+E)xC	Low, Negative	-20	No impact	0
Level of significance after mitigation	Probability: Unlikely: 1 Significance: Low, Negative	-10	No mitigation	
Mitigation measures: • Vegetation Clearing: Restrict clearing to the proposed development footprint to the footprint itself, ensuring minimal disturbance to existing and surrounding habitats. • Erosion Control: Implement erosion control measures to prevent soil erosion and habitat degradation. • Noise and Vibration Control: Use construction methods that minimize noise and vibrations to reduce disturbance to wildlife. • Invasive Species Control: Manage and control invasive species that may have been introduced during construction. • Utilise existing roads and access points to gain entry to the sites.				

- Continue and enhance efforts to control and manage invasive alien plant species in the areas surrounding the impacted area.
- Vegetation Management: Restrict clearing to the proposed development footprint, ensuring minimal disturbance to existing habitats.
- Habitat Restoration: Implement targeted restoration efforts in moderately degraded watercourses to enhance biodiversity.
- Invasive Species Control: manage and control Invasive Alien Plants (IAPs) during the operational phase to prevent further encroachment. Continuous monitoring and prompt intervention are essential.

The proposed powerline will have a low impact on the biodiversity of the PAOI and the impact stays low after mitigation.

The No Go alternative has no impact.

g) Deterioration of ecological infrastructure (water course)

Experienced as: Decline in fresh water quality and volumes

The power line will cross the Diep River as well as several drainage lines. The Diep River and its drainage lines are already impacted, with many major impacts from agriculture, urban and industrial development and roads, bridges and railway lines. The Diep River already lost much of its ecological functioning.

A high voltage power line, its construction and operation, its pylons and overhead cables, are essentially low-impact activities. It is not expected that the proposed power line would measurably add to the already existing impacts.

According to the *Freshwater report for the construction of a high voltage power line from the national power grid to the De Hoop substation, Malmesbury, October 2023,* possible impacts are:

- Flow modification: The pylons must be at least 32m away from the riverbanks. Because of the low-impact nature of the construction, the pylons are unlikely to measurably alter a large flow, as the riverbanks overflow during a large flood. Pylons have to be constructed out of the flood danger area.
- Water quality modification: The pylons and overhead cables are not going to have any effect on the water quality regime of the Diep River at all. During the construction phase, remnants of concrete and rubble may end up in the river, but not if proper mitigating measures are being taken. Concrete must be mixed off site and trucked in, as is common practice at such sites.
- Sediment load modification: There is a possibility of sand and mud washing into the river during the construction phase. Soil will be disturbed that can end up in the river along with stormwater during rainfall events. If the pylons are placed away far enough from the river, the likelihood of this happening is remote.

The construction and the maintenance of the proposed high voltage cable are low impact actions, with no activity going on in the riverbed or on its riparian zone. If kept far enough out of the river, the impacts would be negligible.

A summary of the impact follows in the table below.

Table 30: Assessment of impact of the loss of Fresh water and quality: Operational Phase

Impact	Deterioration of ecological infrastructure of the Diep River.			
Nature of Impact	Decline fresh water quality and volumes.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Medium, negative	-2	No impact	0
Degree of confidence (E)	Moderate	2	No impact	0
Level of significance (AxBxD+E)xC	Medium, Negative	-44	No impact	0
Level of significance after mitigation	Intensity: -1 Significance: Low, Negative	-20	No mitigation	
The following mitigation measures is recommended for the proposed development: • Proper drainage infrastructure around access and maintenance roads to prohibit preferential flow paths. • Immediate stabilisation and rehabilitation of disturbed areas during the construction phase as storm water can wash sand and mud into small wetlands, trenches and streams. • Remove and control invasive vegetation on-route as an ongoing standard operating procedure.				

The proposed powerline has limited impact on the ecological infrastructure and it is rated as medium negative before mitigation and low negative after mitigation.

The No-Go alternative has no impact.

h) Property values decrease (Updated October 2024)

Experienced as: Anticipate lower sales prices and perceived long term health issues.

Secondary research highlight that land owners are of opinion that the proposed change of land use may negatively impact on property values as:

- Security and safety will be compromised.
- Theft and theft of livestock will increase.
- Fire and veld fire potential may likely increase.
- Sense of place will be lost.
- Long term health may decrease.

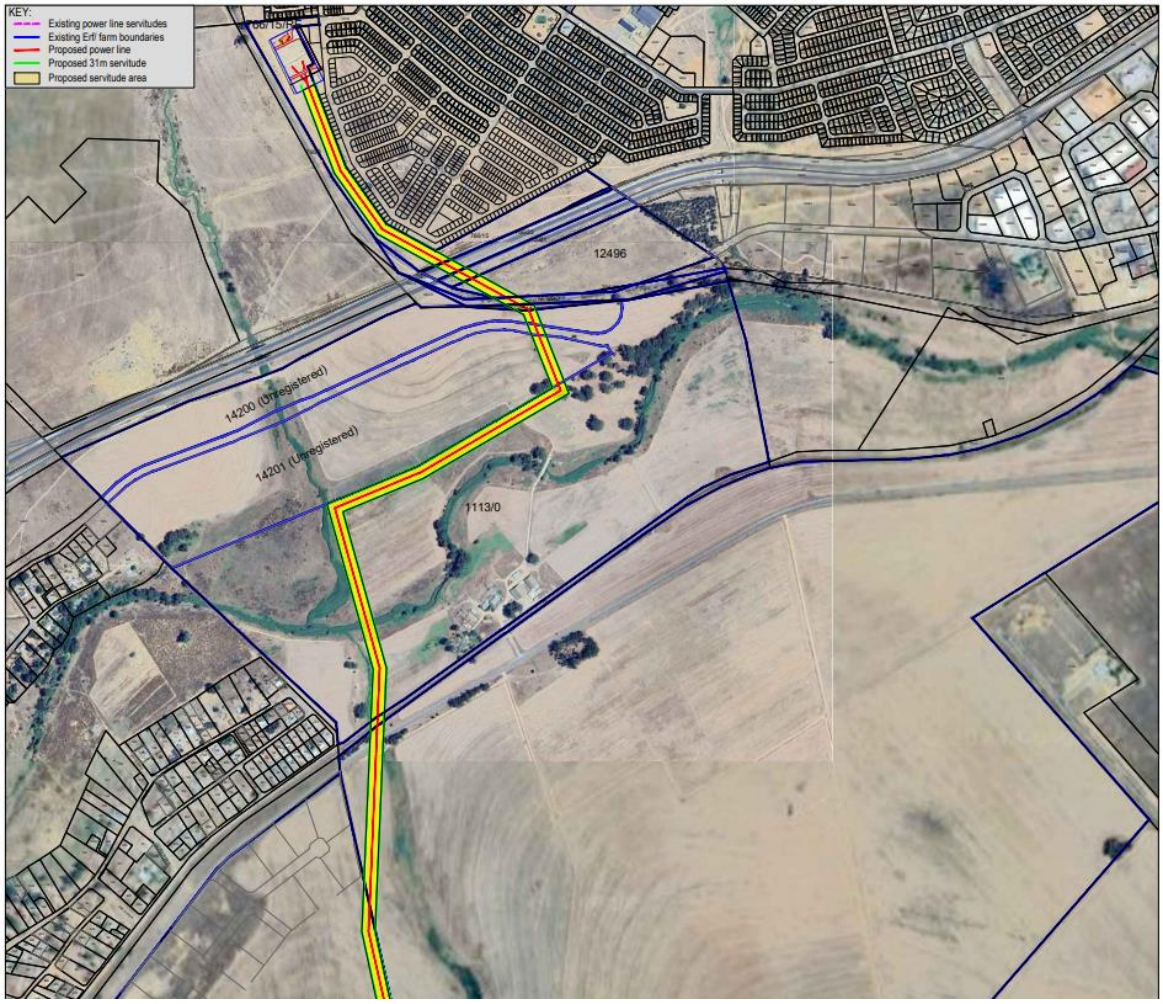
Mixed research results are available about the impact of powerlines on property values. Most conclusive directives are:

- Property value risks associated with transmission lines and where they occur are highly case specific and variable. In general they tend to be higher in residential areas.
- Risks are greater in rural areas nearby residences or when altering views dominated by natural features with clear aesthetic value.
- Risks tend to dissipate at distances in excess of 100 – 200 m from transmission lines.

The statutory servitude widths, ranging between 15m and 80m accompanying powerlines of varying capacity in South Africa, provide for safety and health impacts (Standard for the Development of Power Lines and Substations within Identified Geographical area, 2021). The servitude width of a 132KV submission line is 16,5m from the centre line.

The assessment to follow was informed by reviews of empirical studies on the effects of powerlines on property values. The studies range from survey-based research that provides important context to regression analyses of sales data to less formal appraisal-based sales analyses. The surveys of market participants and real estate agents found evidence of concern and at least in one survey, an assumption that such concern would impact property values. Others noted the unattractiveness of the transmission lines and structures. However, most of the regression-based sales price analyses found little or no effects on price. What effects that were found tended to dissipate with time and distance. No effects were found by price analyses based on less formal paired sales and other techniques (1)Jackson, T.O. & Pitts, J; 2) Elliott, P & Wadley, D; 3) xx).

The preferred route as per the included figure, is assessed.



The following properties are impacted by the proposed powerline.

- Abbotsdale, the residential area on its north-eastern boundary, and 100m further away from the transmission line.

- The farm yard of Farm 1113, and more than 100m further away from the transmission line.
- Farm 373, does not have a farm yard.
- Saamstaan extension, a future subsidized residential development

The assessment focus on the developed north -eastern residential precinct of Abbtosdale. As recommended by literature reviews, each case has to be considered on a case by case basis. The properties earmarked for future development i.e. the farm yards and subsidized housing development are not assessed as in the case of:

- Farm Yard 1113, the powerline is more than 100 away.
- a future farm yard on Farm 373, there is sufficient land to locate the farm yard further than the servitude width away from the powerline.
- future subsidized residential development, consideration of future price and within this specific price range appears to be informed by different considerations than price in established non-subsidized residential areas. Security of serviced tenure and safety are considerations that rates the highest for proposed subsidized residential development.

A summary of the impact follows in the table below.

Table 31: Property Values: Operational Phase

Impact	**Property values decrease**			
Nature of Impact	Impacts occurring during all phases: The presence of powerlines may negatively impact on property values in Abbotsdale north-east as: - Security and safety may be compromised. - Veld fire potential may likely increase. - Sense of place may be lost.			
ALTERNATIVES	**Preferred**		**All**	
Phases	**Operations**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low, negative	-1	No impact	0
Degree of confidence (E)	Moderate	2	No impact	0
Level of significance before Mitigation (AxBxD+E)xC	Moderate, Negative	-20	No impact	0
Level of significance after Mitigation	Probable: Unlikely (1):	-10		
Mitigation measures: - As the transmission line was located a 100m away from existing residential property in the case of Abbotsdale north-east, no further mitigation is required.				

The impact on existing residential properties was minimized and no further mitigation was required.

The No Go Alternative has no impact.

3.2.3 Indirect and Positive Impacts during the Operational Phase

i) Economic growth and increased SMME participation

Experienced as: Energy as a resource, is accessible to operate business or industry and increased economic participation by individual small business owners.

The availability of energy (electricity) and access to energy cause business confidence to invest in business and industry. The same applies to small businesses that gain confidence to establish and to operate. Therefore, the local economy in Malmesbury and its immediate surrounding will grow and benefit the community in the long term.

A summary of the impact follows in the table below.

Table 32: Assessment of impact of enhancing small businesses: Operational Phase

Impact	**Economic growth and increased economic participation by individual SMMEs.**			
Nature of Impact	Increased number of businesses, industries operated by investors and small businesses operated by locals increase.			
ALTERNATIVES	**Preferred Local**		**No Go**	
Extent of impact (A)	Local	4	No impact	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Low, positive	1	No impact	0
Degree of confidence (E)	Low	1	No impact	0
Level of significance (AxBxD+E)xC	Low, Positive	26	No impact	0
Level of significance after Mitigation	Probability: 3, Highly Probable: Low, Positive	39	No mitigation	
Mitigation measures: • Offer rebates to investors to establish businesses and industry. • Promote joint ventures between small business (owned by previous disadvantaged persons) and more established businesses. • Implement formal small business training and mentoring programmes. • Provide urban spaces to conduct business. • Establish a mechanism to enable investment into small businesses.				

An increase in businesses, industry and small businesses is of low significance before and after mitigation. Economic growth will have a significant impact on their families.

The No Go alternative has no impact.

3.2.4 Positive Residual Impacts during the Operational Phase

j) Employment equity of vulnerable groups:

Experienced as: Youth and Women find employment temporarily.

Affording youth and women the opportunity to join the workforce, will improve the social well-being of these vulnerable groups. Given the high youth unemployment rate of 17.9% in relation to the unemployment rate of 10.4% (in 2017), it is likely that fewer young people will get employed. As the young people may not have the required skills, they have little to aspire to and employment is limited to entrance level jobs should they get employed. Of the jobs generated per annum, 60% jobs should be earmarked to be taken up by people younger than 35 years of age and half of these jobs are earmarked to be taken up by women.

Access to electricity (energy) support families in their households and more so women.

A summary of the impact follows in the table below.

Table 33: Assessment of impact of employment of vulnerable groups: Operational Phases

Impact	**Youth and women's social well-being improves, as they find employment and as households have access to energy.**			
Nature of Impact	Young people may lack the skills required and may be excluded from the labour component to be employed. Should young people be employed, it may assist to break the cycle of hopelessness. The self- image of the youth improves as well as the way the community views them. Women may be viewed as not suitable for the work opportunities available and may be excluded from the labour component to be employed. Should women be supported to become skilled and be employed, the self-image of the women and the way the community views them improves. The employment opportunities will enable the families of those employed to benefit from their employment. Self-esteem of young women/ youth increases. Households having access electricity (energy) improve their standard of living.			
ALTERNATIVES	**Preferred**		**No Go**	
Extent of impact (A)	Local	4	Status Quo remains	0
Duration of Impact (B)	Long term	3	No impact	0
Probability of occurrence (C)	Probable	2	No impact	0
Intensity of Impact (D)	Medium positive	2	No impact	0
Degree of confidence (E)	Medium	2	No impact	0
Level of significance (AxBxD+E)xC	Medium, Positive	52	Status Quo remains	0
Level of significance after Mitigation	Highly probable: 3 Medium, Positive	78	Status Quo Remain	
Mitigation measures: • Municipality facilitates that youth and women gain equal access to training and education opportunities: Skills development and improvement of educational qualifications should be a project component and youth and women should gain equal access to training and education opportunities. • Reserve 60% of jobs for youth and 50% for women.				

- Pay youth and women equal and market related prices for the job.
- Municipality to facilitate access to employment for youth and women.

The opportunity afforded to youth and women is positive. Although the significance of the impact is medium, the change in social wellbeing of youth and women will change the social well-being of their families. The impact is viewed as significantly positive, as it may assist in breaking the cycle of hopelessness within poorer communities. The impact is rated as medium positive before and after mitigation.

The No Go alternative has no impact.

3.2.5 Negative Residual Impacts during the Operational Phase

k) Perceived decrease of health

There is a perception amongst some members of the population, that continuous exposure to powerlines may impact on long term health.

As this perception is not quantifiable and limited research exists, it is not assessed.

3.2.6. Summary of Impacts during the Operational Phase

Overall, the operational phase brings about some direct and positive impacts, direct and negative impacts and indirect positive and negative impacts.

Direct and Positive Impacts during the Operational Phase are tabulated below:

Table 34: A summary of direct and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
A	Increased employment opportunities, skills and income.	Economic	Working age people find part-time employment and contribute to household income	Individual & families	Low, Positive	Low, Positive
B	Economic growth & increased local sales and GGP	Economic	Increased expenditure enhance local sales and economy (increased income and spending power).	Community	Low, Positive	Low, Positive
C	Enhanced supply of bulk services	Economic	Electricity generated gets distributed and more households have access to electricity.	Community	High, Positive	No mitigation

Direct and Negative Impacts during the Operational Phase are tabulated below:

Table 35: A summary of direct and negative impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
D	Changed sense of place	Social	The total powerline will not be visible from a specific point, but will be visible from areas of interest.	Individuals & Community	Medium, Negative	Low, Negative
E	Loss of Agricultural Land (food security potential)	Economic	High productive agricultural land is avoided and foundations are placed on fallow land. No jobs will be lost	Community members	Low, Negative	No mitigation
F	Loss of biodiversity	Natural	Degrading and transformation of biodiversity increase and alien vegetation establish.	Community member	Low, Negative	Low, Negative
G	Deterioration of ecological infrastructure (water courses).	Natural	Decline in fresh water quality and volumes.	Community members	Medium, Negative	Low, Negative
H	Property values decrease	Economic	Anticipated lower sales prices and long term health issues.	Families	Medium, Negative	Low, Negative

Indirect and Positive Impacts during the Operational Phase are tabulated below:

Table 36: A summary of indirect and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
I	Economic growth and increased SMME participation Economic Injection because of bulk service	Economic	Energy as a resource, is accessible to operate business or industry and increased economic participation by individual small business owners	Community	Low, Positive	Low, Positive

Residual and Positive Impacts during the Operational Phase are tabulated below:

Table 37: A summary of residual and positive impacts, Operational Phase

	Impact (s)	*Environment*	*Experienced as*	*Population Unit*	*Rating*	*Mitigated*
J	Employment equity of vulnerable groups	Social	Women and Youth find part-time employment and having electricity at home improve their social-well-being.	Community and Individuals	Medium, Positive	Medium, Positive

Overall, the impacts during the Operational Phase are:

Positive and

Direct are:

- Increased part-time employment is generated.
- Increased GDP results from the contributions by the wage and maintenance bill and selling electricity.
- Increased access to bulk electricity.

Indirect are:

- Economic growth and increased business, industry and SMME participation as energy as resources is accessible to conduct business.

Residual are:

- Employment equity of vulnerable groups improves social standing within the community.

Negative and Direct are:

- A slightly changed living environment as the total powerline will not be visible from a specific point of view, but be visible form areas of interest.
- Minimal loss of agricultural potential land and a decline in food security potential.
- Minimal loss of biodiversity and deterioration of natural environment.
- Minimal deterioration of ecological infrastructure and decline in fresh water quality and volumes.
- Perceived decrease in property values.

3.3 Decommissioning Phase

The decommissioning phase will last for 4 - 6 months whilst it is estimated that slightly fewer workers than the number of construction workers, will be employed to demolish the plant. The truckloads of the demolished material to be transported have yet to be determined. The impacts of the decommissioning phase will be similar than that of the construction phase and were not assessed.

a) Renewal or Decommissioning of Powerline

The proposed powerline has an average life span of 30 years, whereafter the line will be replaced or demolished. The replacement will be a new project and will not be assessed as such.

3.3.1. Summary of impacts during the Decommissioning Phase

Overall, the impacts during the decommissioning phase that are:

Positive and Direct are:

- The creation of temporary job opportunities and x jobs with a wage bill for 1 -2 months, and 80% benefitting the locals, providing local people employment opportunities and contributing <1% to the Swartland GDP.
- The return of the sense of place after decommissioning as the area return to agricultural land.

Negative and

Direct are:

- Within limits, though negative, increased use of social amenities and services, decreased road safety and increased noise and dust.

Residual are:

- Diversification of culture because of the influx of people to find work or to conduct business (entrepreneurs).

3.4 Cumulative Impacts

The cumulative impacts associated with the proposed solar energy facility are:

a) Job creation and improved income drive economic growth (and growth in SMMEs and self-esteem).
   - Unemployment levels decrease and income and spending power increase;
   - Investors establish businesses and industry and entrepreneurs render services, all benefitting locals.

   The impact are further enhanced by mitigation measures that keep the benefits of the proposed powerline local, for example giving preference to employ locals and use the services of local service providers.

b) Bulk infrastructure/ alternative energy generation contributes to the national goal of access to services.

3.5 Summary of impacts of the No Go Alternative

The No-Go Alternative would lose an opportunity for Swartland to support access to electricity /energy. No access to basic electricity hampers social well-being at home and economic growth.

Furthermore, the No-Go Alternative will also result in

(a) a loss of employment opportunities generated during construction and operations.
(b) No access to bulk electricity and a decrease in social-well being.
(c) Slowed economic growth.

This alternative represents a negative social cost particularly for the local community. The No Go alternative cannot be considered as the proposed development is viewed as a strategic infrastructure project.

3.6 Recommendation

The proposed powerline is deemed acceptable as it is:
Generating 64 temporary employment opportunities equal to 1.5 year and some part-time jobs for thirty years benefit the locals.

Enhancing access to bulk energy supply during operations.

Mitigation measures to be included into the EMPR are summarized in Section 4 of the Assessment.

The proposed powerline as a whole should be authorized.

Section 4. Management guidelines to address socio-economic impacts

In order to ensure that the disadvantages are managed to maximize positive impacts, specific management strategies and mechanisms need to become part of the proposed development. These strategies and mechanisms need to be implemented through development conditions and are as follows:

a) Preferential procurement of goods, services and labour,
b) Skills transfer
c) Security control
d) Safety Management
e) Traffic Regulation
f) Dust & noise control
g) Enhancing the economy
h) Maintaining Sense of place
i) Loss of ecological Infrastructure (Fresh water and Biodiversity)
j) Loss of Agricultural land
k) Loss of Biodiversity
l) Loss of property Values

To implement the strategies and mechanisms, the development should enable the administration thereof. The administration of the strategies and mechanisms should be in partnership with the local authority.

The recommendations follow below.

4.1 Preferential procurement of goods, services and labour

Construction and Operational

- Contractors, employing or seeking to employ local HDIs who are suitably qualified, should get preference.
- The municipality, local community and community organizations should be informed of the project and potential job opportunities by the developer.
- Developer and contractor to act as reference for locals employed.
- Developer and contractor to liaise with existing or future projects to enhance employment opportunities for locals.
- Reserve a number of jobs for youth (60%) and women (50%).
- Facilitate mechanisms to enable youth and women to access employment.
- Pay men, youth and women doing the same job, equally.
- Ensure that youth and women gain equal access to training and education opportunities than men do.

Construction

- A database of locals including small businesses owned and run by HDIs that qualify as service providers (construction companies, catering companies, waste collection companies, site cleaning companies etc.) should be compiled by the contractor prior to the commencement of the project. These firms should be invited to render services where required.

- Establish a Monitoring Committee for the construction phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the powerline is implemented and completed and that any problems that arise and is associated with this phase, is addressed.
- Reserve a number of jobs (80%) for local labour (un- & semi-skilled labour).
- If not suitably qualified, make an effort to transfer skills on the job. (From Construction Phase Decreased Community stability and safety).

4.2 Skills transfer and Learning Opportunities

Construction

- Reserve 80% of jobs for local labour.
- Require the contractor to enhance formal and informal skills transfer: Such a programme should be offered in liaison with an accredited Further Education and Training College like the West Coast College or University of Technology.
- Require contractor to facilitate that youth gain equal access to training and education opportunities.
- Municipality facilitates that youth and women gain equal access to training and education opportunities: Skills development and improvement of educational qualifications should be a project component and youth and women should gain equal access to training and education opportunities.

Operational

- Reserve 80% of jobs for locals.
- Facilitate mechanisms to enable locals to access training opportunities offered by the proposed powerline.
- Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).
- Facilitate mechanisms to enable local young people to access the educational opportunities to attend courses in scarce subjects.
- Municipality facilitates that youth and women gain equal access to training and education opportunities: Skills development and improvement of educational qualifications should be a project component and youth and women should gain equal access to training and education opportunities.

4.3 Security Control

Construction

- Regularly alternated twenty four hour security to guard the development.
- Documentation of all movement and vehicles entering and leaving the premises.
- Regular searching of all vehicles entering and leaving the premises.
- No persons not concerned with the development to enter on the premises.
- Limit access points to one point.

4.4 Safety Management

Construction and Demolition

- Adhere to international construction health and safety standards and precaution measures.
- To provide health and social training for the project team and in the community which include HIV/AIDs and Covid awareness training.

4.5 Traffic Regulation

Construction

- Upgrade road signs to address the movement conflict.
- Road signs for protecting pedestrians crossing and accessing public roads should be displayed.
- Provide transport to decrease pedestrian traffic.
- Restrict heavy vehicles to specific hours.
- Erect road signs signaling times when heavy vehicles will make use of the road or rads will be closed.
- Adhere to national traffic safety standards and precaution measures.
- Provide traffic safety awareness amongst the project team and the community.

4.6 Dust and Noise control

Construction & Demolition

- Dust creation must be controlled as per construction and demolition management and control code.
- Noise creation should be controlled as per construction and demolition management and control code.
- Appoint an Environmental Control Officer to supervise construction and building and demolition.
- Adhere to the Environmental Management Plan (EMPr) for the Construction and Decommissioning Phase.
- All workers and management must undergo an induction course.
- Enforce strict operating hours for heavy vehicles and construction activities on site to reduce noise and dust impacts on adjacent landowners.
- Implementation dust suppression measures.
- Access must be on recognized routes.
- Litter and littering must be strictly controlled.
- All construction waste and building rubble and demolition waste and rubble must be removed off site.

4.7 Enhancing the economy

Construction and Operational

- Contractors should be directed by tender criteria to purchase locally and to make use of local service providers.
- Spending money locally purchasing from locals and South African should benefit employees. The proposed development should leverage discount in the local economy of the municipal area and province and employees should be made aware of it.
- Small business should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previous disadvantaged persons should be promoted.
- The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.

Operational

- The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.
- Implement formal small business training and mentoring programmes.
- Provide urban space to conduct business.

- Establish a mechanism to enable investment into small businesses.
- Business should be directed to purchase locally and to make use of local service providers.
- Spending money locally purchasing from locals and South African should benefit merchants. Any discount leveraged in the local economy of the municipal area should benefit locals.
- Offer rebates to investors to establish businesses and industry.

4.8 Maintenance of Sense of place:

Construction phase

- Pre-construction keep disturbed areas to a minimum. No clearing of land to take place outside the demarcated footprint. / Keep disturbed areas to a minimum.
- At the substations, any outdoor lighting must be strictly controlled so as to prevent light pollution.
- All lighting must be installed at downward angles.
- Use only minimum wattage light fixtures.
- Clear all alien vegetation.
- Pilons and similar structures must be in keeping with regional planning policy documents, especially the principles of critical regionalism, namely sense of place, sense of history, sense of nature, sense of craft and sense of limits.
- Utilize existing roads and tracks to the maximum extent possible.
- Provide pedestrian walkways where desire lines are identified.
- Visual management and maintenance: site tidiness should be maintained at all times including during construction.

Operational

- Keep disturbed areas to a minimum.
- Utilize existing roads and tracks to the maximum extent possible.

4.9 Loss of ecological infrastructure (freshwater and biodiversity)

All phases

- Proper drainage infrastructure around access and maintenance roads to prohibit preferential flow paths.
- Immediate stabilisation and rehabilitation of disturbed areas during the construction phase as storm water can wash sand and mud into small wetlands, trenches and streams.
- Remove and control invasive vegetation on-route as an ongoing standard operating procedure.

4.10 Loss of Agricultural land and activities

Operational

- Implement an effective system of storm water run-off control at any point where run-off water might accumulate. The system must effectively collect and safely disseminate any run-off water from all accumulation points and it must prevent any potential down slope erosion.
- Any occurrences of erosion must be attended to immediately and the integrity of the erosion control system at that point must be amended to prevent further erosion from occurring there.
- Maintain where possible all vegetation cover and facilitate re-vegetation of denuded areas throughout the site, to stabilize disturbed soil against erosion, and to reduce dust formation.

- If an activity will mechanically disturb the soil below surface in any way, then any available topsoil should first be stripped from the entire surface to be disturbed and stockpiled for re-spreading during rehabilitation. During rehabilitation, the stockpiled topsoil must be evenly spread over the entire disturbed surface, and then stabilized by facilitating vegetation cover.
- Enhance on-site conservation where appropriate.
- Reliable and good fencing is used during construction.
- Pylon footprints inside agricultural fields is kept to a minimum.

4.11 Loss of Biodiversity

Operational

- Vegetation Clearing: Restrict clearing to the proposed development footprint to the footprint itself, ensuring minimal disturbance to existing and surrounding habitats.
- Erosion Control: Implement erosion control measures to prevent soil erosion and habitat degradation.
- Noise and Vibration Control: Use construction methods that minimize noise and vibrations to reduce disturbance to wildlife.
- Invasive Species Control: Manage and control invasive species that may have been introduced during construction.
- Utilise existing roads and access points to gain entry to the sites.
- Continue and enhance efforts to control and manage invasive alien plant species in the areas surrounding the impacted area.
- Vegetation Management: Restrict clearing to the proposed development footprint, ensuring minimal disturbance to existing habitats.
- Habitat Restoration: Implement targeted restoration efforts in moderately degraded watercourses to enhance biodiversity.
- Invasive Species Control: manage and control Invasive Alien Plants (IAPs) during the operational phase to prevent further encroachment. Continuous monitoring and prompt intervention are essential.

4.12 Loss of property Values

Operational

Mitigation measures:

- If technically suitable, the transmission line to be located a 100m away from the existing residential area of Abbotsdale north-east.

4.13 Conclusion

The above management guidelines have been presented in terms of the specific losses that might result due to the proposed Powerline and related infrastructure. These guidelines aim to minimize losses to enhance the gains for the immediate and surrounding community. The main losses of sense of place and biodiversity are reduced after mitigation and enhanced by the social and economic gains, i.e. reliable electricity, jobs and improved income, the local community of Malmesbury and the inhabitants of Swartland Municipality will gain.

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Addendum A

Anelia Coetzee has over 10 years of experience in community development and 20 years in rural and development planning. She holds a Master's Degree in Urban and Regional Planning (UF: Urban & Regional Planning: 2009) and a Master's Degree in Business Administration (UCT: Commerce, 2005). A list of socio-economic studies completed follows;

- *Prepared and Reviewed (R) Socio-Economic Impact Assessments for*
    - *Residential and mixed-use developments*
      2009: Besterskraal residential development; 2010: De Hoop mixed used Development; Malmesbury; 2014: Anura (Klapmuts) mixed use development; 2021: Swartland Junction, Malmesbury; 2024: Yzerfontein Heights
    - *Solar and alternative energy facilities*
      2011: Kenhardt and Keimoes; Danielskuil, Disselsfontein; 2012: Leeu Gamka and Van Rhynsdorp in the Western Cape; 2014: Springbok and Carolesberg; 2017: Danielskuil (R), Disselsfontein (R), Keimoes (R), Kakamas (R), Mount Roper (R) & Whitebank (R); 2018: Kenhardt (R) and Keimoes (R), Northern Cape; 2021: Langebaan (R), Darling (East), 2021; 2022: Doring Rivier, Harvard (Free State); 2023: Klapmuts, Van Rhynsdorp; 2024: Malmesbury, Darling (West Entrance)
    - *Subsidized human settlement projects*
      2014 & 2017: McGregor subsidized housing development; 2015: La Motte subsidized housing development; 2017: Struisbaai Subsidized housing development; 2024: Middelpos, Saldanha Subsidized housing development;
    - *Industrial and Economic development*
      2016: Upgrading of Amawandle Pelagic Fishmeal facility, Laaiplek; 2018: N7 Dual Petroport; 2021: Abbotsdale Industrial Park, Delico Abbatoir, Riebeek-Wes; 2022: Truckstop, Langebaan; 2022: Jacobuskraal, Filling Station
    - *Cemeteries*
      2019: Louwsbos Memorial Park, Stellenbosch
    - *Mining*
      2020: Heidelberg Bentonite Mine
- *Conducted public participation for Hakskeenpan Events Facility, Philandersbron, Northern Cape.*
- *Developed an economic perspective for a Swartland Regional Business Node (2010).*
- *Developed Human Settlement Strategies and Plans for Oudtshoorn Municipality, Matzikama Municipal Area, Cederberg Municipal Area (2009-2012), Cederberg and Swartland Municipal Area (2012-2017), Swartland (2017 – 2022), Stellenbosch (2022 – 2027).*
- *Identified and developed Spatial Considerations for proposed Hydro Electricity site in Matzikama, Witzenberg and Breede River Municipalities for ESKOM. (2009).*
- *Co-developed a model to determine how to maximize the triple bottom line (social, environmental and economic balance) in developments (2005).*

Addendum B

Assessment Measures

The assessment departs from a factual description of the nature of the impact. This description is followed by an appraisal including a description of the effect the activity has on the environment. The description should include what is being affected and how it is affected. Assessment Measures are then applied to refine the results.

Extent (A)

This assessment measures the geographical scale of the impact

Extent of the Impact		
Rating	**Definition of rating**	*Score*
Local	Extending only as far as the activity, Will be limited to the site and its immediate surroundings	*4*
Regional	Will have an impact on the region	*3*
National	Will have an impact on a national scale	*2*
International	Will have an impact across international borders	*1*

Usually, the scores are in ascending order from 1 to 4 (local to international) but given the levels of poverty and remoteness the scores for this project have been changed to a descending order of 4 to 1 (local to international).

Duration (B)

This assessment measure indicates the lifetime of the impact.

Duration of the Impact		
Rating	***Definition of rating***	***Score***
Short term	***0-5 years***	***1***
Medium term	***e.g. 5-15 years***	***2***
Long term	**The impact will cease after the operational life of the activity, either because of natural process or by human intervention**	***3***
Permanent	**Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient**	***4***

The duration of some of the impacts during construction is considered mainly short term, whilst the duration of the impacts during the operational phase is considered long term.

Intensity (C)

Here it should be established whether the impact is destructive or benign and should be indicated as:

Intensity of the Impact		
Rating	***Definition of rating***	***Score***
Low	The impact affects the environment in such a way that natural, cultural and social functions and processes are not affected	***1(±)***
Medium	The affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and	***2(±)***
High	Natural, cultural or social functions or processes are altered to the extent that it will temporarily or permanently cease.	***3(±)***

The intensity of some of the impacts of the proposed project varies. In the case of the proposed project the criteria were customize and refined to their particular study (e.g. a positive impact of "high" significance is when the project could reduce local employment by 5% or more).

Probability (D)

This should describe the likelihood of the impact actually occurring indicated as:

Probability of the Impact		
Rating	***Definition of rating***	***Score***
Improbable	The possibility of the impact to materialize is very low either because of design or historic experience;	***1***
Probable	There is a distinct possibility that the impact will occur	***2***
Highly probable	It is most likely that the impact will occur	***3***
Definite	The impact will occur regardless of any prevention measures	***4***

Significance

The significance of impacts is expressed as a combination and synthesis of the aspects produced in terms of their nature, duration, intensity, extent and probability (likelihood).