

Gamma to Kappa Social and Economic Impact Report



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List of Acronyms

CSIR:	Council for Scientific and Industrial Research
DMA:	District Management Area
EIA:	Environmental Impact Assessment
EIR:	Environmental Impact Report
GAP:	Geographical Analysis Platform
GDP:	Gross Domestic Product
GDPR	Gross Domestic Product per Region
GGP:	Gross Geographic Product
GVA:	Gross Value Added
HSRC:	Human Sciences Research Council
IPAP II:	Industrial Policy Action Plan II
IPP:	Independent Power Producers
JIPSA:	Joint Initiative on Priority Skills Acquisition
NCPGDS:	Northern Cape Provincial Growth and Development Strategy
NEPAD:	New Partnership for African Development
SDGs	Sustainable Development Goals
UNDP:	United Nations Development Programme

1. INTRODUCTION

SSI Engineers and Environmental Consultants, now trading as Royal HaskoningDHV, were appointed by Nzumbululo Holdings to undertake an update of the Social Impact Assessment for Eskom's Kappa to Gamma power line project. This report constitutes RHDHV's desktop research findings with respect to key socio-economic strengths and weaknesses at national, provincial, district, local municipal and ward level that are pertinent to the proposed development. The data presented in this report is a consolidation of information obtained from numerous sources. Primary data sources are as follows:

- Statistics South Africa. Census 2011 statistical releases.
- Millennium Development Goals Country Report: Republic of South Africa, 2010
- United Nations. 2015. Sustainable Development Goals.
- South African Development Indicators. 2010;
- South Africa's 12 Government Outcomes. 2010;
- Western Cape Regional Development Profile: City of Cape Town Working Paper. 2011;
- Western Cape Provincial Economic Review and Outlook. 2012;
- Western Cape Strategic Plan. 2014-2019; and
- Integrated Development Plans for all affected District and Local Municipalities. 2012-2017.

According to the Paleontological Impact Assessment for the proposed development (Almond, 2010), in its entirety, the Kappa to Gamma project entails a proposed new 765kV transmission line which traverses some 550km between the existing Omega Substation east of Koeberg (Western Cape) and the planned new Gamma Substation near Victoria West (close to the border of the Northern and Western Cape, see Figure 1). For most of the central and eastern sections the new power line will follow an existing line from the Ceres Karoo through to the Victoria West area (Almond, 2010).

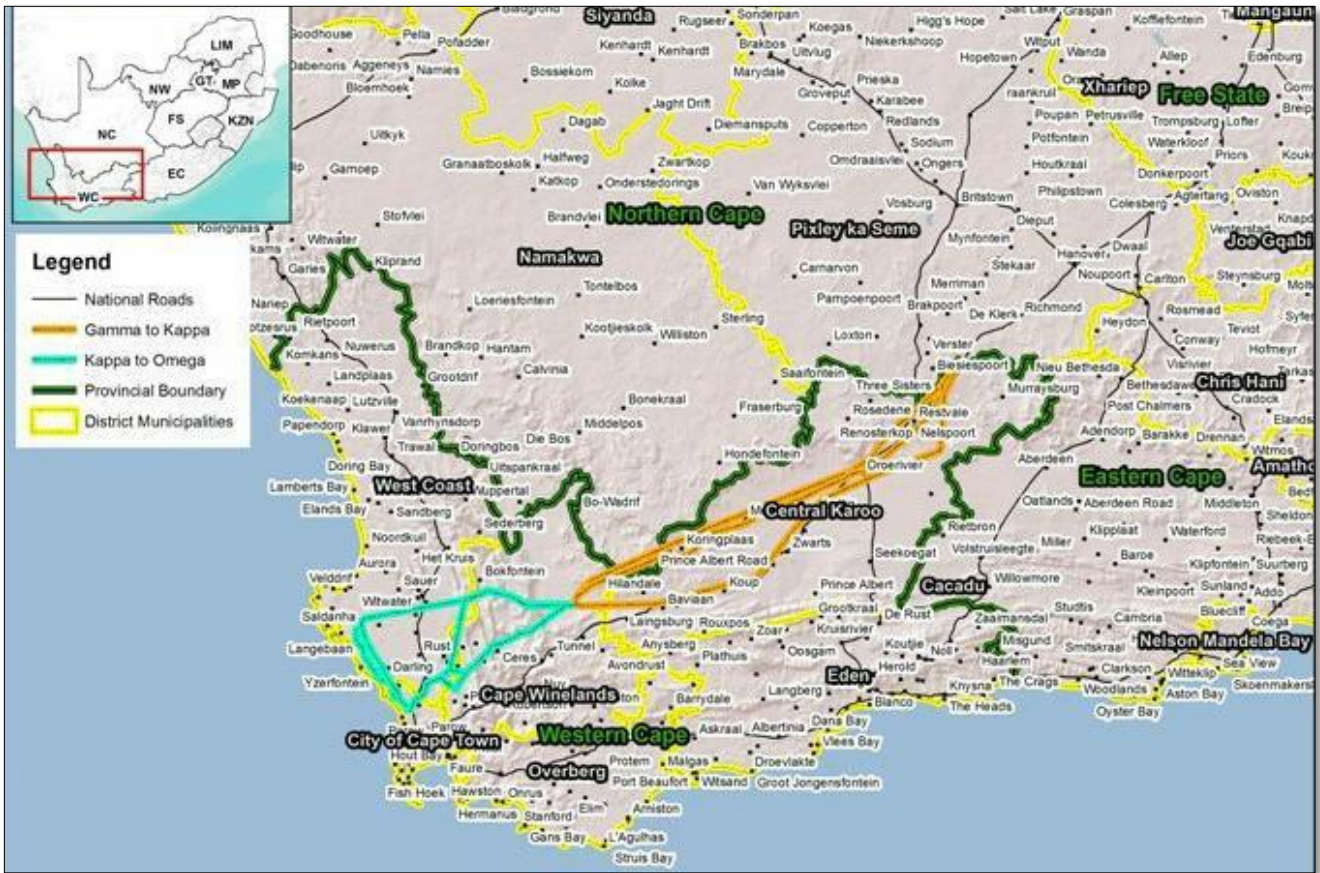


Figure 1: Proposed Kappa to Gamma transmission line route

However, the focus of this assessment is the portion of the proposed transmission line which traverses the area known as Kappa to Gamma, including a number of route alternatives (Figure 2). The Kappa to Gamma routing spans three potential options, that is, Option 1 – identified as the red line, Option 2 – identified as the green line and Option 3 – identified as the orange line.

1.1. Project Context and Background

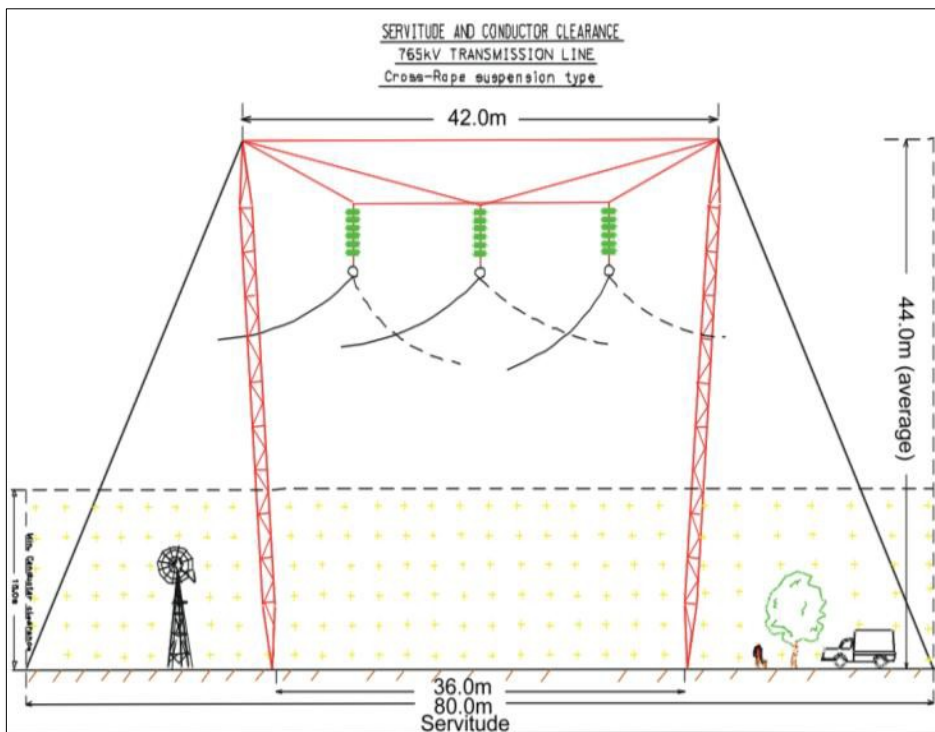
Due to the increasing pressure to provide a reliable medium and long term electricity supply to the Western Cape, Eskom Transmission has proposed the Cape Strengthening Programme to improve the reliability and capacity of the transmission network to the Western Cape (Cape Archaeological Survey and Associates, 2010). As part of the strategy to do so, Eskom Transmission has proposed to develop the Gamma-Omega line. The project components will consist of the transmission lines, pylons and ancillary infrastructure including access roads (Cape Archaeological Survey and Associates, 2010).

Cape Archaeological Survey and Associates (2010) note the following project alternatives as contained in the Environmental Impact Report (EIR):

- The “do-nothing” alternative. The EIR report concluded that with increasing economic activity and demand for electricity in the Western Cape, the regional impact of electricity failures would be significant and increasingly severe;

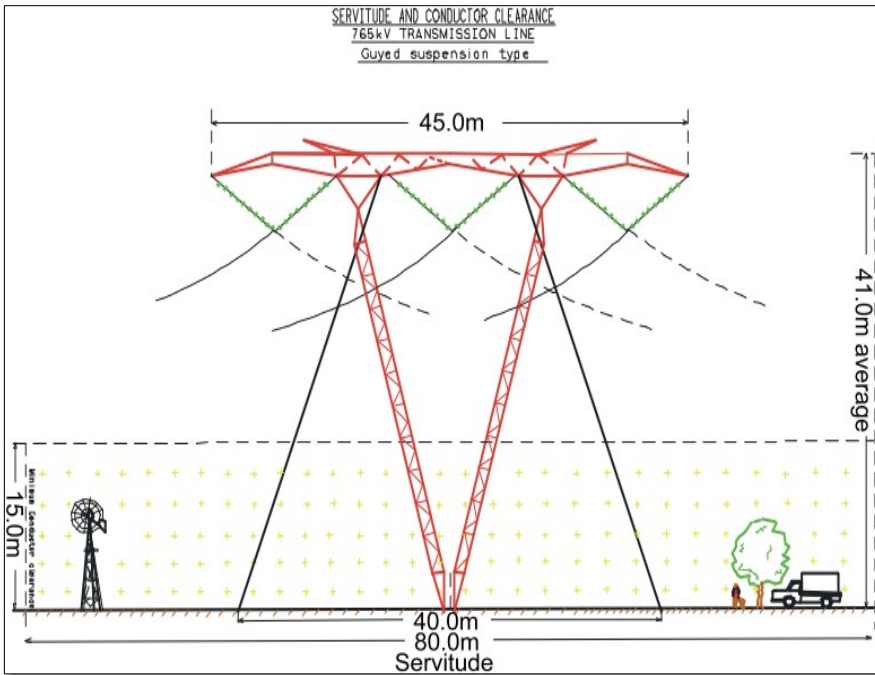
- Alternative sources of power generation. The EIR report concluded that alternative power generation initiatives need to be considered separate from transmission initiatives and were thus not included as part of the scope of work for the EIA. Part of the rationale given was there is no certainty on the future of these generation alternatives and given the lengthy planning timeline required for a project of this magnitude the EIA for the route selection needed to be undertaken;
- Design alternatives. The 765kV line is the largest in terms of capacity, having three times the capacity of the 400kV line currently used on this route. The servitude width is 80m as opposed to the 55m for the 400kV line and the height difference is in the order of 10meters. As with the 400kV transmission lines, there is always a visual impact, some areas being more sensitive than others; and
- The option of taking the transmission line underground will address this impact but there are other issues that need to be considered:
 - The cost of underground cabling is approximately 20 times more than the equivalent overhead lines; and
 - Servitude requirements are far more onerous as the servitude would effectively be sterilized for any land uses, including most agricultural applications.

Two design alternatives have been proposed for this project, the Cross Rope suspension type (Figure 3) and the Guyed Rope Suspension type (Figure 4). In more difficult terrain; when the route changes direction at a thirty degree angle, there will be the need to use self-supporting towers (Figure 5).



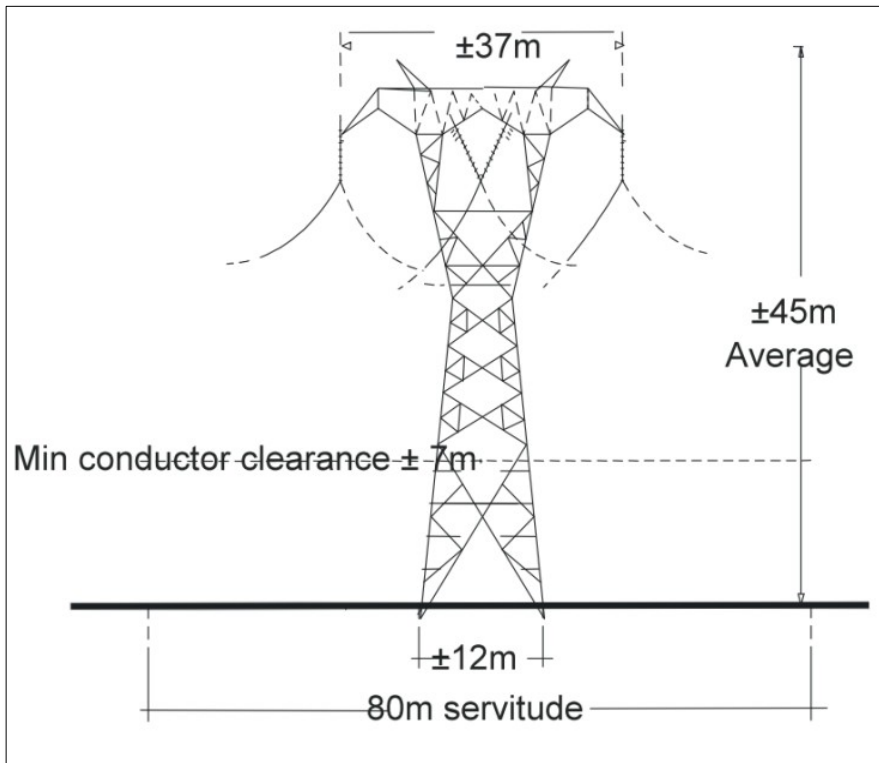
Source: Cape Archaeological Survey and Associates 2010

Figure 2: Cross rope suspension alternative



Source: Cape Archaeological Survey and Associates 2010

Figure 3: Guyed rope suspension alternative



Source: Cape Archaeological Survey and Associates 2010

Figure 4: Self-supporting tower alternative

The proposed Gamma to Kappa section of the proposed transmission line (including all route alternatives), transects four district and five local municipalities within the Western Cape Province and the Northern Cape Province (Figure 6). These are as follows:

- Cape Winelands District Municipality;
 - Witzenberg Local Municipality;
- Namakwa District Municipality;
 - Karoo Hoogland Local Municipality;
- Central Karoo District Municipality;
 - Laingsburg Local Municipality;
 - Prince Albert Local Municipality;
 - Beaufort West Local Municipality;
- Pixley ka Seme District Municipality; and
 - Ubuntu Local Municipality.



Figure 5: District and local municipalities affected by the proposed project

1.2. Report Structure

This report commences with a review and analysis of pertinent legislation and policy at national and provincial level, as well as global trends (Section 2), followed by the socio-economic baseline which is further broken down into national, provincial and regional information (Section 3). The route alternatives for the project (in terms of its geographic range) are then assessed in terms of their social and economic characteristics as well as key strengths and weaknesses at the district municipality level (Section 4). Local municipal characteristics for each route option are then analysed, with a focus on demographics, health, education, economic employment and services. Key sensitivity areas (households and/or communities) along each route are identified spatially by their proximity to the proposed route, following which ward-level social and economic data is extracted and presented for each sensitivity area. A Terms of Reference for the Social and Economic Impact Assessment is rendered in Section 5.

The results of fieldwork are included in a qualitative assessment found within Section 6. Section 7 comprises the impacts and recommended mitigation for each route alternative, with the concluding section, Section 8 highlighting the recommended route option.

2. LEGISLATION AND POLICY

2.1. The Sustainable Development Goals

The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, build on the Millennium Development Goals (MDGs), eight anti-poverty targets that the world committed to achieving by 2015. The MDGs, adopted in 2000, aimed at an array of issues that included slashing poverty, hunger, disease, gender inequality, and access to water and sanitation. Enormous progress has been made on the MDGs, showing the value of a unifying agenda underpinned by goals and targets. Despite this success, the indignity of poverty has not been ended for all.

The new SDGs, and the broader sustainability agenda, go much further than the MDGs, addressing the root causes of poverty and the universal need for development that works for all people.

The United Nations Development Programme (UNDP) Administrator, Helen Clark noted: *"This agreement marks an important milestone in putting our world on an inclusive and sustainable course. If we all work together, we have a chance of meeting citizens' aspirations for peace, prosperity, and wellbeing, and to preserve our planet."*

The Sustainable Development Goals will now finish the job of the MDGs, and ensure that no one is left behind.

The following represents the Sustainable Development Goals (SDG):

- No poverty
- Zero hunger
- Good health and well-being
- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace, justice and strong institutions
- Partnerships for the goals

2.2. South Africa's National Development Plan – Vision for 2030

In 2012, the National Cabinet adopted the National Development Plan (NDP) to serve as a blueprint for the work that is still required in order to substantially reduce poverty and inequality in South Africa by 2030. The Western Cape Government broadly endorses the thrust of the NDP. The NDP offers a long-term perspective. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal.

The only sustainable way to reduce poverty is by creating opportunities for growth and jobs. According to the plan, South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society. Partnerships are central to both the NDP's approach and to the fulfilment of the Western Cape Government's mandate. Partnerships are not confined to organisations, institutions and businesses. Every family and every citizen is an active partner in his or her own development and that of the country, and citizens must use each opportunity to become the best they can.

2.3. The Constitution of the Republic of South Africa (Act No. 108 of 1996)

The Constitution defines the role of the public in the activities of all three spheres of government, namely national, provincial and local government (Sections 59, 72, 118, 152 and 154). Section 59 of the Constitution refers to the National Assembly, Section 72 refers to the National Council of Provinces and Section 118 refers to the Provincial Legislature. These Sections state that public involvement in the legislative and other processes of the Assembly/ Council/ Legislature must be facilitated, where its business is in an open and public manner. Section 152 of the Constitution states that one of the objects of local government is to encourage the involvement of communities and community organisations in its matters; whilst Section 154 states the requirement that draft provincial and national legislation be published for public comment and feedback. Chapter 10 of the Constitution (Section 195) states that the basic values and principles governing public administration include encouraging public participation in policy-making and responding to public need.

Chapter 3 (Section 40) requires all spheres of government to adhere to the principles (Section 41) of cooperative governance by informing one another of, and consulting one another, on matters of common interest and providing effective, transparent, accountable and coherent governance for the Republic as a whole.

2.4. The United Nations Development Programme

All 17 Sustainable Development Goals are connected to UNDP's Strategic Plan focus areas: sustainable development, democratic governance and peace building, and climate and disaster resilience. SDGs Number 1 on poverty, Number 10 on inequality and Number 16 on governance are particularly central to UNDP's current work and long-term plans.

Having an integrated approach to supporting progress across the multiple goals is crucial to achieving the Sustainable Development Goals, and UNDP is uniquely placed to support that process. The United Nations Development Programme (UNDP) will support governments around the world in tackling the new agenda and taking it forward over the next 15 years. The 17 new Sustainable Development Goals, also known as the Global Goals, aim to end poverty, hunger and inequality, take action on climate change and the environment, improve access to health and education, and build strong institutions and partnerships, and more.

The SDGs build on the Millennium Development Goals (MDGs), eight anti-poverty targets that the world committed to achieving by 2015. Since the MDGs were adopted in 2000, enormous progress has been made, but more needs to be done.

The SDGs have a more ambitious agenda, seeking to eliminate rather than reduce poverty, and include more demanding targets on health, education and gender equality. They are universal, applying to all countries and all people. The agenda also includes issues that were not in the MDGs such as climate change, sustainable consumption, innovation and the importance of peace and justice for all.

2.5. Regional Level Plans, Policies and Strategies

The Western Cape Government has, through its Provincial Strategic Plan (PSP) 2014-2019, identified five Provincial Strategic Goals (PSGs) to deliver on its vision and to help realise the objectives of the NDP over its five-year term. The PSP is also closely aligned with the NDP, which commits South Africa to ending poverty by 2030; as well as the Medium-term Strategic Framework 2014-19, the national implementation framework for the NDP. The PSP also reflects the Provincial Spatial Development Framework – a critical enabler for development – and the longer-term OneCape 2040 vision. The PSGs are as follow:

STRATEGIC GOAL 1

Creating opportunity for growth and jobs

We are committed to creating an enabling environment to attract investment, grow the economy and create jobs by supporting high growth economic sectors.

STRATEGIC GOAL 2

Improve education outcomes and opportunities for youth development.

We're committed to expanding quality education across the province and providing opportunities for youth to realise their full potential.

STRATEGIC GOAL 3

Increase wellness, safety and tackle social ills

We're committed to addressing health, safety and social ills by supporting healthy communities, a healthy workforce, and healthy families, youth and children.

STRATEGIC GOAL 4

Enable a resilient, sustainable, quality and inclusive living environment.

We're committed to improving urban and rural areas through enhanced management of land, an enhanced climate change plan, and better living conditions for all.

STRATEGIC GOAL 5

Embed good governance and integrated service delivery through partnerships and spatial alignment. The Province is committed to delivering good governance and an inclusive society that increases access to information, in partnership with active citizens, business and institutions.

The PSGs translate the vision of “an open, opportunity society for all” into practical policies, strategies, programmes and projects. The Strategic Goals are the fulcrum of an actionable policy agenda designed to achieve quantified and measurable outcomes.

In trying to achieve the above goals, the following objectives are being aimed at:

- Provide support to increase the gross value add and employment levels of strategically selected economic Sectors;
- Improve the level of artisan and technical skills and influence an improved labour environment;
- Improve the regulatory environment to enhance the ease of doing business;
- Nurture innovation throughout the economy;
- Optimise land use;
- Improve Broadband rollout for the economy;
- Help ensure sufficient water and energy for growth; and
- Improve the efficiency of the region’s transport system

3. SOCIO-ECONOMIC BASELINE

This section addresses the presentation and analysis of social and economic data for national, provincial, district municipal and ward level for key areas in close proximity to the proposed development area.

3.1. South Africa

General geographic, socio-economic and geo-political characteristics for South Africa are as follows:

- Land surface area: 1,220,813km²;
- Provinces: Gauteng, KwaZulu-Natal, North West, Limpopo, Free State, Mpumalanga, Eastern Cape, Western Cape, Northern Cape;
- Key economic sectors: Financial and real estate services retail/wholesale trade, mining services, transport, energy, manufacturing, tourism, agriculture;
- Official languages: English, isiZulu, isiXhosa, isiNdebele, Afrikaans, siSwati, Sepedi, Sesotho, Setswana, Tshivenda, Xitsonga; and
- Government Constitutional: multiparty, three spheres (local, provincial, national) democracy.

The World bank report (2016) states that South Africa has made considerable strides toward improving the wellbeing of its citizens since its transition to democracy in the mid-1990s, but progress is slowing. Based on a poverty line of \$1.90 per day at Purchasing Power Parity (PPP), poverty fell from 33.8% in 1996 to 16.9% by 2008. Factors driving these included social safety nets, real income growth, as well as decelerating inflationary pressure on households, the expansion of credit, and growth in formal housing. Yet progress has slowed in recent years due to structural challenges and weak global growth since the global financial crisis of 2008. Poverty was 16.6% in 2011, but World Bank estimates suggest poverty barely changed in 2016, dropping just marginally to an estimated 15.9%. High unemployment remains a key challenge: South Africa's unemployment rate hit a 12-year high in 2016, at 27.3% in the third quarter. The unemployment rate is even higher among youths, close to 50%.

Real GDP growth has been revised downward significantly and is now only expected to reach 0.4% in 2016, with risks to the downside. 2017 is expected to see a moderate uptick to 1.1%. This will mean that per capita GDP will have contracted for four years (2014-17). Key drivers of the forecast are continued external headwinds from the plunge in commodity prices, compounding domestic problems, including weak investment sentiment amid policy uncertainty. The ongoing weakening in growth is exacerbating already high unemployment, currently at 26%.

In 2016, Statistics South Africa (Stats SA) estimated the mid-year population as 55,91 million. Approximately fifty-one per cent (that is, 28,53 million) of the population is female.

3.2. The Western Cape Province

3.2.1. The Western Cape's Social and Economic Challenges

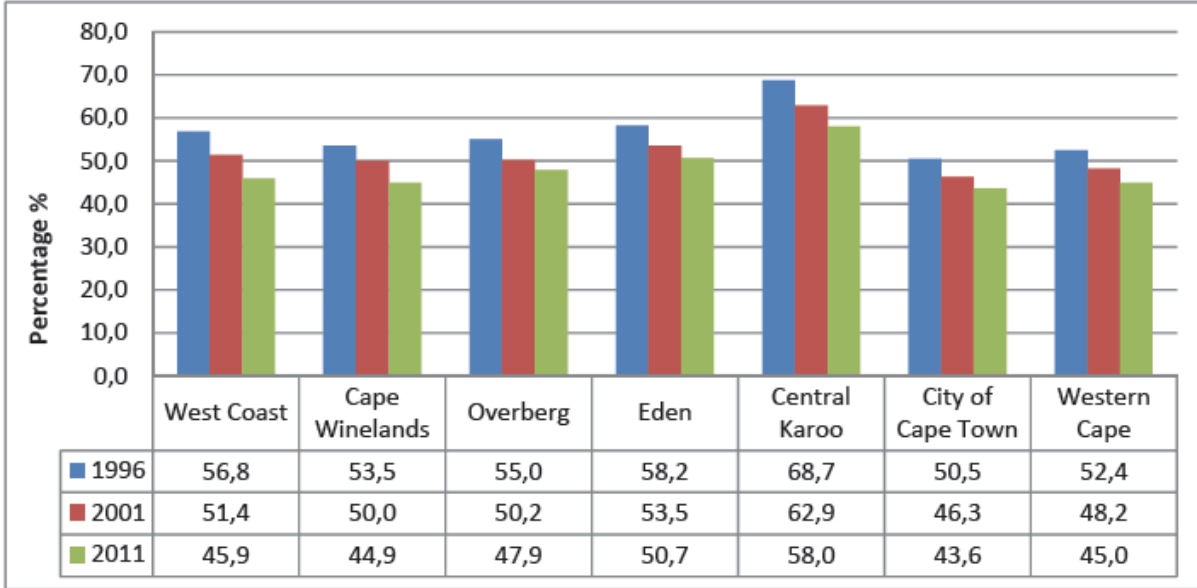
According to Census 2011 data, the Western Cape population grew at a rate of 2.6 per cent per annum between 2001 and 2011. This rate, which was higher than the national population growth rate of 1.5 per cent, can largely be attributed to an influx of individuals from other provinces that move to the Western Cape in search of job opportunities.

The Western Cape's population had increased by 27.8% between the years 2001 to 2011, to 5 822 734 people.

The Municipalities showing the highest increases are captured below:

- Overberg had the highest increase in population of 28, 2% between 1996 and 2001, followed by West Coast (20, 3%);
- West Coast had the highest increase in population of 38,6% between 2001 and 2011, followed by the City of Cape Town (29,3%) and Overberg (26,7%);
- Bitou municipality had the highest increase in population of 58,4% between 1996 and 2001 as well as 68,5% between 2001 and 2011
- It was followed by Overstrand municipality with a 50,0% increase in the population between 1996 and 2001 as well as 46,2% between 2001 and 2011 respectively; and
- Kannaland municipality had the lowest percentage increase of 3,3% between 2001 and 2011.

According to Statistics South Africa (Census 2011), the Western Cape had one of the lowest dependency ratios (54,1%; 48,2% and 45,0%) in the country after Gauteng (44,8%; 38,7% and 39,0%). The City of Cape Town had the lowest dependency ratios in 1996, 2001 and 2011, with 50, 2%, 46, 3 % and 43, 6% respectively. This could be indicative of a larger proportion of the working-age population. The Central Karoo district municipality had the highest dependency ratios in 1996, 2001 and 2011 with 68, 7%, 62, 9% and 58, 0% respectively.



Source: StatsSA, 2011

Figure 6: Age dependency ratios by District Municipality

In 2001 and 2011, Western Cape reported an average household size of 3, 9 and 3, 6 respectively. Western Cape also reported a slight increase between 2001 and 2011, in the proportion of households living in informal dwellings. There was an increase in the proportion of households where refuse had been removed by local authorities. The percentage of households using a communal dump or getting rid of their own refuse also decreased. There has been an increase from 77, 0% in 1996 to 87, and 2% in 2011 in the proportion of households making use of electricity for cooking, and from 85, 7% in 1996 to 93, and 6% in 2011 for lighting in Western Cape. The same upward trend has been depicted for all district municipalities.

3.2.2. The Provincial Economy

The Western Cape's total GDP for 2016 was R424.38 billion (equivalent to US\$29.3 billion) growing from R268.26bn in 2008. In 2016 the economy grew by 2.7% with an annual inflation rate of 6.3%. The province accounts for 14% of South Africa's total GDP with Cape Town accounting for 9.9% of the country's total GDP in 2016.

The province accounts for 11.2% of the country's total population with 6.2 million residents. The Western Cape has a GDP per capita of R74, 274 in comparison to the South African average of R55, 609 per capita in 2016. At 19.7% the province has a substantially lower unemployment rate than the national average standing at 23.2% in 2009. The province's Gini coefficient¹ of 0.58 in 2010 is lower than South Africa's Gini coefficient of 0.65 (for 2011) making it more equal than the rest of the country whilst still being extremely high and unequal by international standards.

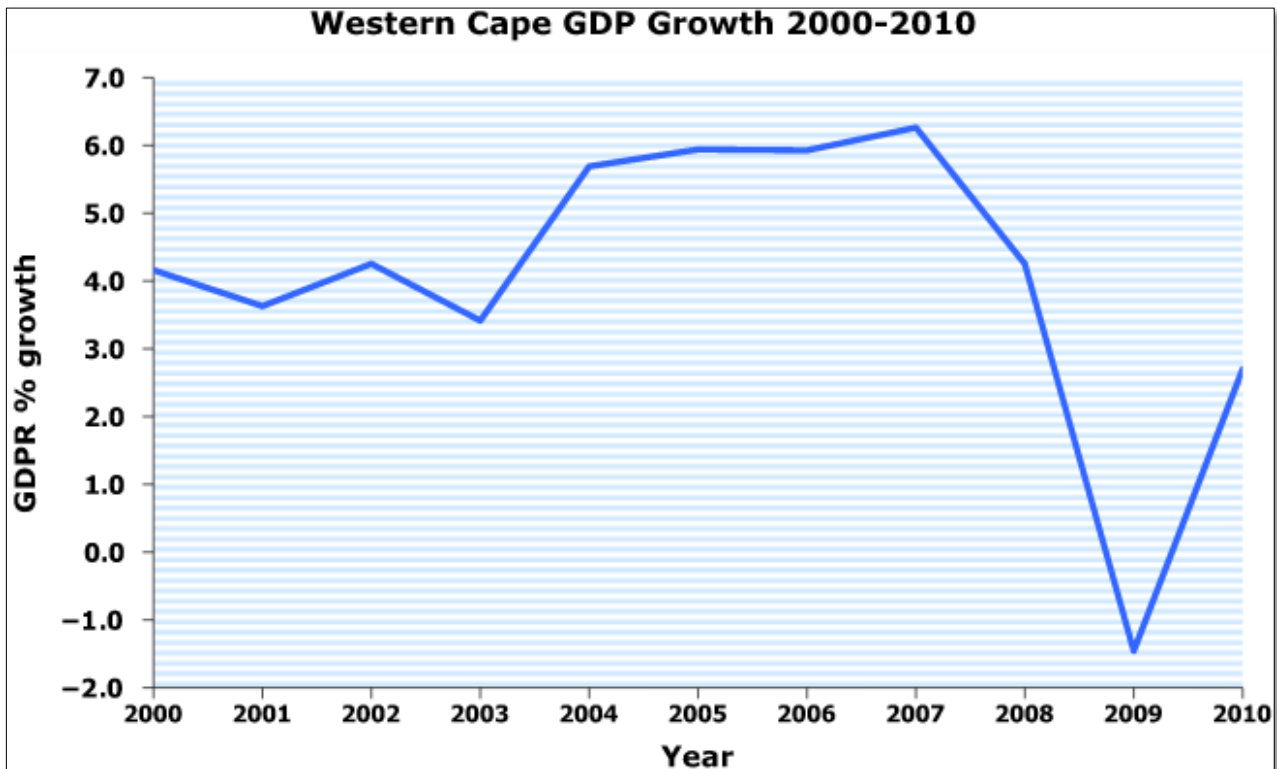
¹ The Gini coefficient is perhaps the best known inequality measure and can be derived from the Lorenz curve. Mathematically the Gini coefficient varies between zero and one, although in reality, values usually range between 0.20 and 0.30 for countries with a low degree of inequality and

The Western Cape's Human Development Index² is the highest in South Africa at 0.7708, compared to the South African average of 0.6675 in 2003.

The province's economy is dominated by the city of Cape Town, where the vast majority of all non-agricultural economic activity takes place. The single largest contributor to the region's economy is the financial and business services sector, followed by manufacturing. Close to 30% of the gross regional product comes from foreign trade with agricultural products and wine dominating exports. High-tech industries, international call centres, fashion design, advertising and TV production are niche industries rapidly gaining in importance. (Economy of the Western Cape).

3.2.2.1. Economic Growth in the Western Cape

Figure 8 shows the trend in economic growth for the Western Cape between 2000 and 2010. Of interest is the fact that the structure of the Western Cape economy (being more tertiary sector orientated than the rest of South Africa) has resulted in the Western Cape being able to experience higher economic growth than the national economy (Western Cape Government Provincial Treasury, 2012).



Data source: Wikipedia: http://upload.wikimedia.org/wikipedia/commons/c/c3/Western_Cape_GDP_growth_2000-2010.svg

Figure 7: Gross domestic product growth in the Western Cape 2000-2010

between 0.50 and 0.70 for countries with highly unequal income distributions

² The Human Development Index (HDI) is a composite, relative index that attempts to quantify the extent of human development of a community. It is based on measures of life expectancy, literacy and income.

According to the Western Cape Government Provincial Treasury (2012), economic growth in the province is forecast to slow to 2.9 % in 2012, before rebounding to 3.6 % in 2013. Thereafter, regional economic growth is expected to remain relatively stable at just above 4 %, with overall growth expected to average 3.9 % between 2012 and 2017 (Western Cape Government Provincial Treasury, 2012).

3.3. The Northern Cape Province

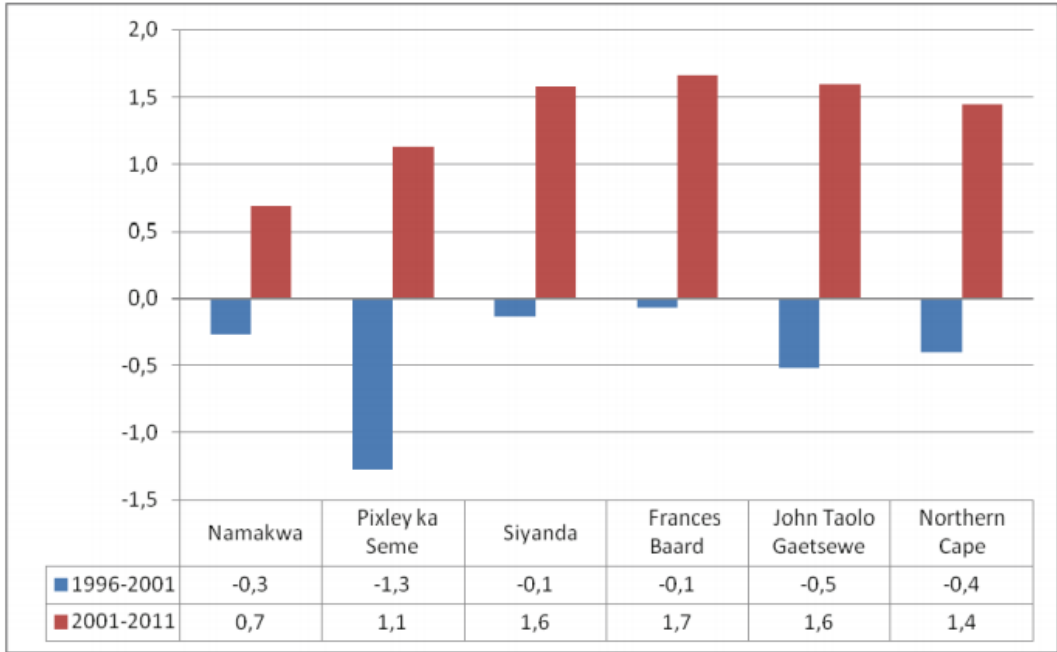
3.3.1. The Northern Cape's Social and Economic Challenges

The Northern Cape is South Africa's largest province, and distances between towns are enormous due to its sparse population.

As reported by the Northern Cape Provincial Government (https://en.wikipedia.org/wiki/Northern_Cape), unemployment still remains a big issue in the province. Unemployment was reported to be at 24.9% during Q4, 2013. Unemployment also declined from 119,000 in Q4, 2012 to 109,000 in Q4, 2013. The Northern Cape is also home to the much acclaimed SKA (Square Kilometre Array) which is located 75 km North-West of Carnarvon.

The economy of the Northern Cape relies heavily on two sectors, namely Mining and Agriculture, which employs 57% (Tertiary Sector) of all employees in the province.

The table below shows that the population growth was negative across all districts between 1996 and 2001. However in the period 2001 to 2011 all, districts recorded a positive growth. This is possibly attributed to the movement of people into the economically active areas in search of work (after being restricted to the South African 'homeland' areas.)



Source: Statistics SA 2011

Figure 8: Population Growth rates by District Municipality

Employment in the province is close to the national average, with 40% of the working-age population employed in 2015, compared to a national average of over 40%. The international norm is around 60%. Working-age people with employment had risen from 39% in 2010, when employment hit a low following the 2008/ 2009 global financial crisis. Sixty-four percent of total employment was in the formal sector, compared to the national average of 69%. In 2014, the median formal wage was R2 600 and the median wage for domestic, informal and agricultural workers was R1 400, compared to R4 000 nationally for formal workers, and R1 500 for other employees.

The Northern Cape has seen significant out-migration, in part due to low pay and limited employment opportunities outside of mining. Its population grew 17% from 1996 to 2015, compared to a national average of 35%. (The Real Economy Bulletin, Provincial Review 2016)

Apartheid geography has a significant impact on economic structures and especially on access to economic opportunities for ordinary South Africans. The Northern Cape has:

- A relatively low share of former “homeland” areas within its borders. In 2015, 21% of the population lived in former “homeland” regions, compared to 27% for the country as a whole.
- No metro areas and one secondary city (Sol Plaatje, which includes Kimberley) out of 32 municipalities. Sol Plaatje accounts for 20% of the province’s population. That compared to 40% of the national population living in metro areas and secondary cities.

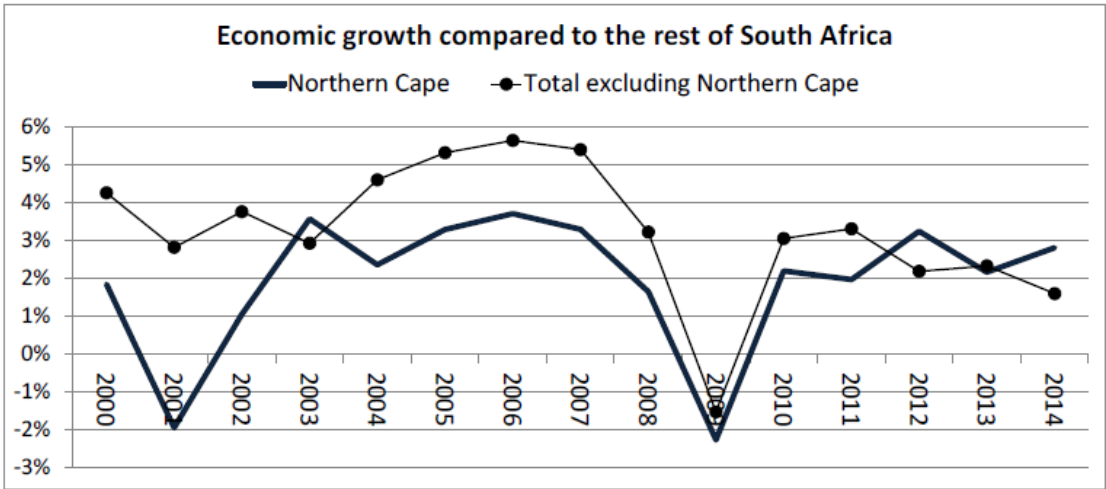
- A relatively large share of non-Africans in the total population, at 47% compared to 20% nationally;
- These factors help explain the province's economic structure and key constraints on growth. Under apartheid, African areas and especially the former “homeland” regions typically excluded natural resources, and for decades were mainly deprived of infrastructure and government services. Some indicators of the implications for the Northern Cape are:
 - The 2015 General Household Survey found that the median household income was R3 460 a month, compared to a national median of R3 260. In the former “homeland” regions it was R2 260 a month, compared to R3 900 in the rest of the province.
 - In 2015, only 21% of working-age people in the former “homeland” regions were employed, compared to 40% in the rest of the Northern Cape.
- According to Census data, the population in the former “homeland” regions in the Northern Cape increased by 2% from 1996 to 2011, while the rest of the province saw population growth of 16% - still well below the national average growth.
- In 2015, matric certificates were held by 26% of the province's working-age population aged over 20, but only by 21% in the former “homeland” regions. For the country as a whole, the figure was 29%. The share of adults in the Northern Cape with matric had climbed from 11% in 1996. Only 9% of the Northern Cape's adult population had a degree, compared to 13% nationally.
- The 2015 General Household Survey found that 77% of households in the Northern Cape had running water in their houses or yards, compared to 73% in 1996. Some 92% had electricity, up from 64% in 1996. Nationally, 73% of households had running water and 85% electricity.
- Municipal expenditure per person in the Northern Cape came to R5 500 in 2015/2016, compared to R5 900 nationally. The lone secondary city, with 20% of the population, raised 36% of all municipal rates and tariffs in the province. It only received 10% of current and 8% of capital transfers and subsidies, mostly from the national government. Still, it spent R7 000 per person compared to R5 100 per person in the other municipalities in the Northern Cape. (The Real Economy Bulletin, Provincial Review 2016)

3.3.2. The Provincial Economy

The Northern Cape, with 1,2 million residents, accounted for only 2% of South Africa's population in 2014/2015, and contributed a similar share of the GDP. In 2014 – the latest available data – the real economy (represented by agriculture, mining, manufacturing and construction) made up 34% of the Northern Cape's output. The largest real-economy sector was mining, at 22% of the provincial economy, followed by agriculture at 7%, manufacturing at 3%, and construction at 2%. The Northern Cape contributed 6% of national mining, 0,5% of national manufacturing and 7% of national agriculture, but just 1% of construction.

The rapid increase in mining prices compared to other products during the commodity boom, and their subsequent sharp decline, makes it more difficult to assess GDP growth at provincial level. Looking only at the volume of production understates the benefits for mining-dependent provinces during the boom as well as the slowdown afterwards, and exaggerates the relative performance of provinces that do not have much mining activity.

The following chart shows growth in the Northern Cape using standard figures that show only the volume of production, effectively ignoring the impact of changes in prices on the purchasing power of the province. By this measure, the Northern Cape mostly lagged national economic growth, especially during the commodity boom.



Source: StatsSA, GDP Annual and Regional Tables 2016

Figure 9: Northern Cape Economic Growth

The importance of mining for the Northern Cape emerged from its dominant share in the provincial economy. During the commodity boom, its contribution climbed from 21, 5% in 2004 to 25% in 2010. It then fell back to 22% in 2014 as iron ore prices collapsed.

Of employed people in the real economy in the Northern Cape in 2015:

- 39 500 were in mining (in 2014)
- 36 000 were in agriculture
- 29 000 were in construction
- 11 000 were in manufacturing

The Northern Cape accounted for 1% of South African manufacturing employment. The top manufacturing industry in the province for employment was food and beverages. But the province accounted for only 1% of employment in that industry.

Iron ore and ferro alloys dominated mining employment in the province. Generally, gold mining saw job losses during the commodity boom, while platinum mining, coal and iron ore created employment. According to Department of Mineral Resources data, which is more reliable for mining, total mining employment in the province climbed from 22 000 in 2003 to 35 500 in 2011, while sales climbed sharply from 8% of the national total to 20%, mostly because iron ore prices multiplied more than tenfold. From 2011 to 2014, the number of Northern Cape miners increased to 39 500, while sales dropped to 19% of the national total as iron prices fell by almost 25%.

4. ROUTE ALTERNATIVES

4.1. Methodology

The scale of the proposed Gamma to Kappa transmission line requires the identification of areas which are of particular sensitivity⁶ from a route alternative perspective at a finer scale. To this end, spatial household location data captured in 2010 by Eskom was used as the basis to identify households that are directly impacted by the proposed route alignments. The proposed design alternatives (Figure 3, Figure 4 and Figure 5) indicate that a servitude of 80 meters will apply for the proposed transmission lines. A precautionary approach was adopted for this report by considering households within 120 meters of the proposed transmission line as 'directly impacted'.

A Geographical Information System (GIS) was used to analyse and identify households along the various route alternatives which are within 120m of the proposed transmission lines. Directly impacted households were extracted and overlaid onto ward-level data from Census 2001 in order to present socio-economic data at the finest possible scale.

Route layouts maps indicate the position of identified sensitivity areas, affected wards as well as the position of the proposed transmission lines overlaid on district and local municipal boundaries to contextualise the areas (Figure 11, Figure 16 and Figure 17). It is important to note that some of the proposed route alternatives do not directly impact on households as per the methodology used in this report. Ward level data for these route alternatives has therefore not been incorporated into the report.

⁶ 'Sensitivity' refers to whether households (that is, people) are found within the proposed development footprint

4.2. Route Option 1: Gamma to Kappa Alternative 1

The affected District Municipalities on this route option are Cape Winelands District Municipality (CWDM), the Central Karoo District Municipality (CKDM), Namakwa District Municipality (NDM) and the Pixley ka Seme District Municipality (PKSDM). The affected district municipalities are discussed in Section 4.2.1 while the affected Local Municipalities are Witzenberg (within the CWDM), Karoo Hoogland (within the NDM), Laingsburg (within the CKDM), Beaufort West (within the CKDM) and Ubuntu (within PKSDM) Municipalities, discussed in Section 4.2.2. Key sensitive areas along Route Option 1 have been identified and further in Section 4.2.3.

4.2.1. Affected District Municipalities

- Cape Winelands District Municipality (CWDM);
- Namakwa District Municipality (NDM);
- Central Karoo District Municipality (CKDM); and
- Pixley ka Seme District Municipality (PKSDM).

4.2.1.1. Social and Economic Characteristics of Affected District Municipalities

The Cape Winelands District Municipality

The Cape Winelands District Municipality (CWDM) is located in the interior of the Western Cape and is bordered to the west by the WCDM, to the south west by the City of Cape Town Metropolitan Municipality, to the east by the Central Karoo and Eden District Municipalities and to the south by the Overberg District Municipality (Figure 12).

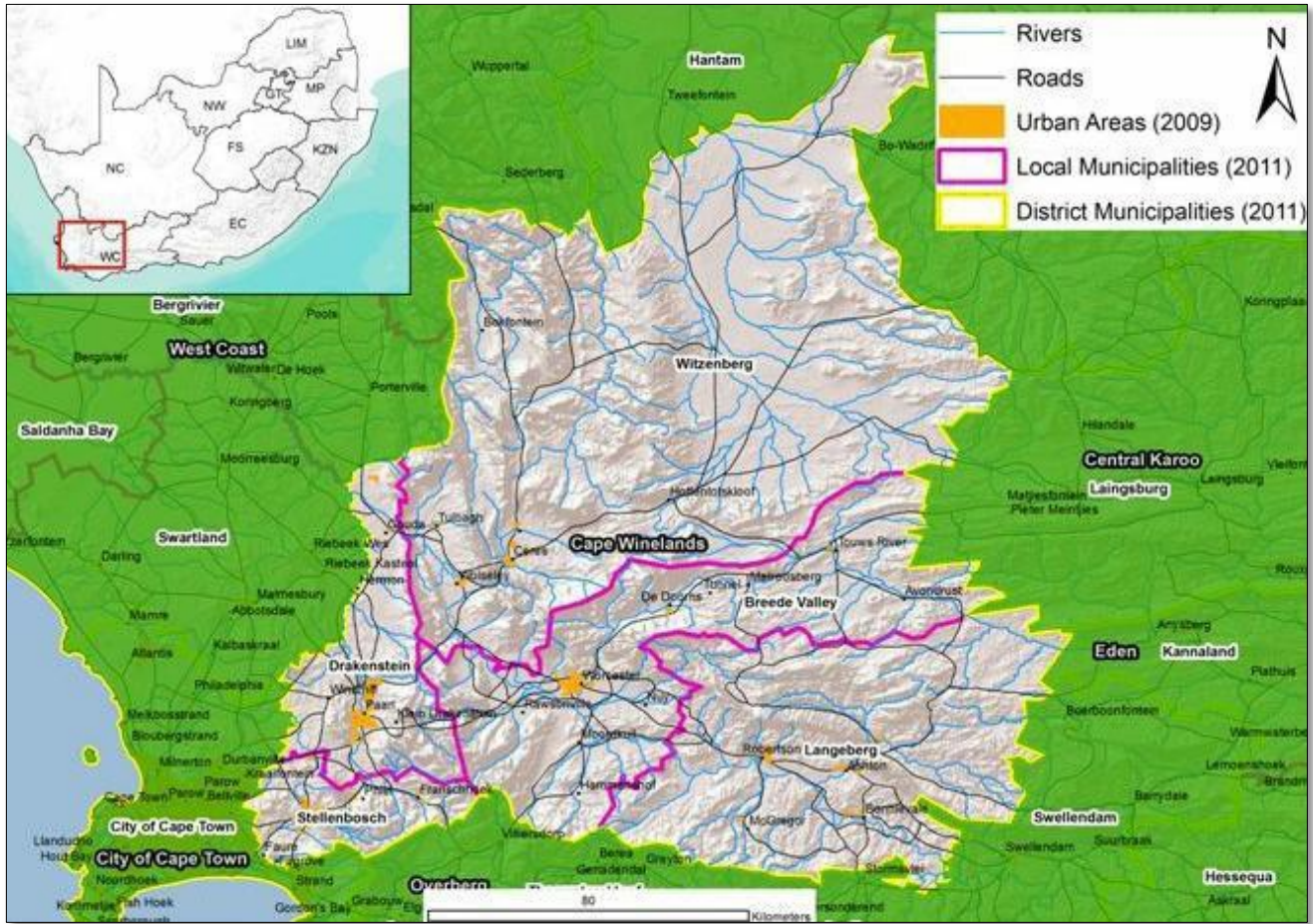


Figure 11: Location of the Cape Winelands District Municipality

Other than the Cape Metro, Cape Winelands has the largest population of all districts in the Western Cape which, according to the forecasts of the Western Cape Department of Social Development, is estimated to be 853 423 in 2017¹. This total gradually increases across the 5-year planning cycle and is expected to reach 913 388 by 2023. This equates to an approximate 7.0 per cent growth of the 2017 base estimate³.

³ The data provided hereto serves as a 2017 – 2023 forecast to coincide with the new 5-year IDP planning cycle. Municipalities are however urged to consult the results of the 2016 Community Survey for the 2016 population count.

Namakwa District Municipality

The Namakwa DM is located on the west coast of South Africa and stretches inland south and west for some 400 kilometers (Figure 13).

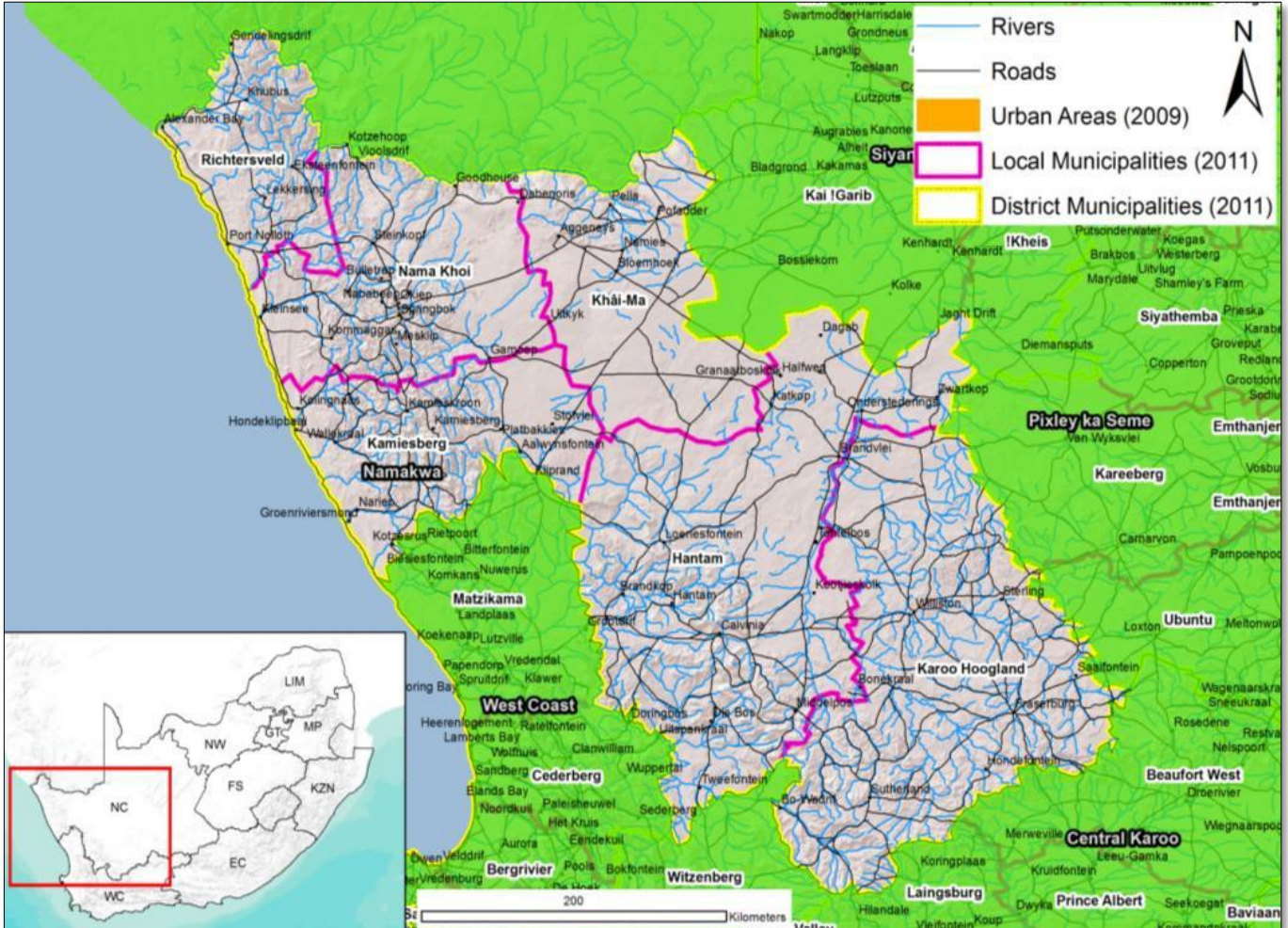


Figure 12: Location of the Namakwa District Municipality

The District is sparsely populated, with a population of 115 842 and is the least populated district in the Province (and Country, although geographically the largest) with a population comprising 10, 11% of the Province’s total population. The population growth rate of the Namakwa District from 2001 until 2011 was 0.69%. The Namakwa District Municipality grew at a diminishing rate; with the population growing at 1.2 per cent in 2004 and 0.2 per cent in 2014. The decrease in population growth can result from a number of factors which might include an increase in the death rate, a decrease in child birth or even the migration of people out of the district.

The Central Karoo District Municipality

The Central Karoo District is located in the north-eastern interior of the Western Cape, has three local municipalities under its jurisdiction (Figure 14) and has the smallest concentration of people in the Western Cape (Central Karoo District Municipality, 2012).

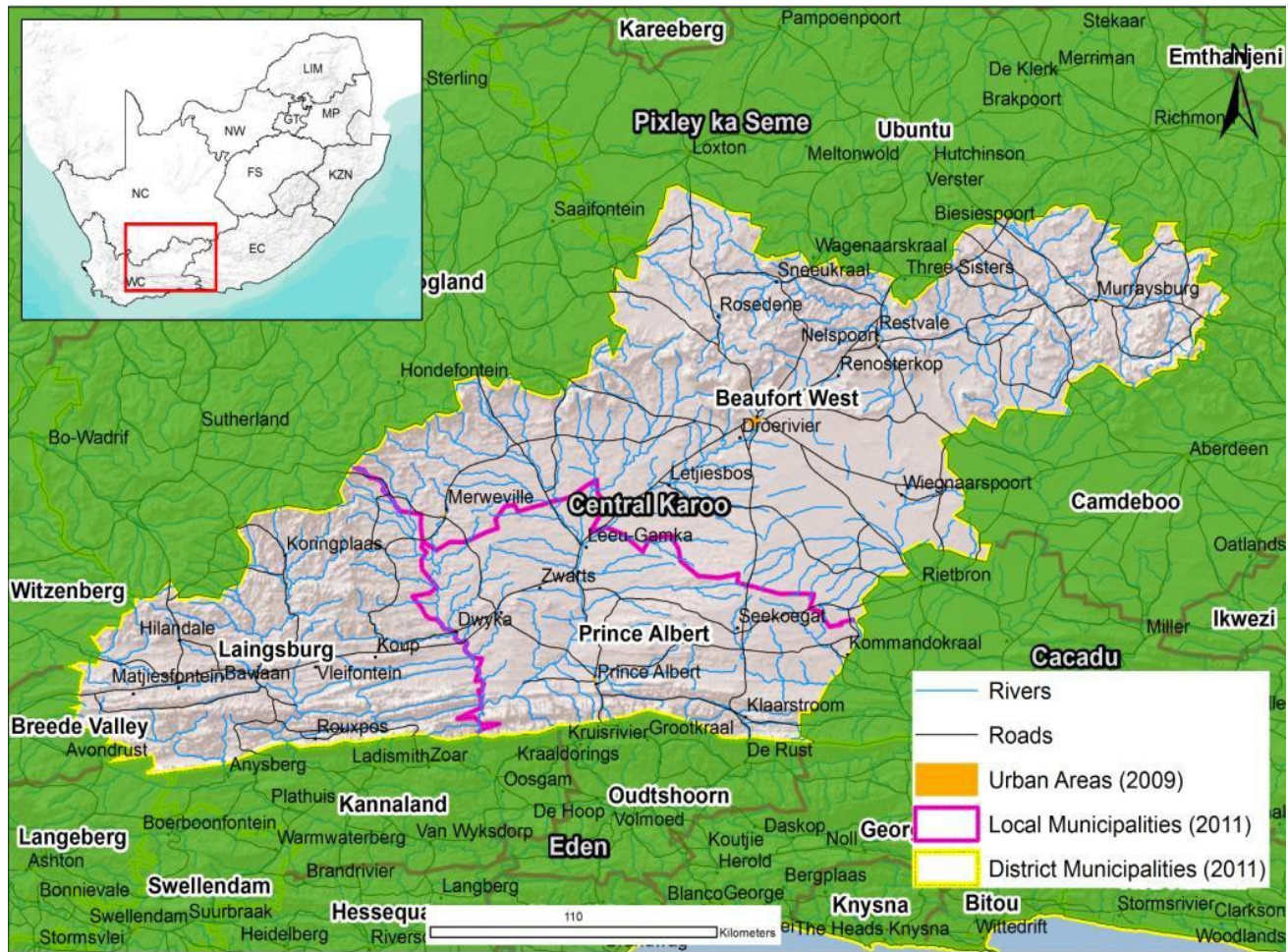


Figure 13: Location of the Central Karoo District Municipality

The jurisdiction of the Central Karoo District Municipality (as a category C municipality) covers an area of 38 854 km², which is also 27.7% of the total area that constitutes the Western Cape province. This district municipal area is the eastern-most district municipality within the Western Cape, and borders on the Northern Cape and Eastern Cape provinces. The population in 2016 was estimated at 74 247, i.e. an increase of 3 236 at a growth rate of 4.6% over the 5-year period. There was both an increase in the population size and the number of households between 2001 and 2011, but a decrease in the average household size over the same period.

The economic activities in the Central Karoo municipal area are dominated by agriculture and the services sector. In this regard, the contribution to the Central Karoo District GDP by the economic sectors that includes 'services', is about 70% of the total contribution. However, the sector with the highest average annual GDP growth rate between

2004 and 2015 (8%) is the construction sector which is 5% more than the average for the district. Note that the highest average growth rates in the next 5 years are expected in the construction sector (11 per cent) and in the finance, insurance, real estate and business services sector (5.0 per cent). For the coming years, a negative overall growth rate of -1, 1% is expected within the district. Of particular importance is the downward trend in the agricultural sector.

The Pixley ka Seme District Municipality

The Pixley ka Seme District Municipality (PKSDM) is located in the central interior of the Northern Cape and has eight local municipalities under its jurisdiction (Figure 15).

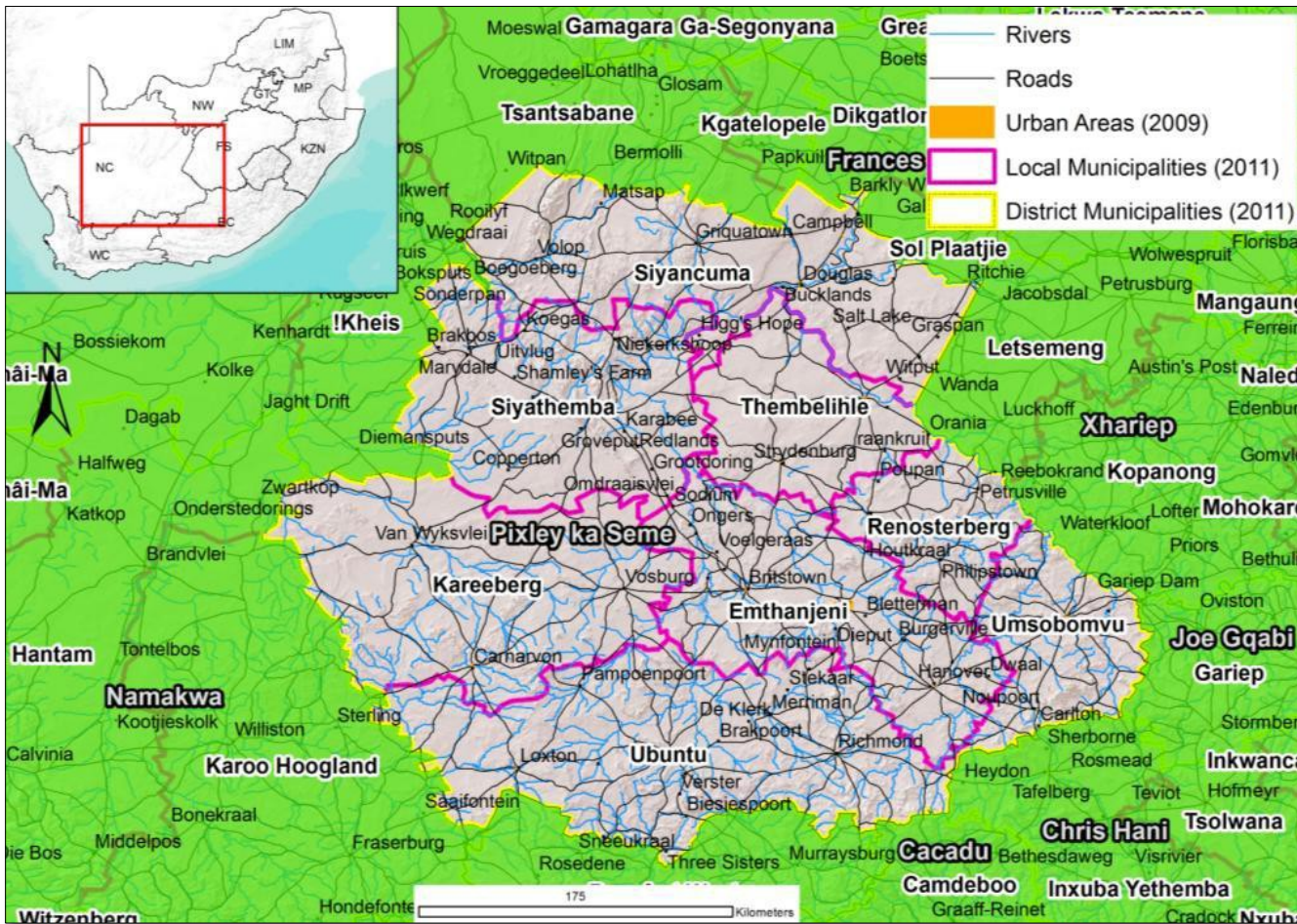


Figure 14: Location of the Pixley ka Seme District Municipality

The jurisdiction of the Pixley Ka Seme District Municipality covers an area of 103 410km², which is also 27.7% of the total area that constitutes the Northern Cape province. The district municipal area is the eastern-most district Municipality within the Northern Cape, and borders on the Western Cape, Eastern Cape and Free State provinces.

The economy in the Municipality is characterised by the following:

- High levels of poverty and low levels of education;

- Small to medium town sub-region with a low level of development despite the strategic location in terms of the national transport corridors;
 - Sparsely populated towns with a number of larger towns serving as ‘agricultural service centers’, spread evenly throughout the districts as central places;
 - High rate of unemployment, poverty and social grant dependence;
 - Prone to significant environmental changes owing to long-term structural changes (such as climate change , energy crisis and other shifts)
 - Geographic similarity in economic sectors, growth factors and settlement patterns;
-
- Economies of scale not easily achieved owing to the relatively small size of towns;
 - A diverse road network with national, trunk, main and divisional roads of varying quality;
 - Potential and impact of renewable energy resource generation; and
 - Potential and impact of radio telescope initiatives, e.g., square kilometers array radio telescope project.

4.2.1.2. Key Strengths and Weaknesses in the Affected District Municipalities

Table 1: Identified Strengths and Weaknesses in the Affected District Municipalities

STRENGTHS	WEAKNESSES
Cape Winelands District Municipality⁴	
<ul style="list-style-type: none"> • Strong agricultural, manufacturing and finance/business service sectors; • Good transport network; • Diversified local economy; and • Natural asset base. 	<ul style="list-style-type: none"> • Unemployment (21 % unemployed in 2010); • Vulnerability to natural hazards (floods, drought, fire, pollution, etc.); • Ageing transport infrastructure; and • Inadequate coverage of electrical infrastructure.
Namakwa District Municipality⁵	
<ul style="list-style-type: none"> • Mineral wealth and strong mining sector; • Strong agricultural sector; and • Good transport infrastructure. 	<ul style="list-style-type: none"> • Lack of institutional capacity; • Loss of skills and young people; • Inadequate basic needs infrastructure (bulk water and sanitation); • Slow local economic development and growth; and • High levels of crime.
Central Karoo District Municipality	
<ul style="list-style-type: none"> • Functional and effective technical department • Provide support to local municipalities in the 	<ul style="list-style-type: none"> • Not sufficiently capacitated • Poor organisational culture

⁴ 2014 data utilised as IDP does not include an update of the SWOT analysis.

⁵ 2014 data utilised as IDP does not include an update of the SWOT analysis.

STRENGTHS	WEAKNESSES
<p>District</p> <ul style="list-style-type: none"> • Institutional memory • New Council committed towards progressive and clean governance • Political and administrative stability • Policies in place and reviewed regularly • Willingness to work together • Diversity 	<ul style="list-style-type: none"> • Financial sustainability/viability – limited resources • Funds do not always follow structure and plans • Skills development and training not sufficient • Low level of skills • Divide between top and middle management and labour • Poor internal communication • Succession planning not in place • Critical posts not filled

The Pixley ka Seme District Municipality	
<ul style="list-style-type: none"> • Competent and qualified staff • Manage to operate within a small budget • Stability- political and administration interface • Infrastructure to render an effective shared service • Commitment of officials • Ability to give support to local municipalities 	<ul style="list-style-type: none"> • Poor debt collection from local municipalities for shared services • Grant dependent institution • Limited technical skills • % Representation of salaries to the budget • Retention of qualified and specialised skills • Limited funding

4.2.2. Affected Local Municipalities

- Witzenberg Local Municipality (within the CWDM);
- Karoo Hoogland Local Municipality (within the NDM);
- Laingsburg Local Municipality (within the CKDM);
- Beaufort West Local Municipality (within the CKDM); and
- Ubuntu Local Municipality (within the PKSDM).

4.2.2.1. Social and Economic Characteristics of Affected Local Municipalities

Witzenberg Local Municipality

The WLM has the smallest population in the Cape Winelands District with 75 152 people in 2007. The population decreased at an annual average rate of 1.8 per cent from 83 573 in 2001 to 75 1521 in 2007 compared to 2.1 per cent growth for the District over the same period. The municipality also has the smallest economy, which only contributes 9% to the Cape Winelands regional GDP (9%), growing on average at 2, 1 per cent and 10, 6 per cent respectively per annum. Within the manufacturing sector, the food, beverage and tobacco sub-sector is clearly dominant, representing 69, 4 per cent of total manufacturing.

The Witzenberg Municipal area is characterised by the following:

- Urban development – low intensity & density, large under-utilized land in prosperous areas.
- Lower income areas – high density, under-provision of formal business development
- The 5 towns are characterised by segregation in settlements – duplication of services, different levels of development due to historic development patterns, and
- Under-utilized commonage.

Karoo Hoogland Local Municipality

Karoo Hoogland is situated in the most southern part of the Northern Cape and falls within the Namakwa District Municipality with its head office located in Springbok. The three main settlements are Williston, Fraserburg and Sutherland which are 499 km, 592 km and 539 km from Springbok respectively. The Municipal jurisdiction area

covers approximately 34 038 km². The municipality is sparsely populated with a population of 12 588 Karoo Hoogland Municipality is the third highest in the district with a growth 19.75% between the years 2001 and 2011.

More than half (55.5%) of employed individuals in Karoo Hoogland are classified as semi- and unskilled, showing that

skills training is a high priority. From 2008 to 2009 Karoo Hoogland experienced a lower economic growth rate (-5.2%) than both the District and the Province (-2.1% and -0.8% respectively). From 2001 to 2009, Karoo Hoogland experienced a negative average annual economic growth rate (-1.8%) which was lower than both the District (1.0%) and Provincial (2.4%) average.

Laingsburg Local Municipality

Generally Laingsburg is a one town Municipality. Laingsburg town has the largest population people followed by Matjiesfontein, the second largest community. The rest of the population (2000 people) is scattered in the some farms all over the Local Municipality.

In terms of contributions to GDP, Laingsburg is the smallest regional economy in the Central Karoo (9.5 per cent in 2013). This contribution is however eclipsed by the economy of Beaufort West which contributed 69 per cent to GDP. Compared to Beaufort West and Prince Albert, the Laingsburg economy has a relatively larger agriculture sector, accounting for close to a third of employment in the region, and a relatively smaller commercial services sector (employing another almost third of the workforce).

Beaufort West Local Municipality

The Beaufort West Local Municipality (BWLM) is the largest of the three local authorities under the jurisdiction of the Central Karoo District Municipality and is located in the north-eastern portion of the Western Cape. Beaufort West is the economic center of the Central Karoo region, accounting for 70 per cent of all economic activity and 65 per cent of the employment in the region. The four largest sectors within the municipal area are the service, manufacture, agriculture and commercial sectors.

Ubuntu Local Municipality

The Ubuntu Local Municipality (ULM) is located in the extreme south of the Pixley ka Seme District Municipality. Victoria West is the main service center town with town planning and associated infrastructure in place; while informal settlements are found throughout the LM (Ubuntu Local Municipality, 2011). According to the 2011 statistics, 33.9% of the population resides in the rural areas of the municipality – with continued rural-urban migration that is foreseen. According to census 2011 the population of Ubuntu Municipality grew from 16 375 in 2001 to 18 601 in 2011.

Examination and analysis of the socio-economic indicators listed above indicate without any doubt that the most critical challenge facing the district is the reduction of poverty. Other challenges that the district must confront, but which in themselves will also address poverty, includes the following:

- Ensuring that all citizens have access to basic services such as water, sanitation, electricity and housing.
 - Increasing access to services in education, health and social services.
 - Stabilizing and decreasing the rate of HIV and AIDS infection, tuberculosis, FAS etc.
 - Reduction in the rate of crime.
 - Economic empowerment
-
- The shortage of critical skills – development of an attraction and retention strategy; improving skills of the labour force etc.
 - Targeting special groups e.g. women, disabled and youth; and
 - Sustainable job creation.

Livestock and game is the nucleus of farming activities in the Ubuntu Region. Irrigation is limited. Livestock farming mainly comprises of sheep, goat and cattle. The main agricultural products are wool for the export market and meat for the local market.

4.2.2.2. Key Strengths and Weaknesses in the Affected Local Municipalities

Table 2: Identified Strengths and Weaknesses in the Affected Local Municipalities

STRENGTHS	WEAKNESSES
Witzenberg Local Municipality	
<ul style="list-style-type: none"> • Close cooperation on management level • Good dialogue with Business Sector • Reduced electricity losses • Good water quality • Effective international relations • Sound governance • IGR Structures and Forums • Budget Control 	<ul style="list-style-type: none"> • No municipal-generated surveys or statistics • Financial limitations • Liability of non-core functions (resorts are not profit- by managed) • Antiquated equipment and vehicle fleet (out-dated) • Departments operating in silos • Weak marketing strategy • No IDP Representative Forum

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Natural environment • Location for certain opportunities • Good governance • Good IGR • Stable political environment • Meeting constitutional obligations • Visionary leadership • Low vacancy rate within organizational structure 	<ul style="list-style-type: none"> • Public Communication • Town management • Insufficient supervision of labour force • Inadequate storm water systems, in some areas • Old asbestos water and sanitation networks • Resealing and maintenance of roads • Garden refuse - Tulbagh, Wolseley and N'Duli • Law enforcement • Ageing infrastructure • Lack of departmental procedures • Centralization/ town management • High water Losses • Lack of integration policies, silo operations • Office space • Slow turn-around time • Lack of capacity for funding applications • Poor IT (integration) • Lack of secure access control • Upgrading of call center
Karoo Hoogland Local Municipality⁶	
<ul style="list-style-type: none"> • Cultural and heritage assets; and • Strong agricultural sector. 	None listed.
Laingsburg Local Municipality	
<ul style="list-style-type: none"> • Political stability and • Loyal employees 	<ul style="list-style-type: none"> • Understaffing
Beaufort West Local Municipality	
<ul style="list-style-type: none"> • Beaufort West can be seen as the connection hub to the rest of the country. Solar energy solutions can address the energy challenges facing the Municipality. The administration can be stabilized by the approval of a new organizational structure and the introduction of a disciplinary code. 	<ul style="list-style-type: none"> • Access to technology and technological advances; • Unable to attract skilled staff to key positions; • Dysfunctional traffic service; • Poor cash-flow; • Not attending and participating in

⁶ 2014 data utilised as IDP does not include an update of the SWOT analysis.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • New dumping sites can be introduced and road and storm-water infrastructure can be introduced to enhance the economic and service infrastructure of the Municipality. • In order to provide employment opportunities in the emerging mining and fracking sector, there is an opportunity to facilitate the development of economic skills. • Agro Processing is another potential development opportunity that can result in economic growth and development for the Municipality. This can include the development of the wool value chain. • The Municipality aims to appoint a LED coordinator in order to develop a strategy and implementation plan for emerging enterprises development 	<p>intergovernmental meetings and planning sessions.</p> <ul style="list-style-type: none"> • No formal policy on green energy; • Poor air quality management; • Require improvement on green drop requirements; • Poor discipline and accountability; • Poor public participation system. • Rural area with low development opportunities; • Water scarcity and high electricity costs; • High cost of compliance and reporting; • Low capacity, making use of consultants to assist in compliance • Revenue and cash constraints with high number of indigents. • Almost half of population registered as indigents; • Number of paying customers is declining

Ubuntu Local Municipality	
<ul style="list-style-type: none"> • Good cooperation among officials and employees • Communities can participate in decision-making structures • Good office infrastructure • An open door policy is implemented • Prompt execution of tasks – by officials • Good relationship between council and officials. • Legislation empowers municipality. 	<ul style="list-style-type: none"> • Poor payment for services • Insufficient funds for service delivery • Weak community participation • In fighting between the political e-lite • Some inhabitants do not participate fully in municipal activities • No response on letters sent by communities to the Municipality • Weak discipline among leadership • No regular report back to communities • Shortage of personnel • Lack of training • No report back from CDW on problems from the community • The availability of CDW's • Local newspaper does not report objectively • Issues regarding Hutchinson still incomplete (town planning) • Mistakes on municipal accounts

4.2.3. Key Sensitivity Areas along the Route

4.2.3.1. Identification and Description

Key sensitivity areas were identified as per the methodology described in Section 4.1 and are depicted spatially in Figure 11.

4.2.3.2. Ward Level Data (2011)

Wards are the basic spatial unit demarcated by the Municipal Demarcation Board for the 2011 elections. The key sensitivity Wards identified are in the Witzenberg Local Municipality (Ward 12), Karoo Hoogland Local Municipality (Ward 2), Beaufort West Local Municipality (Ward 7) and the Ubuntu Local Municipality (Ward 3). Table 3 highlights ward level data for Route Option 1.

Table 3: Ward level data for key sensitivity areas identified along Route Option 1

Witzenberg Local Municipality – Ward 12	
Population	8098. This represents less than 10% of the total population for the Cape Winelands District Municipality.
Median Age	26 years
Number of households	2 274 households with 297 (13.1%) being shacks
Migration (born in Western Cape)	63% of the population
Average number of household members	3.5 members per household
Household income / breadline status	Statistics suggest that 70.2% ⁷ of households are earning below the breadline of USD2.34 p/p/day.
Water source	42.5% of household receive water from a regional or local water service provider
Access to toilets	92% of households have access to flush or chemical toilets, while 2.5% have no access to any toilets
Employment	Approximately 62.9% of the population are employed, of which 63% are in the formal sector.
Educational level	41.8% of the adult population completed Grade 9 or higher, with 15% completing matric or higher.
School attendance	82.6% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	22.6% (83) of school aged children (5-17 years) are in the labour force
Karoo Hoogland Local Municipality – Ward 3	
Population	3171. This represents less than 10% of the total population for the Namakwa District Municipality.
Median Age	37.5 years
Number of households	1406 households with 25 (1.8%) being shacks
Migration (born in Northern Cape)	77% of the population
Average number of household members	2.2 members per household

⁷ The food poverty line is now USD 2.34 p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 3.5 (HH members) = R39 213.72

Household income / breadline status	Statistics suggest that 39% ⁸ of households are earning below the breadline of USD2.34 p/p/p/day.
Water source	10.2% of household receive water from a regional or local water service provider
Access to toilets	56% of households have access to flush or chemical toilets, while 19.6% have no access to any toilets
Employment	Approximately 64.4% of the population are employed, of which 65% are in the formal sector.
Educational level	41.3% of the adult population completed Grade 9 or higher, with 28.8% completing matric or higher.
School attendance	51.2% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	44.4% (40) of school aged children (5-17 years) are in the labour force
Laingsburg Local Municipality – Ward 2	
Population	2671. This represents less than 10% of the total population for the Central Karoo.
Median Age	35 years
Number of households	927 households with 13 (1.4%) being shacks
Migration (born in Western Cape)	85% of the population
Average number of household members	2.8 members per household
Household income / breadline status	Statistics suggest that 31.8% ⁹ of households are earning below the breadline of USD2.34 p/p/p/day.
Water source	3.5% of household receive water from a regional or local water service provider
Access to toilets	61.2% of households have access to flush or chemical toilets, while 12% have no access to any toilets
Employment	Approximately 67.1% of the population are employed, of which 89% are in the formal sector.

⁸ The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 2.2 (HH members) = R24 648.62

⁹ The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 2.8 (HH members) = R31 370.97

Educational level	39.5% of the adult population completed Grade 9 or higher, with 23% completing matric or higher.
School attendance	62.6% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	42% (50) of school aged children (5-17 years) are in the labour force
Beaufort West Local Municipality – Ward 7	
Population	10377. This represents less than 10% of the total population in the Central Karoo District Municipality.
Median Age	25 years
Number of households	2 274 households with 297 (13.1%) being shacks
Migration (born in Western Cape)	87% of the population
Average number of household members	4.5 members per household
Household income / breadline status	Statistics suggest that 74.9% ¹⁰ of households are earning below the breadline of USD2.34 p/p/day.
Water source	76.6% of households receive water from a regional or local water service provider
Access to toilets	91.6% of households have access to flush or chemical toilets, while 2.7% have no access to any toilets
Employment	Approximately 33.2% of the population are employed, of which 71% are in the formal sector.
Educational level	46.8% of the adult population completed Grade 9 or higher, with 20.9% completing matric or higher.
School attendance	85.1% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	19.1% (95) of school aged children (5-17 years) are in the labour force

¹⁰ The food poverty line is now USD 2.34 p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x .4 5(HH members) = R50 413.50

Ubuntu Local Municipality – Ward 3	
Population	4715. This represents less than 10% of the total population for the Pixley Ka Seme District Municipality.
Median Age	25 years
Number of households	1 608 households with 20 (1.2%) being shacks
Migration (born in Western Cape)	79% of the population
Average number of household members	2.9 members per household
Household income / breadline status	Statistics suggest that 44.4% ¹¹ of households are earning below the breadline of USD2.34 p/p/day.
Water source	31.1% of household receive water from a regional or local water service provider
Access to toilets	56.4% of households have access to flush or chemical toilets, while 21.7% have no access to any toilets
Employment	Approximately 62.5% of the population are employed, of which 62% are in the formal sector.
Educational level	35% of the adult population completed Grade 9 or higher, with 20.7% completing matric or higher.
School attendance	71.4% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	32.6% (62) of school aged children (5-17 years) are in the labour force

4.3. Route Option 2: Gamma to Kappa Alternative 2

The affected District Municipalities on this route option are Cape Winelands District Municipality (CWDM), the Central Karoo District Municipality (CKDM), Namakwa District Municipality (NDM) and the Pixley ka Seme District Municipality (PKSDM). The affected district municipalities are discussed in Section 4.3.1. while the affected Local Municipalities are Witzenberg (within CWDM), Karoo Hoogland (within NDM), Laingsburg (within CKDM), Beaufort West (within CKDM) and Ubuntu (PKSDM), discussed in Section 4.3.2. Key sensitive areas along Route Option 2 have been identified and illustrated in Figure 16 and further included into a Ward level context in Section 4.3.3.

¹¹ The food poverty line is now USD 2.34 p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 2.9 (HH members) = R32 491.36

4.3.1. Affected District Municipalities

- Cape Winelands District Municipality.
- Namakwa District Municipality (NDM);
- Central Karoo District Municipality (CKDM); and
- Pixley ka Seme District Municipality (PKSDM).

4.3.1.1. Social and Economic Characteristics of Affected District Municipalities

The Cape Winelands District Municipality

Refer to Section 4.2.1.1

Namakwa District Municipality

Refer to Section 4.2.1.1

The Central Karoo District Municipality

Refer to Section 4.2.1.1

The Pixley ka Seme District Municipality

Refer to Section 4.2.1.1

4.3.1.2. Key Strengths and Weaknesses in the Affected District Municipalities

The Cape Winelands District Municipality

Refer to Section 4.2.1.2.

Namakwa District Municipality

Refer to Section 4.2.1.2.

The Central Karoo District Municipality

Refer to Section 4.2.1.2.

The Pixley ka Seme District Municipality

Refer to Section 4.2.1.2.

4.3.2. Affected Local Municipalities

- Witzenberg Local Municipality (within the CWDM);
- Karoo Hoogland Local Municipality (within the NDM);
- Laingsburg Local Municipality (within the CKDM);
- Beaufort West Local Municipality (within the CKDM); and
- Ubuntu Local Municipality (within the PKSDM).

4.3.2.1. Social and Economic Characteristics of Affected Local Municipalities

Witzenberg Local Municipality

Refer to Section 4.2.2.1.

Karoo Hoogland Local Municipality

Refer to Section 4.2.2.1.

Laingsburg Local Municipality

Refer to Section 4.2.2.1.

Beaufort West Local Municipality

Refer to Section 4.2.2.1.

Ubuntu Local Municipality

Refer to Section 4.2.2.1.

4.3.2.2. Key Strengths and Weaknesses in the Affected Local Municipalities

Witzenberg Local Municipality

Refer to Section 4.2.2.2.

Karoo Hoogland Local Municipality

Refer to Section 4.2.2.2.

Laingsburg Local Municipality

Refer to Section 4.2.2.2.

Beaufort West Local Municipality

Refer to Section 4.2.2.2.

Ubuntu Local Municipality

Refer to Section 4.2.2.2.

4.3.3. Key Sensitivity Areas along the Route

4.3.3.1. Identification and Description

Key sensitivity areas were identified as per the methodology described in Section 4.1 and are depicted spatially in Figure 16.

4.3.3.2. Ward Level Data (2011)

Wards are the basic spatial unit demarcated by the Municipal Demarcation Board for the 2011 elections. The key sensitivity Wards identified are in the Witzenberg Local Municipality (Ward 12), Karoo Hoogland Local Municipality (Ward 2), Beaufort West Local Municipality (Ward 7) and the Ubuntu Local Municipality (Ward 3). Table 3 (in the previous sub-section) highlights Ward level data for the sensitivity areas identified for Route Option 2.

4.4. Route Option 3

The affected District Municipalities on this route option are Cape Winelands District Municipality (CWDM), the Central Karoo District Municipality (CKDM), and the Pixley ka Seme District Municipality (PKSDM). The affected district municipalities are discussed in Section 4.2.1 while the affected Local Municipalities are Witzenberg (within the CWDM), Laingsburg (within the CKDM), Prince Albert Local Municipality (within the CKDM), Beaufort West (with the CKDM) and Ubuntu Municipality (with the PKSDM), discussed in Section 4.4.2. Key sensitive areas along Route Option 3 have been identified and further included into a Ward level context in Section 4.4.3

4.4.1. Affected District Municipalities

- Cape Winelands District Municipality (CWDM);
- Central Karoo District Municipality (CKDM); and
- Pixley ka Seme District Municipality (PKSDM).

4.4.1.1. Social and Economic Characteristics of Affected District Municipalities

The Cape Winelands District Municipality

Refer to Section 4.2.1.1

The Central Karoo District Municipality

Refer to Section 4.2.1.1

The Pixley ka Seme District Municipality

Refer to Section 4.2.1.1

4.4.1.2. Key Strengths and Weaknesses in the Affected District Municipalities

The Cape Winelands District Municipality

Refer to Section 4.2.1.2.

The Central Karoo District Municipality

Refer to Section 4.2.1.2.

The Pixley ka Seme District Municipality

Refer to Section 4.2.1.2.

4.4.2. Affected Local Municipalities

- Witzenberg Local Municipality (within the CWDM);
- Laingsburg Local Municipality (within the CKDM);
- Prince Albert Local Municipality (within the CKDM);
- Beaufort West Local Municipality (within the CKDM); and
- Ubuntu Local Municipality (within the PKSDM).

4.4.2.1. Social and Economic Characteristics of Affected Local Municipalities

Witzenberg Local Municipality

Refer to Section 4.2.2.1.

Laingsburg Local Municipality

Refer to Section 4.2.2.1.

Prince Albert Local Municipality

The municipality covers an area of 8,153 square kilometers (3,148 sq. mi) in the Great Karoo immediately north of the Swartberg Mountains. It abuts on the Beaufort West Municipality to the north, the Dr Beyers Naudé local Municipality to the east, the Oudtshoorn and Kannaland Municipalities to the south, and the Laingsburg to the west.

The main town in the municipality is Prince Albert, which as of 2011 has a population of 7,054. North of Prince Albert on the N1 national road is the village of Leeu-Gamka (population 2,727), while Klaarstroom (population 584) is to the east of Prince Albert at the mouth of Meiringspoort. As per Census 2011 Prince Albert Municipality had the second smallest population size in the Province, consisting of 13 136 persons and growing at an average annual rate of 2.2 per cent. This was faster than the District growth rate of 1.6 per cent. The Western Cape Department of Social Development estimated the population to be around 13 956 for 2017 (2016 SEP report).

Table 4: Identified Strengths and Weaknesses in the Affected Local Municipalities

STRENGTHS	WEAKNESSES
Prince Albert Municipality	
<ul style="list-style-type: none"> • Relatively low crime • Tourism destination • Good Agricultural sector • High temperatures • Well managed town • Stable political environment • Functioning ward committees • Stable community • Good public participation record • Audit committee established and functional • Clean environment • Close to national roads, N1 & N12 	<ul style="list-style-type: none"> • Some rural communities still have gravel roads • Potholes in some areas • Inadequate storm water drainage in some areas; • Ageing service infrastructure • Water storage capacity • Limited public transport options • Limited marketing • Professional capacity shortage • Division in the private sector, rather than cooperation • Objections to reasonable and needed

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Silent and calm environment • Popular place for adventures sports, • Cycling routes and hiking trails 	<p>development</p> <ul style="list-style-type: none"> • Geographic isolation • Apartheid spatial legacy

Prince Albert contributed the second largest share (14 per cent or R380 million) to the District’s GDP of R2.7 billion in 2013. Prince Albert has been the fastest growing municipality in the District at 4.5 per cent for the period 2005 – 2013.

The three largest contributors to GDP in 2013 for Prince Albert were the finance, insurance and business services (33 per cent), construction (15 per cent) as well as agriculture, forestry and fishing (13 per cent) sectors. The finance sector is grouped within the broader commercial services sector which maintained the second highest growth rate throughout the period 2005 – 2013.

The commercial services sector was the largest employer in Prince Albert in 2013, employing 32 per cent of the Municipality’s working population in 2013. In turn, the general government and CSP services and the agriculture sectors employed relatively the same percentage of the working population at 24 and 23 per cent respectively.

Beaufort West Local Municipality

Refer to Section 4.2.2.1.

Ubuntu Local Municipality

Refer to Section 4.2.2.1.

4.4.2.2. Key Strengths and Weaknesses in the Affected Local Municipalities

Witzenberg Local Municipality

Refer to Section 4.2.2.2.

Laingsburg Local Municipality

Refer to Section 4.2.2.2.

Prince Albert Local Municipality

- Cultural history;
- Pristine environmental assets; and
- Good governance.

Beaufort West Local Municipality

Refer to Section 4.2.2.2.

Ubuntu Local Municipality

Refer to Section 4.2.2.2.

4.4.3. Key Sensitivity Areas along the Route

4.4.3.1. Identification and Description

Key sensitivity areas were identified as per the methodology described in Section 4.1 and are depicted spatially by Figure 17.

4.4.3.2. Ward Level Data (2011)

Wards are the basic spatial unit demarcated by the Municipal Demarcation Board for the 2011 elections. The key sensitivity Wards identified are in the Local Municipalities of: Witzenberg (Ward 12), Laingsburg (entire LM), Prince Albert Local Municipality (Ward 1), Beaufort West (Wards 2 and 6) and Ubuntu Municipality (Ward 3). Table 5 highlights Ward level data for the sensitivity areas identified for Route Option 3.

Table 5: Ward level data for key sensitivity areas identified along Route Option

Prince Albert Local Municipality – Ward 1	
Population	3522. This represents less than 10% of the total population for the Central Karoo.
Median Age	25 years
Number of households	969 households with 25 (2.6%) being shacks
Migration (born in Western Cape)	92% of the population
Average number of household members	3.6 members per household
Household income / breadline status	Statistics suggest that 60.4% ¹² of households are earning below the breadline of USD2.34 p/p/p/day.
Water source	68.6% of household receive water from a regional or local water service provider

¹² The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 3.5 (HH members) = R40 334.11

Access to toilets	74.1% of households have access to flush or chemical toilets, while 6.4% have no access to any toilets
Employment	Approximately 38.1% of the population are employed, of which 88% are in the formal sector.
Educational level	44.8% of the adult population completed Grade 9 or higher, with 20% completing matric or higher.
School attendance	87.6% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	29.2% (50) of school aged children (5-17 years) are in the labour force
Witzenberg Local Municipality – Ward 12	
Population	8098. This represents less than 10% of the total population for the Cape Winelands District Municipality.
Median Age	26 years
Number of households	2 274 households with 297 (13.1%) being shacks
Migration (born in Western Cape)	63% of the population
Average number of household members	3.5 members per household
Household income / breadline status	Statistics suggest that 70.2% ¹³ of households are earning below the breadline of USD2.34 p/p/day.
Water source	42.5% of household receive water from a regional or local water service provider
Access to toilets	92% of households have access to flush or chemical toilets, while 2.5% have no access to any toilets
Employment	Approximately 62.9% of the population are employed, of which 63% are in the formal sector.
Educational level	41.8% of the adult population completed Grade 9 or higher, with 15% completing matric or higher.
School attendance	82.6% of the school aged children (5-17 years) are in school

¹³ The food poverty line is now USD 2.34 p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 3.5 (HH members) = R39 213.72

Employment of 15-17 year olds	22.6% (83) of school aged children (5-17 years) are in the labour force
Laingsburg Local Municipality (entire LM)	
Population	8289. This represents approximately 10% of the total population for the Central Karoo.
Median Age	30 years
Number of households	2435 households with 30 (1.2%) being shacks
Migration (born in Western Cape)	85% of the population
Average number of household members	3.4 members per household
Household income / breadline status	Statistics suggest that 56.3% ¹⁴ of households are earning below the breadline of USD2.34 p/p/day.
Water source	58.5% of household receive water from a regional or local water service provider
Access to toilets	83.4% of households have access to flush or chemical toilets, while 4.9% have no access to any toilets
Employment	Approximately 53.4% of the population are employed, of which 86% are in the formal sector.
Educational level	46.1% of the adult population completed Grade 9 or higher, with 24.1% completing matric or higher.
School attendance	81.5% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	22.9% (99) of school aged children (5-17 years) are in the labour force
Beaufort West Local Municipality – Ward 2	
Population	6975. This represents almost 10% of the total population in the Central Karoo District Municipality.
Median Age	32 years

¹⁴ The food poverty line is now USD 2.34 p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 3.4 (HH members) = R38 093.82

Number of households	2 017 households with 34 (1.7%) being shacks
Migration (born in Northern Cape)	71% of the population
Average number of household members	3.4 members per household
Household income / breadline status	Statistics suggest that 48.9% ¹⁵ of households are earning below the breadline of USD2.34 p/p/p/day.
Water source	58.1% of households receive water from a regional or local water service provider
Access to toilets	84.1% of households have access to flush or chemical toilets, while 7.5% have no access to any toilets
Employment	Approximately 50.6% of the population are employed, of which 76% are in the formal sector.
Educational level	54.2% of the adult population completed Grade 9 or higher, with 35.2% completing matric or higher.
School attendance	80.7% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	28.4% (89) of school aged children (5-17 years) are in the labour force
Beaufort West Local Municipality – Ward 6	
Population	6349. This represents around 10% of the total population in the Central Karoo District Municipality.
Median Age	24 years
Number of households	1585 households with 9 (0.6%) being shacks
Migration (born in Western Cape)	95% of the population
Average number of household members	4 members per household
Household income / breadline status	Statistics suggest that 79.1% ¹⁶ of households are earning below the breadline of USD2.34 p/p/p/day.

¹⁵ The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 3.4 (HH members) = R38 093.32

¹⁶ The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 4 (HH members) = R44 815.68

Water source	86.2% of households receive water from a regional or local water service provider
Access to toilets	92.3% of households have access to flush or chemical toilets, while 2.1% have no access to any toilets
Employment	Approximately 27.8% of the population are employed, of which 76% are in the formal sector.
Educational level	43.4% of the adult population completed Grade 9 or higher, with 18.1% completing matric or higher.
School attendance	88.3% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	26.6% (103) of school aged children (5-17 years) are in the labour force
Ubuntu Local Municipality – Ward 3	
Population	4715. This represents less than 10% of the total population for the Pixley Ka Seme District Municipality.
Median Age	25 years
Number of households	1 608 households with 20 (1.2%) being shacks
Migration (born in Western Cape)	79% of the population
Average number of household members	2.9 members per household
Household income / breadline status	Statistics suggest that 44.4% ¹⁷ of households are earning below the breadline of USD2.34 p/p/p/day.
Water source	31.1% of household receive water from a regional or local water service provider
Access to toilets	56.4% of households have access to flush or chemical toilets, while 21.7% have no access to any toilets
Employment	Approximately 62.5% of the population are employed, of which 62% are in the formal sector.
Educational level	35% of the adult population completed Grade 9 or higher, with 20.7% completing matric or higher.
School attendance	71.4% of the school aged children (5-17 years) are in school
Employment of 15-17 year olds	32.6% (62) of school aged children (5-17 years) are in the labour force

¹⁷ The food poverty line is now USD 2.34 p/p/p/day (StatSA). USD2.34 (breadline stats) x R13.30 (exch rate) =R933.66 p/m/ R11 203.92 p/yr/ x 2.9 (HH members) = R32 491.36

5. SOCIAL AND ECONOMIC IMPACT ASSESSMENT TERMS OF REFERENCE

The role of a Social and economic impact assessment (SEIA) would be to:

- Define and assess impacts of environmental social and economic consequences of project-driven changes in the baseline environment;
- Identify risks associated with such project-driven changes; and
- Recommend management measures to reduce the negative consequences, and enhance the positive.

The SEIA will provide a baseline description of the study area, specifically focusing on the communities living and working in close proximity to the proposed Power line. The potential impacts of the proposed development on the social environment will be identified and assessed in terms of an agreed assessment methodology. Mitigation measures will be proposed to enhance the positive impacts and reduce the significance of the negative impacts.

The SEIA should follow a phased method approach. A typical example is captured below:

Phase One – Baseline Development during the EIA Scoping Phase

- Confirmation of study area and affected stakeholders (with the project team and relevant public participation team);
- Review of available secondary data and gap analysis. This includes the review of past studies;
- Assess the data collected during the public participation exercises;
- Analyse data produced by Statistics South Africa, including Census 2001 and the Household Survey of 2007 (as it is the only credible, extensive and available source of data at present). Cross correlate statistical data to other existing and valid sources; and
- Prepare a social and economic baseline description of the potentially impacted areas.

Phase Two – Impact, Mitigation and Management Measures during the EIA Impact Assessment Phase

Utilising the data encompassed within the social baseline, undertake:

- *On-site work.* Conduct focus group meetings with sensitive stakeholders as necessary (landowners and other potentially directly affected people) along the route. The targeted areas will be those highlighted as ‘sensitive areas’ during the course of the baseline study. At this point indications for on-site meetings in affected wards can be deduced. The table below presents the areas targeted.

Table 6: Affected Municipalities and Wards

Municipality	Affected Wards	Nearest Town
Witzenberg	12	Touws River
Laingsburg	1,2,3,4 (all)	Laingsburg
Karoo Hoogland	3	Laingsburg, Merweville
Prince Albert	1	Prince Albert, Leeu Gamka
Beaufort West	6, 7	Beaufort West
Ubuntu	3	Victoria West

The results of the first round of public participation meetings allowed the SEIA team to focus efforts to obtain further data from those identified as Interested and Affected Parties (I&APs).

- *Impact identification and assessment.* Following the data collection activities, the social specialist identified the impacts that are associated with the construction and operation of the proposed project. The identification of potential positive and negative impacts are informed by the all data included within the Baseline description (which is amalgamated with further on-site data obtained during this phase) The findings of the other specialist impact assessment studies have been reviewed and used to inform the impact assessment component of the SEIA; and
- *Identification of management and mitigation measures.* Management and mitigation measures to address the identified impacts are recommended and drafted. These measures will be formulated to maximise the positive impacts and reduce the extent of the negative impacts.

6. QUALITATIVE ASSESSMENT

6.1. Methodology

An intensive field visit was conducted during the course of the 21-26 April 2013. The objective of the visit was to :

- Gain a visual understanding of the potentially impacted areas;
- Conduct on –site meetings with key stakeholders (deemed as potentially affected); and
- Get a sense of the potential social and economic benefits and losses that potentially affected people may endure.

A complete schedule of the meetings that were pursued is contained in the table below. The meetings that did materialise are indicated.

Table 7: Interview Schedule

Day	Organisation/Representation	Meeting Held
22-Apr-13	Zion Park Community Leaders	Yes
22-Apr-13	Inverdoorn Game Reserve Owner	Yes
22-Apr-13	Witzenberg Local Municipality: Ward 12 Councilor	No
23-Apr-13	Chairperson: Laingsburg Farmers Association	Yes
23-Apr-13	Chaiperson: Merweville Farmers Association	Yes
23-Apr-13	Affected Ward Councilors: Laingsburg Local Municipality	No
24-Apr-13	Chairperson: Beaufort West Farmer's Association	Yes
24-Apr-13	Potentially affected landowner: Nelspoort	Yes
24-Apr-13	Potentially affected landowner: Leeu Gamka	Yes
25-Apr-13	Prince Albert Municipality: PR Councilor	Yes
25-Apr-13	Chairperson: Prince Albert Agricultural Association	Yes
25-Apr-13	Prince Albert Municipality: Ward 1 Councilor	No

Sensitive areas were also identified all along all three route options. These sensitive areas are depicted by the possible presence of households or residences. Data obtained from the Eskom database (Households derived from SPOT imagery, 2010) formed the basis for the deduction. A map identifying potentially affected households (that lie within the 2 km corridor) of each route option is shown in the map below.

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While many sensitive areas were inaccessible or too far off the route being followed for the field study, many sensitive areas were visited. The following table explains the marking of the sensitive areas, their correlation to each route option and what was found. Photographs of the sensitive areas visited, are found within a photolog in Annexure A.

Table 8: Sensitive Areas Visited

Sensitivity identification (corresponding to map)	Route Option	Findings
Areas 18 and 19	Route Option 3	The affected households have been identified as that of Koos and Ria Moller's farm. No entry could be gained for an interview.
Areas 11, 12, 13, 14	Route Option 3	Inaccessible – private farms
Area 10	Route Option 3	Windmill / reservoir
Area 16	Route Option 3	Farm owner – Ryno Gouws. Current lines are seen within current servitude across the Gouws farmstead – within possible rail reserve and beyond.
Area 17	Route Option 3	Inaccessible – private land. Farm manager at Area 16 does not recall a household at Area 17.
Areas 0, 2, 3, 4, 5	Route Option 1	Farm owner Anthony Mans. Farm name Jack Rivier.
Unmarked area – Lemeonfontein towards De Jagers Pass	Route Option 2	Heavily impacted – visual. Current game park. No current lines

6.2. Results

A brief summary of the results of the on –site visits is found herein. A full narrative of all meetings is contained within Annexure B.

Table 9: Summary of Responses

Nr	Representation / Geographical Area	Directly Impacted by Routing Option (within 2km corridor) & Priority Comments	Recommendations
1	<p>Touws River – Leaders from Zionpark informal settlement</p>	<ul style="list-style-type: none"> • Touws River is approximately 20 kms from Route Option 3. • No direct impact. • Potentially seeking employment during the construction phase of the line. 	<ul style="list-style-type: none"> • As ‘Rasta’ people, constantly feel that they are being sidelined and discriminated against. Would like to see Eskom utilise a fair and equitable local labour pool during construction.



<p>2</p>	<p>Inverdoorn Game Lodge and Rehabilitation centre</p>	<ul style="list-style-type: none"> • Not directly impacted (13 kms from Kappa substation) • No visual impact. 	<ul style="list-style-type: none"> • After looking at the position of the proposed lines and alternatives – concluded that Inverdoorn is not affected by the development and therefore has no objections or concerns.
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<p>3</p>	<p>Laingsburg Farmers Association</p>	<ul style="list-style-type: none"> • Farmers that are currently impacted lie directly in the route of the pink and green lines. All conduct sheep farming, and land is identified as grazing land. There are approximately 19 farmers named as impacted by Route options 1 and 2, many of whom were identified. • The impact on farmers and their fields is considered a long-term impact as the fields cannot regain farming potential. Farms have land for summer and winter grazing. 	<ul style="list-style-type: none"> • Would recommend that the orange line (Route option 3) be recommend mainly because access from the N1 is most probable– there is less impact on roads and fields because they don't need to get into farms for access. With regards to the green line (Route option 2) – certain portions are not very accessible, so the orange line is best.
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		<p>Compensation is paid for the servitude (once-off) and does not cater for long-term damage.</p> <ul style="list-style-type: none"> Roads usage (or the cutting of new roads)- farm roads are not designed for large, heavy trucks that eventually destroy the roads. roads become inaccessible to farmers due to its degradation after prolonged use by heavy vehicles 	
4	Merweville Farmers Association (Including Leeu Gamka)	<ul style="list-style-type: none"> The Karoo is the only region (semi desert) which is self-sufficient – farmers make a living off the land. Sheep farming is the primary activity. Every farmer has wild animals on the farm (game farming). Has identified that at least two farmers will be impacted by the Route options 1 & 2. Farmers were in the past told that contractors (for other Eskom powerlines) will be on the land for 2-3 months – but it has been much longer. Compensation is paid for the establishment of the servitude but it does not cover long term losses suffered by farmers for land and roads. During breeding season and with the birth of young lambs, any construction phase activities cause fear and trauma to sheep. Farmers are not paid / compensated for loss of livestock. 	<ul style="list-style-type: none"> Eskom should compensate farmers for the entire time spent on the property – in that way timelines and only minor damage to property may occur) The Karoo terrain is very different from a desktop study – and therefore the mapped design may not be entirely realistic. Its only when the construction staff are in the field that they make general deviations to the placement of structures. This in itself must be undertaken in consultation with the farmer.
5	Beaufort West Farmers Association/ private landowners	<ul style="list-style-type: none"> Not personally, directly affected. However there are four farmers who they suspect will be directly impacted by the Route option 2. Farmers were identified. 	<ul style="list-style-type: none"> Recommend the Route option 3 as they see topographical challenges with the Route option 1 routing; If electricity supply to farmers could be secured – it would boost the kind of technologies used – possibly an improvement in irrigation techniques, and thus improved output.
6	Nelspoort Farmers	<ul style="list-style-type: none"> There are current Eskom lines running 	<ul style="list-style-type: none"> No direct recommendation given as the

<p>Association</p>	<p>through farms in the Nelspoort area</p> <ul style="list-style-type: none"> • Nelspoort farms may be directly affected by Route option 1 • Past experience with Eskom powerline establishment has reflected <ul style="list-style-type: none"> a) Road damage – still not repaired to standard; b) Trees were cut (more than necessary). Believes these are indigenous tress. Kudu have been affected; and c) Nuisance/ inconvenience to have contractors around 	<p>assumption is that farmers have had negative experiences with the erection of Eskom lines and the establishment of new lines (whether on undisturbed land, or where current lines exist) will not be welcomed.</p>
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<p>7</p>	<p>Leeugamka Farmers Association (recently joined)</p>	<ul style="list-style-type: none"> • Potentially 10 farmers will be impacted by Route option 3. They were identified. 	<p>Existing lines are 20-25 kms from Leeugamka.</p>
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	with Merweville Farmers Association)		<ul style="list-style-type: none"> The Leeu Gamka area is already badly impacted – with three electrical lines and a railway
8	Prince Albert Proportional representative Councilor	<ul style="list-style-type: none"> Doesn't not understand the area very well in terms of who would be impacted – identifies local farmer, Gay van Hassal as potentially impacted. 	<ul style="list-style-type: none"> Councilor suggests keeping with the existing line – Gay van Hassal had telephonically stated that she is not impacted.
9	Prince Albert Agricultural Association	<ul style="list-style-type: none"> Does not see impact of route options directly on Prince Albert. Ensure that farm boundaries and affected farms are identified (mapped). The farming communities must be specifically targeted during public meetings. This must not become a political issue - as this is a livelihoods issue. There may be money coming into the towns. However an increase in vehicles means there is a bigger safety risk. Especially in rural areas. There is possibility of theft of sheep. Farmers are being killed - insecurity situation is high. Strange people on farm building power lines - not from the area - increases security risk. Karoo veld is very sensitive. Once the veld is damaged, it will never be the same again. 	<ul style="list-style-type: none"> If a new line is drawn into the Route option 3) - the line maybe on high ground. The veld is not that good on higher ground. Suggestion - stay on high ground - least impact in terms of grazing. In terms of the access routes to higher ground - land rehabilitation plans have to be in place. Veld must be replaced. Assemble pylons in sections in one place - along the N1 where the road is already disturbed. Visual impact is not as important as ensuring that less veld is impacted. Eskom need to give something back. If the intention is to use land - 'give and take scenario'. Prince Albert desperately needs reliable power for its business growth. Want to see commercial farmers receive benefit from the line. (lowered rates/ sustainable power) - will allow for benefit to be spread to labour and everyone on the farm. Lowered rates plays a role in municipal taxes.

7. IMPACTS AND MITIGATION MEASURES

This section draws on information obtained from an assessment of literary sources, on-site interviews and visual verification of potentially affected sites⁷.

7.1. Methodology

The following rating criteria and scores were used during the impact assessment process:

Table 10: Criteria for the Rating of Classified Impacts

Low impact (4-6 points)	A low impact has no permanent impact of significance. Mitigatory measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact (7-10 points)	Mitigation is possible with additional design and construction inputs.
High impact (11-14 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader social.
Very high impact (15-16 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

⁷ It is expected that a study of this nature, which extends over a vast range (over 400 kms) will not likely reflect the opinions of all stakeholders which are potentially directly/ indirectly affected, rather only a random sample of them. The sample size itself is not based on a scientific calculation as much of the on-site interactions depended on time and availability.

Table 11: Rating Criteria and Scores

RATING CRITERIA AND SCORES

CRITERIA	DESCRIPTION AND RATING			
	4	3	2	1
EXTENT	<p>National</p> <p>The whole of South Africa</p>	<p>Regional</p> <p>Provincial and parts of neighbouring provinces</p>	<p>Local</p> <p>Within a radius of 2km of the construction site</p>	<p>Site</p> <p>Within the construction site</p>
DURATION	<p>Permanent</p> <p>Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient</p>	<p>Long-term</p> <p>The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory</p>	<p>Medium-term</p> <p>The impact will last for the period of the construction phase, where after it will be entirely negated</p>	<p>Short-term</p> <p>The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase</p>
INTENSITY	<p>Very High</p> <p>Natural, cultural and social functions and processes are altered to extent that they permanently cease /continuously improve</p>	<p>High</p> <p>Natural, cultural and social functions and processes are altered to extent that they temporarily cease / improve</p>	<p>Moderate</p> <p>Affected social is altered, but natural, cultural and social functions and processes continue albeit in a modified way</p>	<p>Low</p> <p>Impact affects the social in such a way that natural, cultural and social functions and processes are not affected</p>
PROBABILTY OF OCCURRENCE	<p>Definite</p> <p>Impact will certainly occur</p>	<p>Highly Probable</p> <p>Most likely that the impact will occur</p>	<p>Possible</p> <p>The impact may occur</p>	<p>Improbable</p> <p>Likelihood of the impact materialising is very low</p>

7.2. Impacts and mitigation – Route Option 1

PRE - CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
A1	Loss of areas of cultural heritage	1	4	2	1	8	Medium negative	1	4	2	1	8	Medium negative
A2	Loss of land due to servitude rights	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A3	Existing powerlines in residential property	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A4	Physical and economic displacement	1	4	4	3	12	High negative	1	4	4	3	12	High negative
CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B1	Establishment or extension of informal settlements by people seeking work opportunities	0	0	0	0	0	Not applicable	0	0	0	0	0	Not applicable
B2	Changes in employment and incomes through project recruitment	2	1	2	3	8	Medium positive	2	1	2	3	8	Medium positive
B3	Increased business opportunity through the procurement of goods and services	3	2	1	2	8	Medium positive	3	2	1	2	8	Medium positive
B4	Increased opportunity for informal business development	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive
B5	Investment impact	4	3	3	3	13	High positive	4	3	3	3	13	High positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	2	3	3	3	11	High negative	2	3	1	2	8	Medium negative

CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B7	Community disruption by non-local and local construction workers and opportunity seekers	2	1	1	1	5	Low negative	2	1	1	1	5	Low negative
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	1	1	1	2	5	Low negative	1	1	1	2	5	Low negative
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	2	3	2	2	9	Medium negative	2	2	1	1	6	Low negative
B10	Crime related incidents	2	1	2	3	8	Medium negative	2	1	1	2	6	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	1	2	3	3	9	Medium negative	1	1	1	2	5	Low negative
B12	Possible engineering deviation for topographical reasons	1	1	2	3	7	Medium negative	1	1	2	3	7	Medium negative
OPERATION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B2	Changes in employment and incomes through project recruitment	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive

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B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	1	4	1	4	10	Medium negative	1	4	1	2	8	Medium negative
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CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
C1	Local improvements to power infrastructure with benefits to proximate communities	1	4	1	4	10	Medium negative	1	4	1	4	10	Medium negative
C2	Change to "sense of place"	2	4	3	4	13	High negative	2	4	3	4	13	High negative

Recommended Mitigation

PRE- CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
A1	Loss of areas of cultural heritage	Medium negative	A Heritage study should be undertaken to point out all known and un-known areas of cultural significance so that that these can be protected and left undisturbed during the construction phase.	Medium negative
A2	Loss of land due to servitude rights	High negative	Eskom acquires the servitude right for land from legal owners. Compensation for land and assets is undertaken. Use of the land for agricultural, grazing, access routes, etc., is undertaken at risk as Eskom has a legal obligation to maintain the servitude. The owner seeds use of the land to Eskom, thereby also agreeing that the veld there-under will remain at a safe height. Grazing land is not replaced, unless it grows naturally. This translates into an economic loss for farmers.	High negative
A3	Existing powerlines in residential property	High negative	The negative high impact remains. Once the powerline is established within a household's habitation area, there is no mitigation that can be proposed to alleviate the impact. (In this case, the resettlement of households should be considered. However, resettlement is not regarded as a mitigation measure, but a critical action if the impact cannot be avoided). Potentially impacted households have been identified in Route option 1 (red line in Figure 32) and identified as 6, 1, 0, 2, 3, 4 and 5.	High negative
A4	Physical and economic displacement	High negative	Using the prescribed 2 km corridor, there are a number of assets and households that are directly impacted. The degree to which economic impact occurs will have to be assessed on a case-by-case basis, while Eskom's resettlement policy will have to be applied for physical displacement. The impact will remain 'high negative' due to its nature. Potentially impacted households have been identified in Route option 1 (red line in Figure 32) and identified as 6, 1, 0, 2, 3, 4 and 5.	High negative

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B1	Establishment or extension of informal settlements by people seeking work opportunities	N/A	There is no indication that informal settlements will establish due to the power line development. The existence of informal settlements in the potential areas of impact is currently unknown, as none were visually verifiable during the course of the field visits.	N/A
B2	Changes in employment and incomes through project recruitment	Medium positive	Recruit unskilled and semi-skilled labour locally. There is no certainty in the number of people that will be employed over the construction period. The formulation of a formal recruitment policy will ensure fair access to jobs, especially for local residents. This must be a requirement of companies working in the construction and operations phases. Employment opportunities should be made known through a corporate communication function, and locally via the Local Council offices and Residents Forum. A Contractor Human Resource Development Plan will ensure the on-going training and development of staff.	Medium positive
B3	Increased business opportunity through the procurement of goods and services	Medium positive	This project does not anticipate considerable procurement of goods and services. A contractor Procurement policy must be maintained. Marketing and advertising campaigns to be actively pursued in an effort to procure goods first from local producers/ suppliers, failing which, non-local suppliers may be targeted.	Medium positive
B4	Increased opportunity for informal business development	Low positive	The possibility of new informal business being established as a direct impact of the new powerline, is highly unlikely, given the nature of businesses in the area, and the proximity of villages and residential areas to the development. The land around most of the proposed development area belongs to private farmers (with restricted access), so informal trading activities will not be possible.	Low positive
B5	Investment impact	High positive	Apart from the potential security of consistent power supply that aims to meet residential and business demands in the Western Cape, the general boost to the local economy through employment and procurement (although short term) also promotes local perceptions of a reviving economy. Maintain media and communication. In a national context, the establishment and maintenance of increased accessibility to electricity reflects a major step forward for resident's living conditions (and the adherence to the individual's constitutional right to basic services), and serves to increase business confidence, a spin-off possibly being increased development and trading. This is deemed as a tool that will enhance community and business sustainability in the Western Cape.	High positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	High negative	A policy on Contractor Health and Safety for the duration of their work on site, must apply, and be monitored. Particular focus is to be paid to all construction vehicles (including contractor vehicles) that are utilising adjoining roads as access routes (specifically through communities (including farming communities). A Residents Forum (if not already in existence) should be set up to facilitate on-going communication between Project Management (possibly through a Community participation consultant). Regular information sharing discussions must be pursued, also giving residents an opportunity to voice concerns and grievances throughout the project construction duration.	Medium negative

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B7	Community disruption by non-local and local construction workers and opportunity seekers	Low negative	It is anticipated that the majority of the non-skilled labour force will be recruited from the exiting local communities, however it is still important that a construction phase Code of Conduct should be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities. These policies are vital, as non-local labourers may take up residence in nearby informal or farm settlements - thus adding to potential social ills in those communities.	Low negative
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	Low negative	Since Eskom is well advised to employ local labour - it is highly unlikely that there will be work seekers in the vicinity of the development, other than the local populations. Local populations reside at an average of 20 kms to 40 kms from the proposed powerlines. In addition, there is no evidence of dense host populations closer to the proposed powerlines (apart from the towns of Merweville and Beaufort West) which will, for all intents and purposes, also be the potential labour pool. A construction phase Code of Conduct will be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community/ farm community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities. Construction phase activities will be communicated through the corporate communication function and via the Resident's Forum.	Low negative
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	Medium negative	Only a certain number of people will be employed during construction. This number is not known at present. In the context of widespread unemployment, local residents (and especially people in the proximate area to the development) will be dissatisfied if access to the finite construction phase jobs and the provision of associated services is perceived to be biased and preferential. The establishment of a labour office during construction may dispel fears that the recruitment of local labour is political, gender or culturally biased. The labour office is more likely to be seen as independent and objective. Contractors must develop and implement a recruitment and employment policy, and a goods and services procurement policy that will promote fair access to jobs and procurement opportunities, through an objective and transparent process.	Low negative
B10	Crime related incidents	Medium negative	Petty crimes (and an increase in cable theft) may occur in communities or even along the route. A proper security strategy must be put in place for site specific crimes. The cumulative effect of added crime in the surrounding communities may enhance the dire situation. Community policing would need to be increased. Increased engagement with communities with regards to finding solutions to cable theft scenarios should be pursued.	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	Medium negative	While the affected person (whose land is sought for the servitude) is compensated for the land (which may range from 55 meters to 80 meters), a timeline is signed against by both Eskom and the owner. Time delays to the projects may extend the powerline development - and the owner should be duly compensated for the added inconvenience, use of private roads, etc.	Low negative

7.3. Impacts and mitigation – Route Option 2

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B12	Possible engineering deviation for topographical reasons	Medium negative	Should the design plans change due to topographical challenges (steep ridges, valley, etc.), the affected person (on whose land the pylon will be erected, should be duly informed if the location of the structure shifts outside of the agreed servitude.	Medium negative
OPERATION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B2	Changes in employment and incomes through project recruitment	Low positive	Operational activities are likely to be limited only to the maintenance of the servitude - which will be undertaken according to a maintenance schedule set by Eskom.	Low positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	Medium negative	The servitude maintenance vehicles will still pose a threat to farm animals and potentially labourers as they will all be utilising the same access routes via farms. Special precaution to be maintained with regards to health and safety risks. All contractors (maintenance staff) should be regularly trained on good farm road safety measures.	Medium negative
C1	Local improvements to power infrastructure with benefits to proximate communities	Medium negative	Residents will have to face the inconveniences related to the construction of the powerlines, however no direct benefit will be forthcoming from Eskom. This is a permanent impact. No mitigation proposed.	Medium negative
C2	Change to "sense of place"	High negative	Change to peoples' perception of the alteration of their homeland is not a mitigation measure that can be proposed. Human nature is rooted in association to place and time. Drastic changes to landscape cannot be mitigated.	High negative

7.3. Impacts and mitigation – Route Option 2

PRE - CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
A1	Loss of areas of cultural heritage	1	4	2	1	8	Medium negative	1	4	2	1	8	Medium negative
A2	Loss of land due to servitude rights	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A3	Existing powerlines in residential property	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A4	Physical and economic displacement	1	4	4	3	12	High negative	1	4	4	3	12	High negative
CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B1	Establishment or extension of informal settlements by people seeking work opportunities	0	0	0	0	0	Not applicable	0	0	0	0	0	Not applicable
B2	Changes in employment and incomes through project recruitment	2	1	2	3	8	Medium positive	2	1	2	3	8	Medium positive
B3	Increased business opportunity through the procurement of goods and services	3	2	1	2	8	Medium positive	3	2	1	2	8	Medium positive
B4	Increased opportunity for informal business development	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive
B5	Investment impact	4	3	3	3	13	High positive	4	3	3	3	13	High positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	2	3	3	3	11	High negative	2	3	1	2	8	Medium negative

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CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B7	Community disruption by non-local and local construction workers and opportunity seekers	2	1	1	1	5	Low negative	2	1	1	1	5	Low negative
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	1	1	1	2	5	Low negative	1	1	1	2	5	Low negative
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	2	3	2	2	9	Medium negative	2	2	1	1	6	Low negative
B10	Crime related incidents	2	1	2	3	8	Medium negative	2	1	1	2	6	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	1	2	3	3	9	Medium negative	1	1	1	2	5	Low negative
B12	Possible engineering deviation for topographical reasons	1	1	2	3	7	Medium negative	1	1	2	3	7	Medium negative
OPERATION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B2	Changes in employment and incomes through project recruitment	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	1	4	1	4	10	Medium negative	1	4	1	2	8	Medium negative

OPERATION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
C1	Local improvements to power infrastructure with benefits to proximate communities	1	4	1	4	10	Medium negative	1	4	1	4	10	Medium negative
C2	Change to "sense of place"	2	4	3	4	13	High negative	2	4	3	4	13	High negative

Recommended Mitigation

PRE - CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
A1	Loss of areas of cultural heritage	Medium negative	A Heritage study should be undertaken to point out all known and un-known areas of cultural significance so that that these can be protected and left undisturbed during the construction phase.	Medium negative
A2	Loss of land due to servitude rights	High negative	Eskom acquires the servitude right for land from legal owners. Compensation for land and assets is undertaken. Use of the land for agricultural, grazing, access routes, etc., is undertaken at risk as Eskom has a legal obligation to maintain the servitude. The owner seeds use of the land to Eskom, thereby also agreeing that the veld there-under will remain at a safe height. Grazing land is not replaced, unless it grows naturally. This translates into an economic loss for farmers.	High negative
A3	Existing powerlines in residential property	High negative	The negative high impact remains. Once the powerline is established within a household's habitation area, there is no mitigation that can be proposed to alleviate the impact. (In this case, the resettlement of households should be considered. However, resettlement is not regarded as a mitigation measure, but a critical action if the impact cannot be avoided). Potentially impacted households have been identified in Route option 2 (green line in Figure 32.) and identified as 7, 8 and 9.	High negative
A4	Physical and economic displacement	High negative	Using the prescribed 2 km corridor, there are a number of assets and households that are directly impacted. The degree to which economic impact occurs will have to be assessed on a case-by-case basis, while Eskom's resettlement policy will have to be applied for physical displacement. The impact will remain 'high negative' due to its nature. Potentially impacted households have been identified in Route option 2 (green line in Figure 32.) and identified as 7, 8 and 9.	High negative

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B1	Establishment or extension of informal settlements by people seeking work opportunities	N/A	There is no indication that informal settlements will establish due to the power line development. The existence of informal settlements in the potential areas of impact is currently unknown, as none were visually verifiable during the course of the field visits.	N/A
B2	Changes in employment and incomes through project recruitment	Medium positive	Recruit unskilled and semi-skilled labour locally. There is no certainty in the number of people that will be employed over the construction period. The formulation of a formal recruitment policy will ensure fair access to jobs, especially for local residents. This must be a requirement of companies working in the construction and operations phases. Employment opportunities should be made known through a corporate communication function, and locally via the Local Council offices and Residents Forum. A Contractor Human Resource Development Plan will ensure the on-going training and development of staff.	Medium positive
B3	Increased business opportunity through the procurement of goods and services	Medium positive	This project does not anticipate considerable procurement of goods and services. A contractor Procurement policy must be maintained. Marketing and advertising campaigns to be actively pursued in an effort to procure goods first from local producers/ suppliers, failing which, non-local suppliers may be targeted.	Medium positive
B4	Increased opportunity for informal business development	Low positive	The possibility of new informal business being established as a direct impact of the new powerline, is highly unlikely, given the nature of businesses in the area, and the proximity of villages and residential areas to the development. The land around most of the proposed development area belongs to private farmers (with restricted access), so informal trading activities will not be possible.	Low positive
B5	Investment impact	High positive	Apart from the potential security of consistent power supply that aims to meet residential and business demands in the Western Cape, the general boost to the local economy through employment and procurement (although short term) also promotes local perceptions of a reviving economy. Maintain media and communication. In a national context, the establishment and maintenance of increased accessibility to electricity reflects a major step forward for resident's living conditions (and the adherence to the individual's constitutional right to basic services), and serves to increase business confidence, a spin-off possibly being increased development and trading. This is deemed as a tool that will enhance community and business sustainability in the Western Cape.	High positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	High negative	A policy on Contractor Health and Safety for the duration of their work on site, must apply, and be monitored. Particular focus is to be paid to all construction vehicles (including contractor vehicles) that are utilising adjoining roads as access routes (specifically through communities (including farming communities). A Residents Forum (if not already in existence) should be set up to facilitate on-going communication between Project Management (possibly through a Community participation consultant). Regular information sharing discussions must be pursued, also giving residents an opportunity to voice concerns and grievances throughout the project construction duration.	Medium negative
B7	Community disruption by non-local and local construction workers and opportunity seekers	Low negative	It is anticipated that the majority of the non-skilled labour force will be recruited from the exiting local communities, however it is still important that a construction phase Code of Conduct should be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities. These policies are vital, as non-local labourers may take up residence in nearby informal or farm settlements - thus adding to potential social ills in those communities.	Low negative

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	Low negative	<p>Since Eskom is well advised to employ local labour - it is highly unlikely that there will be work seekers in the vicinity of the development, other than the local populations. Local populations reside at an average of 20 kms to 40 kms from the proposed powerlines. In addition, there is no evidence of dense host populations closer to the proposed powerlines (apart from the towns of Merweville and Beaufort West) which will, for all intents and purposes, also be the potential labour pool.</p> <p>A construction phase Code of Conduct will be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community/ farm community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities.</p> <p>Construction phase activities will be communicated through the corporate communication function and via the Resident's Forum.</p>	Low negative
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	Medium negative	<p>Only a certain number of people will be employed during construction. This number is not known at present. In the context of widespread unemployment, local residents (and especially people in the proximate area to the development) will be dissatisfied if access to the finite construction phase jobs and the provision of associated services is perceived to be biased and preferential.</p> <p>The establishment of a labour office during construction may dispel fears that the recruitment of local labour is political, gender or culturally biased. The labour office is more likely to be seen as independent and objective. Contractors must develop and implement a recruitment and employment policy, and a goods and services procurement policy that will promote fair access to jobs and procurement opportunities, through an objective and transparent process.</p>	Low negative
B10	Crime related incidents	Medium negative	<p>Petty crimes (and an increase in cable theft) may occur in communities or even along the route. A proper security strategy must be put in place for site specific crimes. The cumulative effect of added crime in the surrounding communities may enhance the dire situation. Community policing would need to be increased. Increased engagement with communities with regards to finding solutions to cable theft scenarios should be pursued.</p>	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	Medium negative	<p>While the affected person (whose land is sought for the servitude) is compensated for the land (which may range from 55meters to 80 meters), a timeline is signed against by both Eskom and the owner. Time delays to the projects may extend the powerline development - and the owner should be duly compensated for the added inconvenience, use of private roads, etc.</p>	Low negative
B12	Possible engineering deviation for topographical reasons	Medium negative	<p>Should the design plans change due to topographical challenges (steep ridges, valley, etc.), the affected person (on whose land the pylon will be erected, should be duly informed if the location of the structure shifts outside of the agreed servitude.</p>	Medium negative

OPERATION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B2	Changes in employment and incomes through project recruitment	Low positive	Operational activities are likely to be limited only to the maintenance of the servitude - which will be undertaken according to a maintenance schedule set by Eskom.	Low positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	Medium negative	The servitude maintenance vehicles will still pose a threat to farm animals and potentially labourers as they will all be utilising the same access routes via farms. Special precaution to be maintained with regards to health and safety risks. All contractors (maintenance staff) should be regularly trained on good farm road safety measures.	Medium negative
C1	Local improvements to power infrastructure with benefits to proximate communities	Medium negative	Residents will have to face the inconveniences related to the construction of the powerlines, however no direct benefit will be forthcoming from Eskom. This is a permanent impact. No mitigation proposed.	Medium negative
C2	Change to "sense of place"	High negative	Change to peoples' perception of the alteration of their homeland is not a mitigation measure that can be proposed. Human nature is rooted in association to place and time. Drastic changes to landscape cannot be mitigated.	High negative

7.4. Impacts and mitigation – Route Option 3

PRE - CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
A1	Loss of areas of cultural heritage	1	4	2	1	8	Medium negative	1	4	2	1	8	Medium negative
A2	Loss of land due to servitude rights	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A3	Existing powerlines in residential property	1	4	4	4	13	High negative	1	4	4	4	13	High negative
A4	Physical and economic displacement	1	4	4	3	12	High negative	1	4	4	3	12	High negative
CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B1	Establishment or extension of informal settlements by people seeking work opportunities	0	0	0	0	0	Not applicable	0	0	0	0	0	Not applicable
B2	Changes in employment and incomes through project recruitment	2	1	2	3	8	Medium positive	2	1	2	3	8	Medium positive
B3	Increased business opportunity through the procurement of goods and services	3	2	1	2	8	Medium positive	3	2	1	2	8	Medium positive
B4	Increased opportunity for informal business development	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive
B5	Investment impact	4	3	3	3	13	High positive	4	3	3	3	13	High positive

HESSA Nzumbululo Gamma to Kappa Social and Economic Impact Report

CONSTRUCTION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	2	3	3	3	11	High negative	2	3	1	2	8	Medium negative
B7	Community disruption by non-local and local construction workers and opportunity seekers	2	1	1	1	5	Low negative	2	1	1	1	5	Low negative
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	1	1	1	2	5	Low negative	1	1	1	2	5	Low negative
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	2	3	2	2	9	Medium negative	2	2	1	1	6	Low negative
B10	Crime related incidents	2	1	2	3	8	Medium negative	2	1	1	2	6	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	1	2	3	3	9	Medium negative	1	1	1	2	5	Low negative
B12	Possible engineering deviation for topographical reasons	1	1	2	3	7	Medium negative	1	1	2	3	7	Medium negative

OPERATION PHASE													
Pre mitigation								Post mitigation					
Ref No.	Impact Description	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact	Extent	Duration	Intensity	Probability of occurrence	Impact Rating	Classification of Impact
B2	Changes in employment and incomes through project recruitment	1	1	1	2	5	Low positive	1	1	1	2	5	Low positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	1	4	1	4	10	Medium negative	1	4	1	2	8	Medium negative
C1	Local improvements to power infrastructure with benefits to proximate communities	1	4	1	4	10	Medium negative	1	4	1	4	10	Medium negative
C2	Change to "sense of place"	2	4	3	4	13	High negative	2	4	3	4	13	High negative

Recommended Mitigation

PRE - CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
A1	Loss of areas of cultural heritage	Medium negative	A Heritage study should be undertaken to point out all known and un-known areas of cultural significance so that that these can be protected and left undisturbed during the construction phase.	Medium negative
A2	Loss of land due to servitude rights	High negative	Eskom acquires the servitude right for land from legal owners. Compensation for land and assets is undertaken. Use of the land for agricultural, grazing, access routes, etc., is undertaken at risk as Eskom has a legal obligation to maintain the servitude. The owner seeds use of the land to Eskom, thereby also agreeing that the veld there-under will remain at a safe height. Grazing land is not replaced, unless it grows naturally. This translates into an economic loss for farmers.	High negative

PRE-CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
A3	Existing powerlines in residential property	High negative	The negative high impact remains. Once the powerline is established within a household's habitation area, there is no mitigation that can be proposed to alleviate the impact. (In this case, the resettlement of households should be considered. However, resettlement is not regarded as a mitigation measure, but a critical action if the impact cannot be avoided). Potentially impacted households have been identified in Route option 3 (and identified as 18, 19, 11, 12, 13, 14, 10, 16, 17 and 15.	High negative
A4	Physical and economic displacement	High negative	Using the prescribed 2 km corridor, there are a number of assets and households that are directly impacted. The degree to which economic impact occurs will have to be assessed on a case-by-case basis, while Eskom's resettlement policy will have to be applied for physical displacement. The impact will remain 'high negative' due to its nature. Potentially impacted households have been identified in Route option 3 (and identified as 18, 19, 11, 12, 13, 14, 10, 16, 17 and 15.	High negative
CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B1	Establishment or extension of informal settlements by people seeking work opportunities	N/A	There is no indication that informal settlements will establish due to the power line development. The existence of informal settlements in the potential areas of impact is currently unknown, as none were visually verifiable during the course of the field visits.	N/A
B2	Changes in employment and incomes through project recruitment	Medium positive	Recruit unskilled and semi-skilled labour locally. There is no certainty in the number of people that will be employed over the construction period. The formulation of a formal recruitment policy will ensure fair access to jobs, especially for local residents. This must be a requirement of companies working in the construction and operations phases. Employment opportunities should be made known through a corporate communication function, and locally via the Local Council offices and Residents Forum. A Contractor Human Resource Development Plan will ensure the on-going training and development of staff.	Medium positive
B3	Increased business opportunity through the procurement of goods and services	Medium positive	This project does not anticipate considerable procurement of goods and services. A contractor Procurement policy must be maintained. Marketing and advertising campaigns to be actively pursued in an effort to procure goods first from local producers/ suppliers, failing which, non-local suppliers may be targeted.	Medium positive
B4	Increased opportunity for informal business development	Low positive	The possibility of new informal business being established as a direct impact of the new powerline, is highly unlikely, given the nature of businesses in the area, and the proximity of villages and residential areas to the development. The land around most of the proposed development area belongs to private farmers (with restricted access), so informal trading activities will not be possible.	Low positive

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B5	Investment impact	High positive	<p>Apart from the potential security of consistent power supply that aims to meet residential and business demands in the Western Cape, the general boost to the local economy through employment and procurement (although short term) also promotes local perceptions of a reviving economy. Maintain media and communication.</p> <p>In a national context, the establishment and maintenance of increased accessibility to electricity reflects a major step forward for resident's living conditions (and the adherence to the individual's constitutional right to basic services), and serves to increase business confidence, a spin-off possibly being increased development and trading. This is deemed as a tool that will enhance community and business sustainability in the Western Cape.</p>	High positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	High negative	<p>A policy on Contractor Health and Safety for the duration of their work on site, must apply, and be monitored. Particular focus is to be paid to all construction vehicles (including contractor vehicles) that are utilising adjoining roads as access routes (specifically through communities (including farming communities). A Residents Forum (if not already in existence) should be set up to facilitate on-going communication between Project Management (possibly through a Community participation consultant). Regular information sharing discussions must be pursued, also giving residents an opportunity to voice concerns and grievances throughout the project construction duration.</p>	Medium negative
B7	Community disruption by non-local and local construction workers and opportunity seekers	Low negative	<p>It is anticipated that the majority of the non-skilled labour force will be recruited from the exiting local communities, however it is still important that a construction phase Code of Conduct should be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities. These policies are vital, as non-local labourers may take up residence in nearby informal or farm settlements - thus adding to potential social ills in those communities.</p>	Low negative
B8	Increased local risk of HIV/AIDS infection with influx of workers and opportunity seekers	Low negative	<p>Since Eskom is well advised to employ local labour - it is highly unlikely that there will be work seekers in the vicinity of the development, other than the local populations. Local populations reside at an average of 20 kms to 40 kms from the proposed powerlines. In addition, there is no evidence of dense host populations closer to the proposed powerlines (apart from the towns of Laingsburg, Leeu Gamka and Beaufort West) which will, for all intents and purposes, also be the potential labour pool.</p> <p>A construction phase Code of Conduct will be prepared and implemented among construction workers. The Code of Conduct will enforce and monitor appropriate relationships between construction workers and community/ farm community members. In addition the Community Health and Safety Policy must act to concretise safety, awareness and conduct in proximate communities.</p> <p>Construction phase activities will be communicated through the corporate communication function and via the Resident's Forum.</p>	Low negative

CONSTRUCTION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B9	Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement	Medium negative	<p>Only a certain number of people will be employed during construction. This number is not known at present. In the context of widespread unemployment, local residents (and especially people in the proximate area to the development) will be dissatisfied if access to the finite construction phase jobs and the provision of associated services is perceived to be biased and preferential.</p> <p>The establishment of a labour office during construction may dispel fears that the recruitment of local labour is political, gender or culturally biased. The labour office is more likely to be seen as independent and objective. Contractors must develop and implement a recruitment and employment policy, and a goods and services procurement policy that will promote fair access to jobs and procurement opportunities, through an objective and transparent process.</p>	Low negative
B10	Crime related incidents	Medium negative	<p>Petty crimes (and an increase in cable theft) may occur in communities or even along the route. A proper security strategy must be put in place for site specific crimes. The cumulative effect of added crime in the surrounding communities may enhance the dire situation. Community policing would need to be increased. Increased engagement with communities with regards to finding solutions to cable theft scenarios should be pursued.</p>	Low negative
B11	Inconvenience related to contracted staff on residential/ farm land for extended periods	Medium negative	<p>While the affected person (whose land is sought for the servitude) is compensated for the land (which may range from 55meters to 80 meters), a timeline is signed against by both Eskom and the owner. Time delays to the projects may extend the powerline development - and the owner should be duly compensated for the added inconvenience, use of private roads, etc.</p>	Low negative
B12	Possible engineering deviation for topographical reasons	Medium negative	<p>Should the design plans change due to topographical challenges (steep ridges, valley, etc.), the affected person (on whose land the pylon will be erected, should be duly informed if the location of the structure shifts outside of the agreed servitude.</p>	Medium negative
OPERATION PHASE				
Ref No.	Impact Description	Significance (pre mitigation)	Mitigation and Management Measures	Significance (post mitigation)
B2	Changes in employment and incomes through project recruitment	Low positive	<p>Operational activities are likely to be limited only to the maintenance of the servitude - which will be undertaken according to a maintenance schedule set by Eskom.</p>	Low positive
B6	Inconvenience and danger to proximate residents through increased road traffic and dust.	Medium negative	<p>The servitude maintenance vehicles will still pose a threat to farm animals and potentially labourers as they will all be utilising the same access routes via farms. Special precaution to be maintained with regards to health and safety risks. All contractors (maintenance staff) should be regularly trained on good farm road safety measures.</p>	Medium negative
C1	Local improvements to power infrastructure with benefits to proximate communities	Medium negative	<p>Residents will have to face the inconveniences related to the construction of the powerlines, however no direct benefit will be forthcoming from Eskom. This is a permanent impact. No mitigation proposed.</p>	Medium negative
C2	Change to "sense of place"	High negative	<p>Change to peoples' perception of the alteration of their homeland is not a mitigation measure that can be proposed. Human nature is rooted in association to place and time. Drastic changes to landscape cannot be mitigated.</p>	High negative

8. CONCLUSION AND RECOMMENDED WAY FORWARD

Each of the three Options / alternatives shows an equal number of impacts, of equal type and range. This is so because the environment in which the project is proposed (for each of the three routes), is almost identical in terms of habitation and usage. Below, a summary of the impacts is found.

Table 12: Summary of Post Mitigation Impact Ratings per Route Option

Project Phase	Impact Ratings for Route Option 1)				Impact Ratings for Route Option 2				Impact Ratings for Route Option 3			
	Positive	Negative	N/A	Range	Positive	Negative	N/A	Range	Positive	Negative	N/A	Range
Pre-construction Phase	0	4	0	Medium to High	0	4	0	Medium to High	0	4	0	Medium to High
Construction Phase	4	7	1	Low to High	4	7	1	Low to High	4	7	1	Low to High
Operational Phase	1	3	0	Low to High	1	3	0	Low to High	1	3	0	Low to High
Sub totals	5	14	1		5	14	1		5	14	1	

Clearly, the impacts that are likely to be experienced along any route are likely to be similar. This study, if compelled to recommend a route for this project, would recommend the following:

Primarily keep with the existing Route option 3 but consider the following (refer to Figure 18 for verification):

- 1) Host specific meetings with directly impacted individuals along the 'improved route'. (Along the original proposed route, it may include the Möller's farm near the Kappa substation, and potentially all households identified in Figure 18 of this report). It is equally important that affected individuals be aware of the existing powerlines, farm portions and owners in order to make informed decisions;
- 2) To fully understand the direct economic impacts that will be experienced by each landowner in the widely farmed area, it is recommended that individual economic audits/ cost benefit analysis be undertaken for each prior to their signing of any contractual agreements with Eskom;
- 3) As part of the 'improved route', consider the option to run the new line closer to the old line, which rests largely north of Route option 3 This is tagged as "A" in Figure 19;
- 4) As part of the 'improved route', consider the option to follow an existing powerline which runs closer to the N1, all the way to Beaufort West. This is tagged as "B" in Figure 19. There is a field-verified railway servitude along which it is recommended that Route option 3 continue to run. This is tagged "C" in Figure 19;
- 5) Keep with the intended routing of the line closer to the Nelspoort area. This is tagged as "D" in Figure 19; and
- 6) If deviations are being sought as part of the 'improved route,' consider locating structures on higher ground (as the quality of grazing land is poorer), but only after consultations with directly affected individuals.

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ANNEXURE A

Sensitivity identification	Route Option
Areas 18 and 19	Route Option 3
Areas 11, 12, 13, 14	Route Option 3
Area 10	Route Option 3
Area 16	Route Option 3
Area 17	Route Option 3
Areas 0, 2, 3, 4, 5	Route Option 1
Unmarked area – Lemeonfontein towards De Jagers Pass	Route Option 2

Areas 18 and 19

Route Option 3





Areas 11, 12, 13, 14

Route Option 3



Area 10

Route Option 3



Area 16

Route Option 3



Rail Reserve close to Area 16



Area 17

Route Option 3



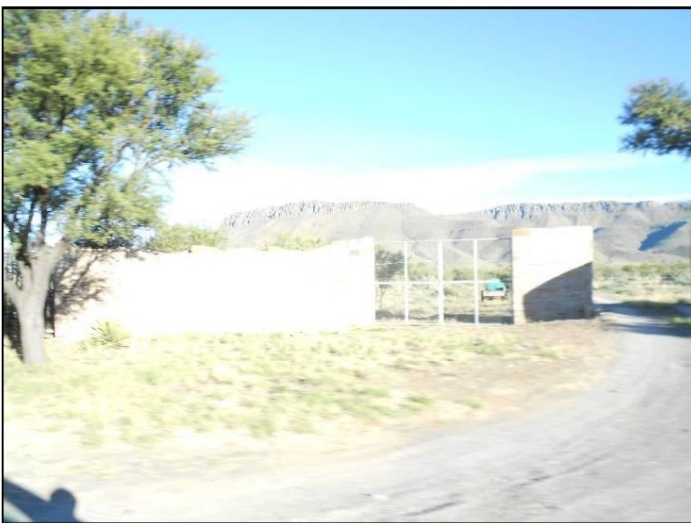
Areas 0, 2, 3, 4, 5

Route Option 1



Unmarked area- Lemeonfontein towards De Jagers Pass

Route Option 2





ANNEXURE B

Narrative of field interviews

22 April 2013

Representatives : Touws River – Leaders from Zionpark informal settlement

- Zionpark is the only informal settlement in Touws River.
- Zionpark is approximately 2 yrs old and constitutes people 300 people from the Touws River area.
- There are no basic services provided in Zionpark, but people are awaiting government housing.
- The development route is approximately 20-30 kms from Touws river.
- There are no known communities in close proximity to the line, the closest is Touws river. The people that may live out in that area are likely to be farm labourers that are housed temporarily.
- The Zionpark leaders are in the process of getting a labour database together – of all people in Zionpark that can be used as a pool of labour for the Eskom development. Community labour should be accessed through such a database.
- As 'Rasta' people, constantly feel that they are being sidelined and discriminated against. Would like an equal chance at employment opportunities.
- Feel as if the ward councillor (from Touws River) is unrepresentative, therefore as elected leaders of the community, feel its their duty to voice the concerns of the nearby community which always feels marginalised.
- In past projects the Cape Winelands District Municipality has played a major role in housing and labour allocation – and fear that the DM will take control of labour allocation, with no thought to Zionpark. Even present day housing and basic service delivery priorities have become Worcester and De Doorns.

22 April 2013

Game Farm Owner : Inverdoorn Game Lodge and Rehabilitation centre

- Has not been visited by anyone with regards to the new development.
- Inverdoorn's perimeter lies approximately 13kms to the nearest point of the proposed development.
- After looking at the position of the proposed lines and alternatives – concluded that Inverdoorn is not affected by the development and therefore has no objections or concerns.
- The Kappa substation was started approximately 2 yrs ago
- Inverdoorn has approx 80 people on site (many of whom live on the property), nd a collective staff complement of approx 100 (incl CTown/ Jhb)
- There is no visual impact, no understanding of potential impact to bird life.
- The only impact foreseeable is that of road use (R355 off the R46). Particularly during construction phase it is expected that road usage and vehicle numbers will increase, however does not foresee a concern or visible threat.

Visible Impact - 22 Apr (Kappa substation)

Koos and Ria Moller's farm seems to be the area in which the Kappa substation is being built. The same farm road is accessed by Kappa workers. There are signs of construction – uncertain what the details are. The Mollers could not be reached for comment as their farm gate was locked, with no contact numbers available.

April 23

Mr Andries Le Roux : Chairman of the Laingsburg Farmers Association

Characteristics of present farming – 4200 hectares.

- Primarily sheep farming. 60 Hectares is set aside for agriculture (carrots, onion and lucern on a rotational basis – all for subsistence purposes. Carrot and onion seeds are produced for export;
- Current irrigation includes centre pivots.

Opinion regarding impact implications

- Farmers that are currently impacted lie directly in the route o. All conduct sheep farming, and land is identified as grazing land. There are approximately 10 farmers named as impacted by the red line (Route option 1), some of which were identified as:
 - Douglas Calldo
 - Kobus Le Roux
 - Andries Le Roux
 - Piet Conradie
 - Francois Conradie
 - Ockie Conradie
 - Christiaan van der Vyver
 - Niël Brink
 - Erasmus van Zyl
 - Eldri van Zyl
 - PJD Stofberg
 - Hennie Muller
 - Billy Myburgh
- Directly affected individuals by the green line (Route option 2) include:
 - Lukas Botes
 - Piet Gouws
 - HJC Groenewald
 - Adriaan Botes
 - David Lascomb
 - Frans du Toit
 - Christiaan van der Vyver
- There would be a positive impact for the village as a whole, but would be short term, as it would last only for the construction period;

- The impact on farmers and their fields is considered a long-term impact as the fields cannot regain farming potential. Compensation is paid for the servitude (once-off);
- There was a previous line built (approximately 50 years ago). The field does not recover within 1-10 years, even from fires. Recovery is a long term process. 7 hectares is required per small stock unit (1 sheep/ goat) 32 for large stock. The foreseeable problem related to the slow recovery of the field and roads usage (or the cutting of new roads). Roads are not designed for large, heavy trucks that eventually destroy the roads. There is a proposed meeting between Landbou and Agriculture Western Cape (representing farmers) and Eskom and SanRal to demonstrate such impact. Essentially, farmers do not want trucks on gravel roads that are for their (farmers) use – as roads become inaccessible to farmers due to its degradation after prolonged use by heavy vehicles;
- The land between the pink and green lines are for summer and winter use – therefore all farmers are affected

Recommendation

- Would recommend that the orange line be recommend mainly because access from the N1 – there is less impact on roads and fields because they don't need to get into farms for access. With regards to the green line – certain portions are not very accessible, so the orange line is best.

23 April

Mr Charles Muller : Chairman of the Merveville Farmers Association (Including Leeu Gamka)

Opinion regarding impact implications

- Will be directly affected. From the Leeugamka Northern Cape birder – assumes that approximately 2- farmers will be affected by the green and pink lines. To his knowledge they are located between the green/ pink and oranges lines.
- Sees the connection to electricity being largely positive for the community and village business (local business), but not good for farmers;
- Used an example of the current Eskom line that was built to benefit Merweville, where it took almost a year to complete as a result of sub contractors not working according to specification. Of the opinion that sub-contractors never deliver on time. Farmers were in the past told that contractors will be on the land for 2-3 months – but it has been much longer. Compensation is paid for the establishment of the servitude but it does not cover long term losses suffered by farmers;
- Windfarm developers wanted to develop substation on Charle's property – compensation is the same as Eskom's. Would rather pay Eskom – to stay away from farm land (as it may work out cheaper for the farmer in the long run);
- From past experience understands that for such development, trucks carrying loads of over 1000 tons will have to navigate the roads onto sites. Many contractors will end up making new roads. The use of roads does not show efficiency – 1 person per vehicle, as compared to 3-4 people per vehicle;

- Charles is the current owner of a farm west of Merweville. The green and pink lines cut through his farm. The pink line cuts through a neighbouring farm land belonging to A Mans. In 1964, powerlines were erected near his current farm. Almost 50 years later roads are still damaged, even after farmers tried filling in the damaged roads;
- While contractors usually take good care over the closure of farm gates, the risk for farmers is the damage to roads and land. Past cases of such damage has been reported by farmers;
- The Karoo is the only region (semi desert) which is self-sufficient – farmers make a living off the land. Sheep farming is the primary activity. Every farmer has wild animals on the farm (game farming)
- During breeding season and with the birth of young lambs, any construction phase activities cause fear and trauma to sheep.
- Farmers are not paid / compensated for loss of livestock.

Comments

- A topographical map is needed which will show farms;
- Would like to see 3 maps superimposed (current lines + topographical map with farm boundaries + map with routing alternatives)
- Opinion that Eskom may expropriate land if farmers are in resistance and do not accept compensation.
- Eskom should compensate farmers for the entire time spent on the property – in that way timelines and only minor damage to property may occur)
- The Karoo terrain is very different from a desktop study – and therefore the mapped design may not be entirely realistic. Its only when the construction staff are in the field that they make general deviations to the placement of structures. This in itself must be undertaken in consultation with the farmer.

24 April

Beaufort West Farmers Association (however representation occurred as private landowners) Mr J Scheün and Andrew Jack (also Chairperson of the Beaufort West Farmers Association)

The meeting attendees had, after assessing the map, agreed that they are not personally, directly affected. However the farmers who they suspect will be directly impacted are:

- Werner Koster
- Charles De Villiers (De Hoop)
- Gideon Vivier
- Michael Ansty (Nelspoort area)

General Comments

- If electricity supply to farmers could be secured – it would boost the kind of technologies used – possibly an improvement in irrigation techniques, and thus improved output.

24 April

**Wylie Esterhuizen – Chairperson Nelspoort Farmers Association / Roelie van der Merwe
(Nelspoort farmer)**

Wylie is the farm manager at Buffelsfontein (owned by R vd Merwe)

General comments

- Buffelsfontein is a 5000 hectare farm area, used for sheep farming. There is a fair amount of game on the farm. Approximately 2 years ago farm owner signed with Eskom – Eskom servitudes and overhead lines were erected. The job was completed a month ago;
- Believes that the farms that will be severely affected lie within the pink line routing alternative.

Complaints

- Road damage – still not repaired to standard;
- Trees were cut (more than necessary). Believes these are indigenous tress. Kudu have been affected; and
- Nuisance/ inconvenience to have contractors around.

24 April

**S. O Steyn – Leeugamka Farmers Association (recently joined with Merweville Farmers
Association)**

General comment

- The existing lines are 20-25 kms from Leeu Gamka.
- Sheep farming is the primary activity
- Impacted farmers maybe :
 - EJ Maritz
 - Piet J Le Granse
 - AC Scheun
 - Piet Hugo
 - Willem Ekstein
 - Dick Viljoen
 - Piet Geldenhuys
 - Piet Bothas
 - Adrie Maree
 - Andre Le Roux (already impacted by 3 lines)
- Main concern is whether electrical lines and pylons devalues property. No investor wants property that cannot hold its value;
- The Leeu Gamka area is already badly impacted – with three electrical lines and a railway
- Leeu Gamka has good groundwater supply. Cultivated areas need to be avoided. Avoid the catchment area.

- Labour to be employed during the construction period should be local-unlike the Fraserberg road development-where Taiwanese labour was brought in.
- Suggests that the new line run within the same servitude as the old lines (parallel to the N1)

