BASIC SOCIAL ASSESSMENT
As part of the
BASIC ASSESSMENT PROCESS
For the
PROPOSED 220 KV TRANSMISSION LINE LINKING THE AGGENEIS AND PAULPUTS SUBSTATIONS (INCLUDING THE SUBSTATION UPGRADES) IN THE NAMAKWA DISTRICT, NORTHERN CAPE

DRAFT REPORT

December 2010
**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST**

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<td>File Reference Number</td>
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**PROJECT TITLE**

Basic Social Assessment Report for the construction and operation of the proposed 220kV transmission line linking the Aggeneis and Paulputs substations (including the substation upgrades) in the Namakwa district, Northern Cape

**Specialist:** MasterQ Research  
**Contact person:** Nonka Byker  
**Postal address:** 49 Muller Street, Yeoville  
**Postal code:** 2198  
**Telephone:** 011 477 3265  
**E-mail:** nonka@masterq.co.za  
**Professional affiliation(s) (if any):**  
- Health Professions Council of South Africa  
- International Association of Impact Assessors South African branch

**Project Consultant:** Bohlweki-SSI Environmental  
**Contact person:** Melissa Naidoo  
**Postal address:** PO Box 867  
**Postal code:** 2052  
**Telephone:** 011 798 6458  
**E-mail:** melissan@ssi.co.za
The specialist appointed in terms of the Regulations

I, J.W. Nonka Byker, declare that --

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

Signature of the specialist

MasterQ Research (Pty) Ltd

Name of company (if applicable)

2010-12-10

Date
EXPERIENCE RECORD

This report was compiled by Ms Nonka Byker of MasterQ Research.

Ms Byker holds a B.Psych (Adult Mental Health) from the University of Pretoria and is a social impact assessment specialist with approximately 4 years experience in this field. She specialises in the assessment of potential social impacts, which includes the collection and analysis of data and superimposing a proposed project on a baseline social profile to determine the potential social impacts from which mitigation measures can be developed. In total she has approximately 11 years experience in the social development field, of which 7 years were spent as a public participation consultant. Ms Byker is registered with the Health Professions Council of South Africa (HPCSA) and is a member of the International Association for Impact Assessment South African Affiliate (IAIAsa).

Some of the most recent linear Social Impact Assessments that Ms Byker has conducted on behalf of MasterQ Research included, amongst others, the following projects:

1. Social Impact Assessment for the proposed The Rest Substation and associated 132kV distribution power line between the existing Hilltop substation and the new The Rest substation in the Nelspruit area, Mpumalanga Province (Client: Eskom Generation & Distribution, Project Manager: Bohlweki-SSI Environmental).
8. Social Impact Assessment for the proposed liquid fuels transportation infrastructure from the Milnerton refinery area to the Ankerlig power station in the Atlantis Industrial area (Client: Eskom Generation, Project Manager: Bohlweki-SSI Environmental).
EXECUTIVE SUMMARY

The Namakwa District Municipality and surrounding areas are experiencing electricity supply problems as a result of limited capacity of the Aggeneis and Paulputs Substations and existing 88kV Transmission line. Increased demand and increased growth in the area now warrants the need for a new 220 kV Transmission Power-line to assist in minimising pressure on the substations.

In order to adequately provide for the growing electricity demand, Eskom proposes to construct a new 220 kV Transmission Power-line from the Aggeneis Substation to the Paulputs Substation over a distance of approximately 97km. The project will further entail the necessary upgrades to the substations. The type / design of the tower structures will be determined once a servitude has been secured.

This report details the findings of the Basic Social Assessment undertaken by MasterQ Research as part of the Basic Assessment process managed by SSI Engineers and Environmental Consultants.

Vanclay (2002) defines a social impact as follows:

“The consequences to human populations of any public or private actions (these include policies, programmes, plans and/or projects) that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally live and cope as members of society. These impacts are felt at various levels, including individual level, family or household level, community, organisation or society level. Some social impacts are felt by the body as physical reality, while other social impacts are perceptual or emotional.”

The following legislation and regulatory documents are relevant to the BSA process:

- Constitution of the Republic of South Africa (Act No. 108 of 1996);
- The Occupational Health and Safety Act (Act No. 85 of 1993);
- Extension of Security of Tenure Act (Act 62 of 1997) (ESTA);
- National Environmental Management Act (NEMA), No. 107 of 1998, as amended and Environment Conservation Act, No. 73 of 1989, as amended;
- The Environmental Impact Regulations of 21 April 2006;
- Relevant Labour Relations legislation.

In terms of the EIA Regulations, feasible alternatives were considered within the Basic Assessment Process. In this regard, three route alignment alternatives were considered for the proposed 220kV Transmission line between the Paulputs and Aggeneis Substations. All these alternatives were evaluated in terms of social, biophysical, economic and technical factors.
The study area is located within the KhaiMa Local Municipality of the Namakwa District in the Northern Cape. The closest towns are Pofadder (approximately 32km southwest of the Paulputs substation and 1.5km south of Alternative 1) and Aggeneys (approximately 8km southwest of the Aggeneis substation and 600m north of Alternative 3).

At 362,591.4km$^2$ the Northern Cape has the biggest land mass of all the provinces and covers approximately 29.7% of South Africa's total land surface. Apart from its western border that is bounded by the Atlantic Ocean, the province is mostly landlocked: Namibia lies to the north-west, Botswana to the north, and the Western Cape to the south.

According to the Northern Cape Province Fifteen Year Review (2009), the main economic contributors are mining and agriculture, despite the fact that the mining industry does not absorb as much labour as the agricultural sector. The Northern Cape's contribution to the Gross Domestic Product (GDP) showed an average growth rate of 4.1% per annum during the period 1995 to 2006. The Fifteen Year Review further stipulated that the agricultural sector within the province grew faster than the national average, in part due to the provincial government's policies in terms of the transformation of the agricultural sector.

For the purposes of this BSA the impact variables were categorised in terms of change processes, as previously mentioned. A change process can be defined as change that takes place within the receiving environment as a result of a direct or indirect intervention from an outside source. A potential impact follows as a result of the change process. However, a change process can only result in an impact once it is experienced as such by an individual or a community on a physical and/or cognitive level. The change processes that were considered in this BSA included the following:

- **Geographical processes** refer to the processes that affect the land uses of the local area.
- **Demographical processes** refer to the movement and structure of the local community.
- **Economical processes** refer to the economic activities in the local society, including the peoples' way of sustaining their livelihoods, and to a lesser extent, the macro-economic factors that affected the local community as a whole.
- **Institution and Legal processes** refer to the processes that affect service delivery to the local area.
- **Socio-cultural processes** refer to the processes that affect the local culture of an affected area, i.e. the way in which the local community live (however, sometimes different cultural groups occupy the same geographical area and these groups are seldom homogenous).
Geographical Processes

Geographical processes relate to the land use patterns and established and planned infrastructural developments in an area. Land use is defined as "... the human modification of the natural environment or wilderness into a built environment such as fields, pastures, and settlements."\(^1\)

According to the KhaiMa Municipality’s Integrated Development Plan (IDP, 2009/10), the municipal area is mostly rural in nature that includes townships, commercial farms, commonage areas and the Orange River.

A general assessment of the land uses in the study area indicated the following trends:

- Residential;
- Commercial cattle farming;
- Mining; and
- Energy generation (the two substations, Aggeneis and Paulputs).

The identification of geographical (land use) change process from a social perspective looks at how the presence of the proposed substations and distribution power lines might change the behaviour/lives of land owners and/or land users in the affected area. This is done by considering actual or perceived land use changes, whether on a temporary or permanent basis.

The geographical change processes and expected impacts are summarised in the table below:

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Geographical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>The identification and assessment of social impacts arising from geographical change processes within a social context, focuses on how the proposed development might impinge on the behaviour and/or lives of landowners and/or land users in the affected area.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>Large segments of the project area appear to be utilized for agricultural purposes, mostly grazing. A number of scattered households have also been identified within the boundaries of the study area (refer to figure 3.1).</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>The presence of the Transmission power line (and associated infrastructure such as towers) on grazing land pose few problems, as cattle can move around towers and therefore minimal land is lost. However, it is expected that there would be a temporary loss of grazing land during the construction process as a result of the construction activities.</td>
</tr>
</tbody>
</table>

Geographical Change Processes

A change in the surrounding land use of an area associated with a linear development, such as a transmission power line, is often a gradual process that in the end could set an unintentional precedent for further land use changes. Often these additional land use changes are of a similar nature than the original development, e.g. the placement of a new transmission power line next to an existing transmission power line, as is the case with all of the transmission power line alternatives. Usually, depending on the results of the various specialist studies, the placement of new infrastructure within an existing ‘disturbed corridor’ is preferred as it reduces the impact on sense of place by avoiding green field areas.

Demographical Processes

Demographical processes relate to the number of people and the composition of a community. This includes an overview of the population size, the race, age, gender and educational profile of a population as well as household compositions.

In 2001, the KhaiMa Municipality had a total population of 11 349 people. The population size increased by some 1 219 people between 2001 and 2007, so that, in 2007, the population size was estimated at around 12 568 people. This represents a population increase of around 10.7% over the 6-year period between 2001 and 2007. The population density in 2001 was around 1.0 person per km\(^2\), which increased very slightly to 1.1 persons per km\(^2\) in 2007.

It is expected that the construction and operation of the proposed 220kV transmission line will lead to a temporary change in the number and composition of the population within the affected local area during the construction period, which in turn could lead to economic, land use, and socio-cultural change processes.

The demographical change processes and expected impacts are summarised in the table below:

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Demographical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>The proposed development can lead to an increase in a certain section of the population, i.e. an influx of migratory workers in the form of the construction team. The presence of the construction team and the prospect of employment can further lead to an influx of unemployed work seekers to the area.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>The current total population within the affected area stands at 12 568 people. A construction team consisting of a total of 206 people will represent a population increase of approximately 1.6%. However, again it should be noted that the total construction team will not be on site simultaneously and</td>
</tr>
</tbody>
</table>
therefore this population increase is not expected. During the peak of construction an estimated 70 people are expected on site, which represents an estimated population increase of approximately 0.6%.

A change in the number and composition of the local area can lead to economic, health, safety and social-wellbeing impacts. Bearing in mind that this population increase will only be temporary; the effect is expected to be negligible.

**Economical Processes**

Economical processes relate to the way in which people make a living and the economic activities within that society. The employment status within any given area gives an indication of the economic stability of such an area and also serves as an indicator of such an area’s general well-being.

The Northern Cape is comparatively sparsely populated as a province, which usually translates into low economic output when compared to population centres. Gross Domestic Product figures support this notion and the Northern Cape contributed only 2.3% of national GDP in 2008 (StatsSA, 2009). This contribution is in turn dominated by the mining industry which contributes 27% of the total Gross Geographic Product (GGP) of the province of R52 billion. The contribution of mining to GGP in the province fluctuated in the period 1995-2008 with a low of 19% in 1996 and a high of 28.9% in 2002. Trade/hospitality, financial/ business services and government are other sectors of importance, contributing between 11% and 13% each. These contributions have remained fairly stable throughout the period 1995 to 2008.

Economical change processes relate to the changes brought about to the employment and general economic profile of an area as a result of the introduction of any development. For example, job opportunities might be created as a result of the construction and maintenance of the proposed transmission power line and associated infrastructure. Employment creates a source of income, which in turn enables the employed individual to access services as a support mechanism for his/her family.

The economical change processes and expected impacts are summarised in the following table:

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Economical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>Contracts between the project proponent and its appointed contractors normally stipulate employment requirements, which usually include gender quotas, youth quotas and quotas for local labour to be employed during the project. In addition, they might also require that a certain proportion of time for</td>
</tr>
</tbody>
</table>
**ISSUE**

<table>
<thead>
<tr>
<th>Economical Change Processes</th>
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<tbody>
<tr>
<td>which construction workers are paid must be spent on skills development initiatives.</td>
</tr>
</tbody>
</table>

**EXISTING IMPACT**

Although there has been a reduction in the employment rate between 2001 and 2007, the study area is still characterised by a high employment rate. Noteworthy, however, is the reduction in agriculture as the predominant employment industry – from 49.6% in 2001 down to 23.2% in 2007, which indicates to a reduction in this industry.

**PREDICTED IMPACT**

The proposed development can enhance economic opportunities by creating and affording job opportunities to local community members. However, it is not foreseen that such opportunities would be sustainable as most of the jobs will be restricted to the construction phase. It is furthermore unlikely that vast numbers from the local community will find employment during the construction phase due to the skills levels required and the sensitivity of the construction material used (e.g. in the past temporary staff from local communities were responsible for copper theft, which resulted in time delays and cost implications for Eskom).

Even if local community members are not utilised as part of the construction team, it is important to note that 206 positions will still be created, which means that there will still be 206 employment opportunities available on a national level. These individuals will still gain financially from employment on the project, whether they are local or not. The proposed project can furthermore lead to a boost in the local formal and informal trade market as it is likely that some local services can be utilised, albeit on a temporary basis.

The expansion of the municipal services network can take place if more electricity becomes available. This means that more households can be connected to the electricity grid, which would enhance their quality of life. In addition, the expansion of the electricity grid could stimulate economic growth in the area, which in turn would have a positive economic impact on the area as more jobs become available.

**Institutional and Legal Processes**

Institutional and Legal processes refer to the role and efficiency of the local authority and other service providers in the area in terms of their capacity to deliver a quality and uninterrupted service to the local area.

Overall the municipal profile of the KhaiMa area compares favourably to the district and the province. In 2007 the majority of households made use of electricity for cooking, heating and lighting purposes and in most instances, this is an improvement from the 2001-profile. The majority of households in KhaiMa have access to water that is on par
or above RDP standard (i.e. piped water within a 200m distance from the dwelling). The same holds true for other municipal services, i.e. sanitation and refuse services.

The KhaiMa Municipal area is serviced by 4 police stations, one in Aggeneys, one in Onseepkans, one in Pofadder, and one in Pella. According to the South African Police Service’s website, the ratio of police officers in the Northern Cape as at September 2010 was 1 police officer for every 196 citizens. On a population size of 21 235, theoretically this means that there are approximately 108 police officers deployed throughout the area.

According to the KhaiMa Municipality IDP there is no doctor who services the municipal area and all emergency cases are referred to the doctor in Springbok. Pofadder has two ambulances that have to service the whole municipal area. The hospital in Aggeneys only provides services to mine employees.

Institutional and Legal Change Processes assesses the way in which a development of this nature could change the face of service delivery in the affected area and how this change in turn could affect the quality of life of local residents.

The institutional and legal change processes and expected impacts are summarised as per the table below.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Institutional and Legal Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>Construction workers will require housing. The need for housing is normally addressed by the contractor(s). The influx of job seekers might lead to an increase in opportunistic crime. The health and emergency services in the area might not be able to cope with accidents and emergencies, which will have obvious health impacts.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>The existing baseline municipal profile suggests that most of the basic municipal services are adequately supplied throughout the area.</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>Construction workers will require housing. In the past large segments of this group was housed successfully within the local community to avoid the use of a residential construction village as the presence of such a village brings with it its own set of socio-cultural change processes and resultant impacts. The need for housing is normally addressed by the contractor(s). The influx of job seekers might lead to an increase in opportunistic crime. The health and emergency services in the area might not be able to cope with accidents and emergencies, which will have obvious health impacts.</td>
</tr>
</tbody>
</table>
**Socio-Cultural Processes**

Socio-cultural processes relate to the way in which humans behave, interact and relate to each other and their environment, as well as the belief and value systems which guide these interactions.

The two closest towns are Aggeneys and Pofadder. Aggeneys is a small mining town that was established in 1976 to service the Black Mountain Mine. The mine currently employs over 600 permanent staff. Pofadder is located some 60km from Aggeneys on the N14 between Upington and Springbok. The area surrounding both these towns is arid, sparsely populated and rugged. Some people say that Pofadder was named after Klaas Pofadder, who was a koranna Captain of the area. However, no record exists that this is in fact the case which means that the town could just have been named after the venomous snake that is common to the district.

The socio-cultural change processes and expected impacts are summarised as per the table below.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Socio-Cultural Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>It is possible that construction workers and job seekers have a different cultural background and dissimilar social practices than local residents, which can lead to the development of conflict situations that impact on community cohesion and social well-being. The potential impact on socio-cultural behaviour and the related perception of environmental changes can have either a positive or a negative impact on sense of place (e.g. peace of mind vs. frustration/anger). The introduction of a new project to the area can be viewed as a positive impact if people perceive the project as infrastructural and/or economic development that is not intrusive on their lives and do not cause them immediate danger. Potential negative impacts include the visual impact and the resultant intrusion on sense of place.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>At the time of the study information was not available on the cultural dynamics of the affected local area. Also the level of place attachment that local residents have to the area was not known.</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>Apart from the obvious health implications, HIV infection in particular also has an economic impact. Conflict situations can impact on community cohesion and social well-being, although the potential for conflict is deemed to be very low.</td>
</tr>
</tbody>
</table>
Conclusions and Recommendations

As could be expected, the construction phase is characterised by a number of negative social impacts, which is mainly due to the nature of the activities that take place during this phase. Although the expected social impacts associated with the construction phase are mostly negative across all the change processes, these impacts are for the most part only temporary in nature and as such and expected to only last over the construction period.

However, even though all of the identified social impacts can be mitigated or enhanced successfully, it can only be done if Eskom, or its appointed contractor(s), commit to the responsibility of ensuring that the level of disturbance brought about to the social environment by the more negative aspects of the project, is minimised as far as possible.

In addition, the social specialist strongly recommends the following:

- Ensure that social issues identified during the EIA phase are addressed during construction. This could be done by engaging social specialists where necessary or by ensuring that ECOs used during construction have the necessary knowledge and skills to identify social problems and address these when necessary. Guidelines on managing possible social changes and impacts could be developed for this purpose.

- Always inform neighbouring landowners beforehand of any construction activity that is going to take place in close proximity to their property. Prepare them on the number of people that will be on site and on the activities they will engage in.

- Ensure that Eskom employees are aware of their responsibility in terms of Eskom’s relationship with landowners and communities surrounding power lines. Implement an awareness drive to relevant sections to focus on respect, adequate communication and the ‘good neighbour principle.’

- Incorporate all mitigation measures in the BSA that are relevant to the construction phase in the EMP to ensure these are adhered to by Eskom and the contractor.

Based on the results of the BSA, Alternative 2 following on Alternative 1 is deemed the most preferred alternative from a social perspective. This is based on the fact that:

- Alternative 2 as it is the furthest alignment from the Aggeneys Airport and the town itself;
- Following on the alignment of the N14, this alternative does not affect any scattered households; and
- Where the alternative intersects with Alternatives 1 and 3, it should follow on with Alternative 1 following the alignment of the existing line as the area is already disturbed.
1. INTRODUCTION

The Nwamakwa District Municipality and surrounding areas are experiencing electricity supply problems as a result of limited capacity of the Aggeneis and Paulputs Substations and existing 88kV Transmission line. Increased demand and increased growth in the area now warrants the need for a new 220 kV Transmission Power-line to assist in minimising pressure on the substations.

In order to adequately provide for the growing electricity demand, Eskom proposes to construct a new 220 kV Transmission Power-line from the Aggeneis Substation to the Paulputs Substation over a distance of approximately 97km. The project will further entail the necessary upgrades to the substations. The type / design of the tower structures will be determined once a servitude has been secured.

In terms of the New Environmental Impact Assessment (EIA) Regulations Government Notice. R. 544 to No. R. 546 of 2010 published in terms of Section 24(5) read with Section 44 of the National Environmental Management Act (NEMA), 1998 (Act No 107 of 1998), Eskom Transmission requires authorisation from the Department of Environmental Affairs (DEA) for the undertaking of the proposed project as it includes activities listed under Regulation 544 of the NEMA EIA Regulations. Activities under these listings may have a detrimental effect on the environment, hence a Basic Assessment Process, as prescribed in the EIA Regulations was undertaken. In this regard, Eskom has appointed SSI Engineers and Environmental Consultants, as an independent Environmental Assessment Practitioner (EAP), to undertake the necessary environmental studies to identify and assess all potential environmental impacts associated with the proposed project.

This report details the findings of the Basic Social Assessment undertaken by MasterQ Research as part of the Basic Assessment process managed by SSI Engineers and Environmental Consultants. The first subsection below gives a definition of social impacts, followed by the objectives of the study. The third subsection details the approach and methodology that were followed to meet these objectives.

1.1 Definition of a Social Impact

Vanclay (2002) defines a social impact as follows:

"The consequences to human populations of any public or private actions (these include policies, programmes, plans and/or projects) that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally live and cope as members of society. These impacts are felt at various levels, including individual level, family or household level, community, organisation or society level. Some social impacts are felt by the body as physical reality, while other social impacts are perceptual or emotional."
According to Van Schooten, Vanclay and Slootweg (2003:78-79), “Social change processes are set in motion by project activities or policies. They take place independently of the social context. Resettlement, for example, is a social change process, set in motion by, inter alia, the activity of land clearing... social change processes can lead to several other processes. Depending on the characteristics of the local social setting and mitigation process that are put in place, social change process can lead to social impacts.” Furthermore, “The way in which the social change processes are perceived, given meaning or value depend on the social context in which various societal groups act. Some sectors of society, or groups in society, are able to adapt quickly and exploit the opportunities of a new situation. Others (for example, various vulnerable groups) are less able to adapt and will bear most of the negative consequences of change. Social impacts, therefore, are implicitly context-dependent.”

1.2 Objectives of the Study

The main objective of the Basic Social Assessment (BSA) is to provide a professional opinion on the expected social impacts associated with the proposed project and how such impacts can be mitigated. This will be included in the overall BA Report used to obtain environmental authorisation. Secondary objectives include the following:

- Gain an understanding of the proposed project, including aspects such as the nature and timeframe of the activities that will take place across the lifespan of the project (construction, operation, decommissioning);
- Obtain information on the baseline social profile currently characterising the study area in terms of the following social processes:
  * Geographic processes: land use patterns;
  * Demographic processes: the composition of local settlements;
  * Economic processes: the way in which people make a living and the economic activities in a society;
  * Institutional and Legal processes: the role and efficiency of the local authority and other service providers in the area in terms of their service delivery capacity;
  * Socio-cultural processes: the way in which humans behave, interact and relate to each other, their environment, and the belief and value systems that guide these interactions.
- Identify how these processes might be changed by the proposed project and highlight major concerns as a result of these changes; and
- Identify mitigation measures that serve to either prevent or minimise the effect of negative impacts, and enhancement measures that serve to sanction or maximise positive impacts.

The approach and methodology that were followed to fulfil the objectives of the Scoping Phase are listed in section 1.3 below.
1.3 Approach and Methodology

Apart from a site visit that was undertaken by helicopter on 30 November 2010, the BSA largely centred on a desktop study in which the following documentation and data was perused:

- Information obtained from the project proponent and the EAP on the project itself, including aspects such as:
  * Locality maps; and
  * The Background Information Document.
- Relevant documentation, such as the Integrated Development Plan (IDP) of the local (KhaiMa) and district (Namakwa) municipalities;
- Census 2001 and Community Survey 2007 data;
- Review of the Northern Cape Province’s Growth and Development Strategy to determine the province’s development programmes and initiatives; and
- A desktop aerial study of the affected area through the use of Google Earth, which assisted the social team in identifying social sensitive areas.

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

In order to determine the potential impacts on the various transmission line alignment alternatives, a distinction was made between the following impacts:

- **Category 1**: Impacts that are not expected to differ between the proposed alternatives, e.g. the number of employment opportunities that might be created by the proposed project are expected to remain the same, irrespective of the chosen alternative (except in the case of the ‘no go’ option); and

- **Category 2**: Impacts that are expected to cause significant changes between the proposed alternatives, e.g. the need to resettle certain households increases proportionately if the development comes in close proximity to densely populated areas as opposed to skirting sparsely populated areas.

This BSA also took into account the extent, duration, intensity and probability of occurrence that a potential impact might have on the social environment. Impacts can either be negative, neutral or positive. The impacts are also categorised according to the various project stages, i.e. pre-construction, construction, post construction (operation), and decommissioning. Mitigation measures have also been identified with the aim to reduce the potential negative impacts and to enhance the potential positive impacts. Also included in the assessment tables that follow in Section 3 is a rating of the significance of the impact.
To ensure a direct comparison between various specialist studies, six standard rating scales are defined and used to assess and quantify the identified impacts. The rating system used for assessing impacts (or when specific impacts cannot be identified, the broader term issue should apply) is based on three criteria, namely:

- The relationship of the impact/issue to temporal scales (Box 1.1);
- The relationship of the impact/issue to spatial scales (Box 1.2); and
- The severity of the impact/issue (Box 1.3).

These three criteria are combined to describe the overall importance rating, namely the significance (Box 1.4).

**Temporal Scale**
The temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.

**Box 1.1: Temporal scale used in assessing issues**
- Short term - less than 5 years. Many construction phase impacts will be of a short duration.
- Medium term - between 5 and 15 years.
- Long term - between 15 and 30 years
- Permanent - over 30 years and resulting in a permanent and lasting change that will always be there.

**Spatial Scale**
The spatial scale defines the physical extent of the impact.

**Box 1.2: Spatial scale used in assessing issues**
- Individual - this scales applies to person/s in the area.
- Household - this scales applies to households in the area.
- Localised - small scale impacts- from a few hectares in extent to e.g. the local district area.
- Regional – Provincial.
- National - South Africa.
- International – this scale applies outside of South Africa’s borders.

**Severity/Beneficial Rating Scale**
The severity scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected system or a particular affected party. It is a methodology that attempts to remove any value judgements from the assessment, although it relies on the professional judgement of the specialist.
<table>
<thead>
<tr>
<th><strong>Box 1.3: Severity/beneficial scale</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Very severe</strong></td>
</tr>
<tr>
<td>An irreversible and permanent change to the affected system(s) or party(ies) which cannot be mitigated. For example, the permanent change to topography resulting from a quarry.</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
</tr>
<tr>
<td>Long term impacts on the affected system(s) or party(ies) that could be mitigated. However, this mitigation would be difficult, expensive or time consuming or some combination of these. For example, the clearing of forest vegetation.</td>
</tr>
<tr>
<td><strong>Moderately severe</strong></td>
</tr>
<tr>
<td>Medium to long term impacts on the affected system(s) or party(ies) that could be mitigated. For example constructing a narrow road through vegetation with a low conservation value.</td>
</tr>
<tr>
<td><strong>Slight</strong></td>
</tr>
<tr>
<td>Medium or short term impacts on the affected system(s) or party(ies). Mitigation is very easy, cheap, less time consuming or not necessary. For example, a temporary fluctuation in the water table due to water abstraction.</td>
</tr>
<tr>
<td><strong>No effect</strong></td>
</tr>
<tr>
<td>The system(s) or party(ies) is not affected by the proposed development.</td>
</tr>
</tbody>
</table>
**Significance Scale**

The significance scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. The evaluation of the significance of an impact relies heavily on the values of the person making the judgement. For this reason, impacts of especially a social nature need to reflect the values of the affected society. A five-point significance scale has been applied (see Box 1.4).

**Box 1.4: The significance rating scale**

<table>
<thead>
<tr>
<th>Significance Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERY HIGH</strong></td>
<td>These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or social) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects. Example: The loss of a species would be viewed by informed society as being of VERY HIGH significance. Example: The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with VERY HIGH significance.</td>
</tr>
<tr>
<td><strong>HIGH</strong></td>
<td>These impacts will usually result in long term effects on the social and/or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light. Example: The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated. Example: The change to soil conditions will impact the natural system, and the impact on affected parties (in this case people growing crops on the soil) would be HIGH.</td>
</tr>
<tr>
<td><strong>MODERATE</strong></td>
<td>These impacts will usually result in medium to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are real but not substantial. Example: The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant. Example: The provision of a clinic in a rural area would result in a benefit of MODERATE significance.</td>
</tr>
<tr>
<td><strong>LOW</strong></td>
<td>These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by the public and/or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect. Example: The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels. Example: The</td>
</tr>
</tbody>
</table>
increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people who live some distance away.

**NO SIGNIFICANCE**

There are no primary or secondary effects at all that are important to scientists or the public. Example: A change to the geology of a particular formation may be regarded as severe from a geological perspective, but is of NO significance in the overall context.

### 1.4 Relevant Legislation

The following legislation and regulatory documents are relevant to the BSA process:

- Constitution of the Republic of South Africa (Act No. 108 of 1996);
- The Occupational Health and Safety Act (Act No. 85 of 1993);
- Extension of Security of Tenure Act (Act 62 of 1997) (ESTA);
- National Environmental Management Act (NEMA), No. 107 of 1998, as amended and Environment Conservation Act, No. 73 of 1989, as amended;
- The Environmental Impact Regulations of 21 April 2006;
- Relevant Labour Relations legislation.

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

The Constitution mostly relates to human rights with the intention of establishing “a society based on democratic values, social justice and fundamental human rights”, which should be achieved through the promotion of human dignity, equality and the advancement of human rights and freedoms. Some of the human rights that are explicitly stated in the Constitution are a person’s right to equality, freedom of expression and association, political and property rights, housing, healthcare, education, access to information, and access to courts.

The Constitution is made up of a preamble, fourteen chapters each relating to a specific topic, and seven schedules. Of these fourteen chapters, chapter 2 (The Bill of Rights) is mostly applicable to the implementation and management of social mitigation measures.

The Bill of Rights outlines detailed provisions on civil, political, social and economic rights. According to the Bill of Rights, it is therefore illegal to discriminate against any person on any of the following grounds:

- Race and colour;
- Sexual orientation (be that heterosexual, homosexual or transsexual);
- Marital status (be that single, married, divorced or widowed);
- Gender in terms of social and cultural ascribed gender roles, e.g. not permitting women to work on a construction team because she is a woman;
- Sex, relating to the physical differences between men and women;
- Pregnancy;
- Age;
- Disability;
- Ethnic origin;
- Culture, e.g. traditional practices;
- Language;
- Religion, conscience, belief; and
- Birth.

**The Occupational Health and Safety Act (Act No. 85 of 1993)**

The Occupational Health and Safety Act outlines the clear responsibilities of employers and employees alike in ensuring that a safe work environment is created and maintained at all times. The creation of a safe work environment also applies to any and all work equipment that is required in carrying out assigned duties.

Noteworthy to consider is the fact that this act stipulates that a health and safety representative has to be appointed where a workforce consists of 20 or more people. A health and safety representative has to be a fulltime employee and there should be at least one such a representative per every 50 employees or part thereof, either per workplace of per section of the workplace. Where a workplace has more than one health and safety representative, a health and safety committee should be formed that meets at least once every 3 months. Health and safety representatives should carry out the following functions in terms of this act:

- Review the effectiveness of health and safety measures;
- Identify potential hazards at the workplace that could lead to potential major incidents;
- Examine the causes of incidents at the workplace, in collaboration with the employer;
- Investigate any complaints made by employees in terms of health and safety aspects at the workplace;
- Provide feedback to the health and safety committee on the aspects mentioned above;
- Provide feedback to the employer on matters relating to the health and safety of employees at the workplace; and
- Inspect all aspects relating to the safety of the workplace, including the workplace itself, any plants, machinery, articles, health and safety equipment, etc. at intervals agreed upon with the employer.


This act provides for measures to facilitate the long-term security of land tenure, and also regulates the conditions of residence on certain land, the circumstances under which a person’s right to reside on a particular piece of land may be terminated, and to provide
for regulatory matters where persons have been evicted from a particular piece of land or land portion.

Chapter 4 of this act relates to the measures that have to be implemented when right of tenure is terminated on any lawful ground (e.g. in the case of relocation), provided that such a termination is just and has regarded the following factors:

- The fairness of the agreement on which the owner relies;
- The conduct of the parties giving rise to the termination;
- The interests of the parties involved in relation to the comparative hardship of the owner and/or occupier of the land;
- The existence of a reasonable expectation for the renewal of an agreement; and
- The fairness of the procedure leading to termination, including whether or not the owner/occupier had been granted a reasonable opportunity to make representations before termination became effective.

Section 14 under Chapter 4 outlines the procedures for the restoration of residence, the use of land, and compensation for damages. A person who was the rightful owner of the land may institute proceedings in a court of law, where after the court may make the following orders:

- The restoration of residence and land use;
- The repair, reconstruction or replacement of any building, structure or any other installations that the owner/occupier have enjoyed on his land prior to the removal and/or eviction;
- The restoration of any services that the owner/occupier has a right to;
- The payment of compensation;
- The payment of damages, including but not limited to, damages inflicted by the removal process; or
- Any other compensation the court may see fit.

National Environmental Management Act (NEMA), No. 107 of 1998, as amended and Environment Conservation Act, No. 73 of 1989, as amended

Both the National Environmental Management Act (NEMA) as well as the Environmental Conservation Act (ECA) promotes citizens’ right to an environment that is not harmful to their health and well being. This right is closely linked to the Constitution where clause 32 of the Bill of Rights stipulates that current and future generations have a right to a healthy environment. NEMA defines the environment as the natural environment as well as the physical, chemical, aesthetic and cultural properties that influences a person’s health and well-being.
1.5 Limitations and Assumptions

- This study was carried out with the information available to the specialists at the time of executing the study, within the available timeframe and budget. The sources consulted are not exhaustive and additional information which might strengthen arguments or contradict information in this report might exist.

- The specialists did endeavour to take an evidence-based approach in the compilation of this report and did not intentionally exclude scientific information relevant to the assessment.

- It was assumed that the motivation for, and the ensuing planning and feasibility studies of the project were done with integrity, and that the information provided to date by the project proponent, the independent Environmental Assessment Practitioner (EAP) and the public participation consultant was accurate.

- Areas that might yield socio-economic sensitivities have been identified through a fly-over on 30 November 2009 and a desktop study in Google™ Earth. The areas that have been marked are the sensitive areas, in close proximity to the three route alternatives, visible to the social specialist at the time of the study. However, the sensitivity map is not meant as a final, all-inclusive indication of sensitive areas, as it is possible that more sensitive areas might exist.

- The statistics that informed this report were primarily taken from Census 2001 and the more recent Community Survey 2007 (CS). The comparative analyses of these sets of data should only be regarded as an indication of broad trends in the area, because of the South African Statistics Council’s (SASC) concerns about data integrity in CS. The SASC was concerned about the following regarding CS:
  * Institutional population is merely an approximation to 2001 numbers and not new data;
  * Unemployment in the Community Survey is higher and less reliable because of questions that were asked differently;
  * Income includes unreasonably high income for children – presumably misinterpretation of the question, listing parents’ income for the child; and
  * Distribution of households by province has very little congruence with the General Household Survey or last census.

- A number of systematic errors were observed in the statistical data, which included:
  * An underestimate of men relative to women;
  * An underestimate of children younger than 10 years;
  * An excess of those aged 85+, in particular among men;
  * Missing women aged 20–34 from the Coloured population;
  * Misdistribution of the population by province;
  * Excess of people aged 10–24 in Western Cape and Gauteng;
* A shortfall of women aged 20–34 in Free State, KwaZulu-Natal and Limpopo.

The SASC states (2008): "In the absence of a comprehensive sampling frame, it is difficult to determine whether the differences are due to sampling error, biases or the reality that has changed beyond our expectations. There may be other variables that will require similar warnings after further interrogation."

The following section describes the project and study area and then proceeds to address the objectives of the BSA.
2. PROJECT BACKGROUND

This section briefly assesses the information relevant to the study area and the project. The first subsection provides a brief description of the proposed project and route alternatives, followed by a general overview of the study (a more detailed baseline profile of the study area in terms of the identified social processes follows in Section 3).

2.1 Project Overview

As mentioned previously, the Nwamakwa District Municipality and surrounding areas are experiencing electricity supply problems as a result of limited capacity of the Aggeneis and Paulputs Substations and existing 88kV Transmission line. Increased demand and increased growth in the area now warrants the need for a new 220 kV Transmission Power-line to assist in minimising pressure on the substations.

In order to adequately provide for the growing electricity demand, Eskom proposes to construct a new 220 kV Transmission Power-line from the Aggeneis Substation to the Paulputs Substation over a distance of approximately 97km. The project will further entail the necessary upgrades to the substations. The type / design of the tower structures will be determined once a servitude has been secured.

Route Alternatives

In terms of the EIA Regulations, feasible alternatives were considered within the Basic Assessment Process. In this regard, three route alignment alternatives were considered for the proposed 220kV Transmission line between the Paulputs and Aggeneis Substations (refer to figure 2.1). All these alternatives were evaluated in terms of social, biophysical, economic and technical factors.
Alternative 1 (pink line) will run parallel to the existing 400kV line. This alternative will add to the visual impact for the motorist travelling in that area as it will be very close to the N14. This alternative will be cost effective in terms of construction as it has very few bending points.

Alternative 2 (yellow line) runs on the South-Eastern side of the existing 400kV line from Aggeneis. At about 20km it then crosses the existing line towards the North-Western side. Further North there are mountains which prevents this alternative from proceeding up. The route is then forced to link up with Alternative 3. This alternative will be more expensive compared to the other two.

Alternative 3 (blue line) will also run parallel to the existing 400 kV line with some slight deviations and bends. This alternative will add to the visual impact for the motorist travelling in that area as it will be very close to the N14. This alternative will also be cost effective in terms of construction as it has almost similar bending points as Alternative 1.

Negotiation Process

As per Eskom’s standard operating procedure, a 220kV transmission power line is operated within a 31m-wide servitude. The servitude basically entails a restriction on a property by registering the servitude at the Deeds Office, which permits Eskom to access
that part of the property to ensure the safe operation of the power line. Important to note is the fact that the servitude conditions are transferable in the event that an affected property is sold on the open market.

Eskom’s policy is to compensate the landowner for the strip of land that is required for the servitude. In order to do so, Eskom enters into a negotiation process with the affected landowner, with the aim to reach a servitude agreement. The compensation amount is calculated based on the value that the property would have reached if it was sold on an open market by a willing seller to a willing buyer (property valuations are done by independent valuators and property owners have the right to verify such valuations). In addition to the actual property value, Eskom also compensates the landowner for any actual financial loss (the value of which will be determined by the independent land valuator) caused by the acquisition of the servitude. It is important to note that Eskom undertakes the negotiation process directly once authorisation has been granted by the competent authority (i.e. the process does not form part of the EIA process nor is it undertaken by consultants).

The negotiation process is as follows:

1. Once the route of the transmission power line has been finalised and environmental authorisation received, Eskom negotiators will identify the affected properties and verify the information with the Survey-General, after which they will obtain the detail of the legal landowner(s) from the Deeds Office. At this stage Eskom will commission independent strip valuations on the affected properties, including pre- and post-valuations if required. As soon as Eskom has acquired all the necessary information, an Eskom negotiator will meet with the affected landowner to commence the negotiation process by presenting the landowner with a formal offer. Landowners have the right, within reason, to negotiate special conditions that, once accepted by both parties, will form part of the formal servitude agreement.

2. If both parties are satisfied with the terms and conditions set out in the servitude agreement (which includes aspects such as the compensation amount, the special conditions for the operation of the servitude, etc.), they sign the agreement. Once the servitude agreement has been signed, the terms and conditions thereof cannot be renegotiated – landowners should thus ensure that they take cognisance of the project’s pre-construction, construction, and operational phases during the negotiation process. Landowners are expected to sign a Final Release Certificate if they are satisfied with the condition of their land upon completion of the construction process, and until such time Eskom remains responsible for the rehabilitation of the land.

3. If the negotiation process reaches a deadlock, or if the parties failed to reach an agreement within 90 days after commencement of the negotiation process, Eskom may apply for the expropriation of the land required for the servitude, in accordance with the following legislation:
The Electricity Regulation Act (Act 4 of 2006), section 27(1): (If Eskom is unable to reach an agreement with a landowner) the State may, in order to facilitate the achievement of the objectives of this Act, expropriate land, or any right in, over or in respect of land, on behalf of a licensee in accordance with section 25 of the Constitution and section 2 of the Expropriation Act, 1975 (Act No. 63 of 1975).

Constitution of South Africa (Act 108 of 1996), section 25: (A property may be expropriated if such an expropriation is) for the greater good of the public at large; and subject to compensation. In this instance, compensation should be fair and should create a balance between public interest and that of the affected landowner in respect of: The current use of the property; the history of the property in terms of acquirement and use; and the current market value of the property.

The Expropriation Act (Act 63 of 1975), subsection 12, stipulates that the compensation amount on any property, excluding properties with registered mineral rights, should be calculated as follows:
* The amount that the property would have sold for if it was sold on an open market to a willing buyer from a willing seller;
* An amount to compensate for any actual financial loss as a direct result of the expropriation; and
* In the case of a registered right on or to a property, excluding registered mineral rights, an amount to compensate for the actual financial loss as a direct result of the expropriation or the obtaining of the right.

However, Eskom aims to avoid expropriation as far as possible, as this process is not only time consuming and tedious, but also damaging to Eskom’s relationship with landowners.

**Construction Processes**

This section deals with the general information and criteria for the design, engineering, supply, fabrication, construction, testing and commissioning of the civil and structural work associated with that of a transmission power line.

There are a number of variables determining the sequence of events in the construction process, the number of people involved in each activity and the time spent on an activity. These variables include the timeframes for completion of the line, the natural environment, and other local conditions. Some activities can take place simultaneously.

When the construction of the line starts, each activity will follow the previous one, so that a chain of events, with different teams involved, will happen over time. On average, there are some 35 active days of construction at any point, but given the time lapses
between certain events, the process itself normally takes place over a longer period – anything from a few months to a couple of years, depending on the length of the line.

The construction process can commence as soon as the servitude has been secured. The following activities form part of the construction process, listed more or less in the chronological order in which these activities take place:

1. The selected route is surveyed to determine soil types and other conditions that have to be considered in the final selection of conductor types, towers, insulators, and foundations. This survey is undertaken by foot, but on longer lines, a fly over is often utilised in addition to the walk through.

2. Once the technical walk through has been completed, the final design of the line is determined along with the tower positions. This is then followed by the environmental walk through to ensure that all the sensitive areas have been identified and considered for inclusion in the construction Environmental Management Plan (EMP).

3. Eskom negotiators start negotiations with landowners to ensure unrestricted access to the servitude, which often involves that construction teams might have to cross over private land and/or make use of existing access points on the affected property. During this negotiation round, all the parties involved (e.g. Eskom, the contractor and the landowner) discuss and agree on the rehabilitation measures that have to be implemented to restore the land to its original condition upon completion of the construction process. Photographs of the applicable infrastructure or land is taken beforehand to ensure that rehabilitation is done to the agreed standards.

4. Normally access roads to the construction site(s) form through the recurring use of an existing (gravel) road or track, and seldom through a more formal procedure such as blading or road scraping. However, the establishment of access road(s) are dependent on the local site conditions.

5. The first step as part of the actual construction process is the pegging of the central line in the middle of the servitude. During this time, the team will also record the requirements for and locations of new gates.

6. Servitude clearance commences which involves clearing vegetation along the length of the servitude. Servitude clearance across the width of the line depends on the vegetation and landscape of the area, as well as on the respective landowners’ requirements. During vegetation clearance, protected fauna and flora species are relocated while alien species are removed. If required, the installation of new gates also takes place during this activity. The size of the servitude/vegetation clearance team depends on the size of the clearance area(s), but on average consists of 10-20 individuals. Apart from the management of protected species, which requires specialist services, a large segment of this team (10-15) can consist of unskilled labour that can be sourced locally.
7. A surveyor is appointed to peg the tower foundations, which involves setting out the footing of the towers. The surveyor also identifies and reports on any obstacles or potential problems associated with any of the towers’ positioning, which can result in the consequent moving of a tower.

8. Once the final locations of the tower foundations have been pegged, the contractor will establish foundation nominations. At this stage, the various soil types are examined to enable the contractor to comply with the necessary foundation requirements that will ensure the stability of the tower. Trial foundations are then excavated at the main foundation points through the use mechanical back-actors and/or augers. Under certain conditions the use of manual labour might also be required, and if so, unskilled workers might again be employed. A foundation normally represents a square pit of 4m x 4m and under normal soil conditions, is usually also 4m deep. Once the foundation pit has been excavated, it is fenced-off to secure the area until such time that the foundation is cast.

9. The foundation steelwork is fitted into the foundation pit not too long after it was excavated. This is done to reinforce the foundations. Although the steelwork is made up at base camp and brought to site by truck, all the actual fitting, and wiring is done on site.

10. The concrete for the foundations are poured after the steelwork has been fitted. Shuttering is done and a standard concrete truck is used to cast the concrete. A 28-day period is required after the concrete was laid to allow it to set. During this stage access or service roads will be used extensively.

11. The steelwork for the towers is delivered in sections and assembled on site. The steelwork is transported on a long haul truck, and is delivered directly to the respective foundation pits along the line’s route. To ensure that the correct tower is delivered to the correct site, the access road is clearly marked to indicate the routes to the various sites.

12. The tower is then assembled on site by the assembly team (which is the case for every tower site). The tower’s steelwork is fitted an assembled on the ground at the site, and therefore site clearance is required around the foundation pit. Once the tower has been assembled, it is painted with a non-corrosive paint and then erected with a crane and placed in the foundation pit.

13. Once all the towers have been put up, the stringing team will commence with stringing the cables between the towers. Cable drums are placed next to each other and stringing takes place in both directions from these drum stations. The working area at each drum station can be as long as 130m but will be confined to the servitude width. Intensive vehicle movement may take place within this working area. A pilot tractor places the pilot cable on the ground, which is pulled up through the use of a pulley. When all the lines have been strung, the line is tensioned from each cable station to
ensure that minimum ground clearance heights are achieved. The stringing team consists of skilled people, so it is unlikely that they will be sourced from within the local area.

14. Rehabilitation of the construction site and construction servitude commences once the lines have been strung and tensioned. Quotations are sourced and a proposal is prepared to reimburse all the respective landowners for damages to their properties. As soon as the rehabilitation process has been completed, the affected landowner must sign a release certificate to indicate that they are satisfied with the condition of the land post rehabilitation.

15. A final inspection of the line and servitude is done, and if all the parties involved are satisfied, it marks the end of the construction period.

2.2 Overview of the Study Area

The study area is located within the KhaiMa Local Municipality of the Namakwa District in the Northern Cape. The closest towns are Pofadder (approximately 32km southwest of the Paulputs substation and 1.5km south of Alternative 1) and Aggeneys (approximately 8km southwest of the Aggemeis substation and 600m north of Alternative 3). Figure 3.2 below provides an overview of the study area in relation to the local municipal area.

Figure 3.2: Study area within the KhaiMa Local Municipality
At 362,591.4km² the Northern Cape has the biggest land mass of all the provinces and covers approximately 29.7% of South Africa’s total land surface. Apart from its western border that is bounded by the Atlantic Ocean, the province is mostly landlocked: Namibia lies to the north-west, Botswana to the north, and the Western Cape to the south.

The province was home to two cross-boundary municipalities (the Ga-Segonyana District Municipality and the Phokwane Local Municipality) that overlapped with the Northwest Province, but in 2006 these municipalities were incorporated into the Northern Cape. This incorporation led to an increase in the province’s total population by approximately 180,000 people and had a significant impact on the province’s services backlog in terms of water, sanitation, housing and electricity.

By the year 2007, the total population size of the province was estimated to be around 1.1 million people, which represents a population increase of approximately 66,000 people from 2001, when the last census was conducted. Based on the population size of 2007, the province has an extremely low population density, estimated at around 3 persons per square kilometre. However, it can be expected that the population density will increase in the urban areas, e.g. in the Sol Plaatje Local Municipal area (Kimberley) the population density stands at approximately 129.5 people per square kilometre.

According to the Northern Cape Province Fifteen Year Review (2009), the main economic contributors are mining and agriculture, despite the fact that the mining industry does not absorb as much labour as the agricultural sector. The Northern Cape’s contribution to the Gross Domestic Product (GDP) showed an average growth rate of 4.1% per annum during the period 1995 to 2006. The Fifteen Year Review further stipulated that the agricultural sector within the province grew faster than the national average, in part due to the provincial government’s policies in terms of the transformation of the agricultural sector.

One of the most significant driving forces behind the transformation of the agricultural sector is the Land Reform Programme as the provincial government adopted the national target of redistributing at least 30% of the productive agricultural land within the province to historically disadvantaged communities by the year 2014. In the Northern Cape alone a total of 2,883 land claims were lodged with the Land Claims Commission, of which a total of 552,084ha have successfully been transferred to the beneficiaries by January 2008.

The Northern Cape Province Growth and Development Strategy (NCPGDS) identified the need to focus on the following issues within the province:

- Sector specific strategies that defines where public and private sector intervention is essential and valid;
- Key macro-level involvement and cooperation required from national line ministries to strengthen provincial initiatives;
Interventions and opportunities at programme and project level;  
The development of a comprehensive provincial Spatial Development Framework (SDF) and strategy;  
Accessing the necessary financial resources to finance growth and development within the province;  
The identification of institutional delivery mechanisms; and  
The establishment of monitoring and evaluation systems and procedures.

The NCPGDS further indicated that poverty reduction is the most significant challenge faced by the provincial government and its growth and development partners. Addressing this issue also implies that the following societal problems have to be addressed:

- Reducing the backlog in basic needs such as water, sanitation and housing;  
- Improving basic services such as health, education and social services;  
- Reducing the HIV/AIDS prevalence rate;  
- Creating employment opportunities;  
- Reducing the crime rate; and  
- Empowering vulnerable groups.

In addressing these and other issues, the Northern Cape Provincial Government considered the national development targets, the millennium development goals and the resolutions taken at the World Summit on Sustainable Development. From these the provincial government developed its own set of targets, which included the following:

- Maintaining an average annual economic growth rate of 4-6%;  
- Halving the unemployment rate by 2014;  
- Reducing the number of households living in absolute poverty by 5% per annum;  
- Improving the literacy rate by 50% by 2014;  
- Reducing the infant mortality rate by two thirds by 2014;  
- Reducing the maternal mortality rate by two thirds by 2014;  
- Providing shelter to the whole population by 2014;  
- Providing clean water to everyone in the province by 2009;  
- Reducing the crime rate by 10% by 2014;  
- Stabilizing and then reversing the HIV/AIDS prevalence rate by 2014;  
- Redistributing 30% of the province’s productive agricultural land to previously disadvantaged individuals by 2015;  
- Conserving and protecting 6.5% of the province’s valuable biodiversity; and  
- Providing adequate infrastructure to enable economic growth and development by 2014.
3. **CHANGE PROCESSES AND POTENTIAL IMPACTS**

In order to address the overall objective of this study, it was necessary to compile a detailed description of the study area. Each subsection first presents the baseline profile (status quo) of the receiving environment in terms of the various socio-economic processes (cf. Vanclay, 2002), followed by a discussion on how the baseline profile is likely to change with the introduction of the proposed project. It is believed that the baseline profile would be maintained to a large degree (not taking into account variables outside of the project) in the event that a ‘no go’ option was implemented.

Each subsection concludes with a table summarizing how the project is likely to change the baseline profile, and the related impacts that could be expected as a result of the introduction of the project to the local area.

Unless otherwise stated, the baseline profile was compiled based on data obtained from Census 2001 and the more recent Community Survey (CS) 2007. It is important for readers to note that CS data does not replace Census data, but that the CS is merely an attempt to adjust measurements to a best estimate. In this regard, Statistics South Africa has stated the following: "Any adjustment done [in CS 2007] has maintained the profiling of the community in terms of the people and households while compensating and correcting the undercounted bias by different projections on national, provincial and municipalities level." Therefore, please bear in mind that the following data should only be viewed as an indication of the broad socio-economic trends within an area and not as a fixed representation of the area.

For the purposes of this BSA the impact variables were categorised in terms of change processes, as previously mentioned. A **change process** can be defined as change that takes place within the receiving environment as a result of a direct or indirect intervention from an outside source. A potential **impact** follows as a result of the change process. However, a change process can only result in an impact once it is experienced as such by an individual or a community on a physical and/or cognitive level. The change processes that were considered in this BSA included the following:

- **Geographical processes** refer to the processes that affect the land uses of the local area.
- **Demographical processes** refer to the movement and structure of the local community.
- **Economical processes** refer to the economic activities in the local society, including the peoples’ way of sustaining their livelihoods, and to a lesser extent, the macro-economic factors that affected the local community as a whole.
- **Institution and Legal processes** refer to the processes that affect service delivery to the local area.

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2 Statistics South Africa: Community Survey 2007: Key Municipal Data: ix.
Socio-cultural processes refer to the processes that affect the local culture of an affected area, i.e. the way in which the local community live (however, sometimes different cultural groups occupy the same geographical area and these groups are seldom homogenous).

This section has been structured as follows:

- A description of the baseline profile per change process as mentioned above, i.e. the status quo of the area without project intervention;
- A detailed discussion of the expected change processes that might occur as a result of introducing the project to the area, including a brief discussion on the circumstances that might lead to such change process taking place; and
- An assessment table to determine the significance rating of an impact pre- and post-mitigation as per the criteria listed earlier.

3.1 Geographical Processes

Geographical processes relate to the land use patterns and established and planned infrastructural developments in an area. Land use is defined as "... the human modification of the natural environment or wilderness into a built environment such as fields, pastures, and settlements."³ This subsection therefore describes the current and future land use in the project area (baseline profile), followed by the description of the expected change processes and potential social impacts that can result from project implementation.

Baseline Geographical Processes (Status Quo)

Figure 3.1 below provides an overview of the social sensitivity of the study area in relation to the surrounding environment. The social sensitivity map has been developed based on a fly-over and a desktop study using Google Earth. The social specialist endeavoured to identify social sensitive areas such as areas of human settlement, commercial/industrial areas and irrigation areas. However, it should be noted that these were the areas visible to the social specialist at the time of the study and therefore it is entirely possible that more areas of a social sensitive nature might exist. Following on the social sensitivity map, the various subsections discuss the respective change processes and the potential impacts that could be experienced by the receiving environment as a result of the construction and operation of the proposed 220kV transmission line.

According to the KhaiMa Municipality’s Integrated Development Plan (IDP, 2009/10), the municipal area is mostly rural in nature that includes townships, commercial farms, commonage areas and the Orange River.

A general assessment of the land uses in the study area indicated the following trends:

- Residential;
- Commercial cattle farming;
- Mining; and
- Energy generation (the two substations, Aggeneis and Paulputs).

The Black Mountain mine (Anglo Base Metals) is located approximately 3km north of the Aggeneis substation. Copper, lead and Zinc is being mined at Black Mountain. The Aggeneys Airport mostly services the mine and is located approximately 360m north of Alternative 3 in the vicinity of the Aggeneis substation. A new mining area is planned approximately 8km east of Aggeneys town.

The two closest towns to the route alternatives are Aggeneys and Pofadder. The new mine will most probably lead to the expansion of Aggeneys town as people move into the area. In addition a number of scattered households have been observed along the route alternatives (these are indicated by the red dots in figures 3.1).
The typical land use along the route alternatives is depicted by figure 3.2 below.

**Figure 3.2: Typical land use along the route alternatives**

The Namakwa District compiled a State of the District Profile Report that identified several issues and challenges. These included:

- The effective maintenance of existing infrastructure;
- Minimising existing infrastructural backlogs;
- Developing additional water sources;
- Increased investment for the maintenance of roads in order to capitalise on the economic benefits that tourism and agriculture offered;
- Increased investment in development projects that were in line with the IDP, the NCPGDS and the NSDP;
- The effective use of resources to assist in development;
- Improving intergovernmental cooperation to ensure that common goals and targets were achieved; and
- Developing human potential within the district in an effort to retain the economically active population within the district.
**So What?**

- To ensure the health and safety of people in the area, the placement of the sub-transmission power line and the substation should avoid human settlement;
- To allow for future development plans, it is preferable that the route alignment of the sub-transmission power line and the site location for the substation take cognisance of such plans to avoid interfering with such plans as far as possible;
- The most preferred alignment is an alignment that passes over grazing land as animals can still freely move around towers and underneath the sub-transmission power line, which implies minimal land loss;
- Where the sub-transmission power line cannot avoid crossing over cultivated land, it is preferable that the alignment follows farm boundaries as far as possible to minimise the potential impact of land loss.

**Geographical Change Processes and Expected Impacts**

The identification of geographical (land use) change process from a social perspective looks at how the presence of the proposed substations and distribution power lines might change the behaviour/lives of land owners and/or land users in the affected area. This is done by considering actual or perceived land use changes, whether on a temporary or permanent basis.

The geographical change processes and expected impacts are summarised in table 3.1.

**Table 3.1: Geographical Change Processes and Expected Impacts**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Geographical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>The identification and assessment of social impacts arising from geographical change processes within a social context, focuses on how the proposed development might impinge on the behaviour and/or lives of landowners and/or land users in the affected area.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>Large segments of the project area appear to be utilized for agricultural purposes, mostly grazing. A number of scattered households have also been identified within the boundaries of the study area (refer to figure 3.1).</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>The presence of the Transmission power line (and associated infrastructure such as towers) on grazing land pose few problems, as cattle can move around towers and therefore minimal land is lost. However, it is expected that there would be a temporary loss of grazing land during the construction process as a result of the construction activities. A change in the surrounding land use of an area associated with a linear development, such as a transmission power line, is often a gradual process that in the end could set an unintentional precedent for further land use changes. Often these additional land use changes are of a similar nature than</td>
</tr>
</tbody>
</table>
### Geographical Change Processes

The original development, e.g. the placement of a new transmission power line next to an existing transmission power line, as is the case with all of the transmission power line alternatives. Usually, depending on the results of the various specialist studies, the placement of new infrastructure within an existing ‘disturbed corridor’ is preferred as it reduces the impact on sense of place by avoiding green field areas.

<table>
<thead>
<tr>
<th>IMPACT ASSESSMENT</th>
<th>Pre-Mitigation</th>
<th>Post-Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal Scale</strong></td>
<td>Short term</td>
<td>Short term</td>
</tr>
<tr>
<td><strong>Spatial Scale</strong></td>
<td>Localised</td>
<td>Household</td>
</tr>
<tr>
<td><strong>Severity/Beneficial Scale</strong></td>
<td>Slight</td>
<td>No effect</td>
</tr>
<tr>
<td><strong>Significance Scale</strong></td>
<td>Low</td>
<td>No significance</td>
</tr>
</tbody>
</table>

#### MITIGATION MEASURES

- Compensation for the temporary loss of grazing land should be included in the negotiation process with the landowner.
- The area should be rehabilitated upon completion of the construction activities to ensure that the land is returned in the same condition as prior to the construction activities.
- Mitigation measures should be implemented to avoid any negative impact on animals (e.g. fencing off the construction area).
- Eskom or its appointed contractor(s) should assist with the temporary relocation of livestock during construction, as well as relocating cattle back to their original grazing area once construction in an area is completed.
- Grazing areas should be rehabilitated to their original grazing conditions to ensure that cattle can continue to graze in the area once they are returned to that area.
- Where the area cannot be rehabilitated to its original condition within a reasonable period of time, Eskom or its appointed contractor(s) should provide funding to obtain alternative food sources to the farmer for the time period required for natural rehabilitation to occur within the grazing area.

#### PREFERRED ALIGNMENT

Alternative 2 as it is the furthest alignment from the Aggeneys Airport and the town itself. Following on the alignment of the N14, this alternative does not affect any scattered households. Where the alternative intersects with Alternatives 1 and 3, it should follow on with Alternative 1 following the alignment of the existing line as the area is already disturbed.
3.2 Demographical Processes

Demographical processes relate to the number of people and the composition of a community. This includes an overview of the population size, the race, age, gender and educational profile of a population as well as household compositions.

Baseline Demographical Processes

The KhaiMa Municipality covers a geographical area of approximately 11 000 km$^2$ and is located on the eastern border of the Northern Cape Province. The municipality is landlocked and is bordered by Namibia to the north, the Nama Khoi Municipality to the west, the Northern Cape District Management Area (NCDMA) known as Namaqualand to the south, and the Siyanda District to the east.

- Population Characteristics

In 2001, the KhaiMa Municipality had a total population of 11 349 people. The population size increased by some 1 219 people between 2001 and 2007, so that, in 2007, the population size was estimated at around 12 568 people. This represents a population increase of around 10.7% over the 6-year period between 2001 and 2007. The population density in 2001 was around 1.0 person per km$^2$, which increased very slightly to 1.1 persons per km$^2$ in 2007.

The KhaiMa Municipality has a fairly young population and in 2007 just over a quarter of the population (27.1%) were below the age of 15. The economically active population group (defined by StatsSA as the ages between 15 and 65) accounts for two thirds (66.9%) of the total population.

In 2001, by far the majority of the population (77.6%) belonged to the Coloured population group, followed by Whites at 9.9%. During the next 6 years the Coloured population group expanded, so that in 2007, it accounted for 86.0% of the population. During the same time the White population group also increased slightly to 10.6% of the total population. The Black African and Indian/Asian population groups remained relatively unchanged at around 3% of the population. There are slightly more males (52.7%) than females (47.3%) in the municipal area.

In 2001, the KhaiMa Municipality consisted of a total of 2 750 households$^4$, with an average occupancy rate of 4.1 persons per household. As could be expected with the influx of people, the number of households in the area also increased so that in 2007, the area had a total of 3 786 households, decreasing the average occupancy rate to 3.3 persons per household.

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$^4$ A household is defined as: “One or more people occupying a housing unit as their usual place of residence. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements”.

Table 3.2 below provides an overview summary of the population demographics of the local municipal area in relation to South Africa, the Northern Cape and the Namakwa District.

**Table 3.2: Summary of Population Characteristics**

<table>
<thead>
<tr>
<th></th>
<th>South Africa</th>
<th>Northern Cape</th>
<th>Namakwa District</th>
<th>KhaiMa</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area size (km²)</strong></td>
<td>1 219 912</td>
<td>361 830</td>
<td>126 747</td>
<td>11 000</td>
</tr>
<tr>
<td></td>
<td>(29.7% of SA)</td>
<td>(2.2% of SA)</td>
<td>(35.0% of the NC)</td>
<td>(8.7%</td>
</tr>
<tr>
<td><strong>Total population</strong></td>
<td>48 502 063</td>
<td>1 058 060</td>
<td>108 050</td>
<td>11 349</td>
</tr>
<tr>
<td></td>
<td>(2.2% of</td>
<td>(2.1% of SA)</td>
<td>(12.0% of the NC)</td>
<td>(10.5%</td>
</tr>
<tr>
<td></td>
<td>SA)</td>
<td></td>
<td></td>
<td>of the DM)</td>
</tr>
<tr>
<td><strong>Population density</strong></td>
<td>39.8</td>
<td>2.9</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>per km²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total households</strong></td>
<td>12 500 610</td>
<td>264 654</td>
<td>30 582</td>
<td>2 750</td>
</tr>
<tr>
<td></td>
<td>(2.1% of</td>
<td>(13.8% of the NC)</td>
<td>(9.0% of the DM)</td>
<td>(10.4%</td>
</tr>
<tr>
<td></td>
<td>SA)</td>
<td></td>
<td></td>
<td>of the DM)</td>
</tr>
<tr>
<td><strong>Avg. persons</strong></td>
<td>3.9</td>
<td>4.0</td>
<td>3.5</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>per household</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Predominant</strong></td>
<td>Black</td>
<td>Coloured</td>
<td>Coloured</td>
<td>Coloured</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>African</td>
<td>(50.0%)</td>
<td>(83.9%)</td>
<td>(77.6%</td>
</tr>
<tr>
<td><strong>Groups</strong></td>
<td>(79.5%)</td>
<td></td>
<td></td>
<td>(86.0%</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Black</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>African</td>
<td>(11.8%)</td>
<td>(9.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(39.8%)</td>
<td></td>
<td>(10.6%)</td>
</tr>
<tr>
<td><strong>Predominant</strong></td>
<td>Female</td>
<td>Female</td>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>(50.8%)</td>
<td>(50.9%)</td>
<td>(50.3%)</td>
<td>(51.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(52.7%)</td>
</tr>
<tr>
<td><strong>Predominant</strong></td>
<td>Working</td>
<td>Working</td>
<td>Working</td>
<td>Working</td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td>age</td>
<td>age</td>
<td>age</td>
<td>age</td>
</tr>
<tr>
<td></td>
<td>(62.9%)</td>
<td>(65.1%)</td>
<td>(64.0%)</td>
<td>(65.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(66.9%)</td>
</tr>
</tbody>
</table>

- **Education Profile**

One of the driving forces behind social change is educational attainment, which in turn is linked to poverty levels as there appears to be a correlation between the level of educational attainment and income levels. People with higher educational levels tend to be economically better off, and therefore contribute more to the reduction of the unemployment rate. Educational attainment is also linked to poverty in the sense that funds are required to further studies, therefore people living in less favourable economic conditions tend to be unable to further their education, which in turn holds them in a downward poverty spiral.

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5 Census 2001 data (2007 data not readily available)

9 Census 2001 data
An overview of the educational profile for the local municipal area is provided in Figure 3.2.

**Figure 3.3: Educational Profile of the KhaiMa Municipality**

In 2001, a total of 6.5% of the population had no form of schooling. Coupled with those individuals who only completed some form of primary education (a further 36.1%), this means that, in 2001, close on a half (42.6%) of KhaiMa’s population had limited educational skills, which in turn would hinder their employability on the general job market. However, more than half of the people (53.7%) completed some form of secondary education, which could enhance their employability. Only 3.8% of the population went on to obtain a tertiary qualification.

The situation only improved marginally between 2001 and 2007: the number of people who had no form of education decreased from 6.5 to 4.0%, whereas those who completed some form of primary or secondary education now accounted for the majority of the population (93.0%). Those individuals who obtained some form of tertiary education slightly decreased to 3.0%.

**So What?**
- The baseline demographic profile provides an overview of the local area that will be affected to ensure proper planning that will affect the least amount of people during both construction and operation; and
- The baseline educational profile provides the project proponent with an indication of the skills levels that might be available in the area in an attempt to predict whether or not it would be possible to source labour and services from the local community.
**Demographical Change Processes**

It is expected that the construction and operation of the proposed 220kV transmission line will lead to a temporary change in the number and composition of the population within the affected local area during the construction period, which in turn could lead to economic, land use, and socio-cultural change processes.

Table 3.3 below provides an overview of the estimated number of people who will be on site at any given time during the various construction phases, i.e. pre-construction, construction, and post-construction. Not all of the people are present on site all day every day. Due to the location of the project area and the project size, it is foreseen that construction team members will be housed on site in a construction village. The total size of the construction team is estimated to be in the order of 206 people across the lifespan of the project.

The size of the team should not be confused with employment opportunities, as it is expected that the bulk of these positions will be filled by skilled employees from either the contractor or Eskom itself. Where unskilled work is required these positions might be filled by people from the local area, but these opportunities are mostly restricted to activities such as vegetation clearance, gate erection and rehabilitation of the natural environment post construction, i.e. an estimated 30 positions across the lifespan of the project. However, often vegetation clearance pre-construction is done by a specialised firm to ensure that sensitive plant species are preserved and/or relocated correctly.

In addition, bear in mind that the construction processes follow a phased approach so that the full construction team component will never be on site simultaneously. The most people that will be on site at the same time are during the peak of construction, when approximately 70 construction team members will be active on the project.

Following on table 3.3, the demographical change processes and expected impacts are summarised in table 3.4.
Table 3.3: Estimated number of people on site per project component per project phase

<table>
<thead>
<tr>
<th>On Site Activities</th>
<th>Pre-Construction Phase</th>
<th>Construction Phase</th>
<th>Post-Construction Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical survey</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental survey</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access negotiations</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pegging central line</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bush clearance</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gate erection</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation team</td>
<td>30 30 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assembly team</td>
<td>30 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erection team</td>
<td>30 30 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stringing team</td>
<td>30 30 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioning team</td>
<td>10 10 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation team</td>
<td>15 15 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management team</td>
<td>10 10 10 10 10 10 10 10 10 10 10 10 10 10 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>20 26 20 25 40 40 70 70 40 40 70 40 40 35 35 35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.4: Demographical Change Processes and Expected Impacts

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Demographical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>The proposed development can lead to an increase in a certain section of the population, i.e. an influx of migratory workers in the form of the construction team. The presence of the construction team and the prospect of employment can further lead to an influx of unemployed work seekers to the area.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>The current total population within the affected area stands at 12,568 people. A construction team consisting of a total of 206 people will represent a population increase of approximately 1.6%. However, again it should be noted that the total construction team will not be on site simultaneously and therefore this population increase is not expected. During the peak of construction an estimated 70 people are expected on site, which represents an estimated population increase of approximately 0.6%.</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>A change in the number and composition of the local area can lead to economic, health, safety and social-wellbeing impacts. Bearing in mind that this population increase will only be temporary; the effect is expected to be negligible.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ASSESSMENT</th>
<th>Pre-Mitigation</th>
<th>Post-Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal Scale</td>
<td>Short term</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Localised</td>
<td>Household</td>
</tr>
<tr>
<td>Severity/Beneficial Scale</td>
<td>Slight</td>
<td>No effect</td>
</tr>
<tr>
<td>Significance Scale</td>
<td>Low</td>
<td>No significance</td>
</tr>
</tbody>
</table>

**MITIGATION MEASURES**
- Raise awareness amongst construction workers about local traditions and practices.
- Inform local businesses that construction workers will move into the area to enable local businesses to plan for the extra demand.
- Ensure that the local community communicate their expectations of construction workers’ behaviour with them.

**PREFERRED ALIGNMENT**
- No preference

### 3.3 Economical Processes

Economical processes relate to the way in which people make a living and the economic activities within that society. The employment status within any given area gives an
indication of the economic stability of such an area and also serves as an indicator of such an area’s general well-being.

**Baseline Economic Processes**

The Northern Cape is comparatively sparsely populated as a province, which usually translates into low economic output when compared to population centres. Gross Domestic Product figures support this notion and the Northern Cape contributed only 2.3% of national GDP in 2008 (StatsSA, 2009). This contribution is in turn dominated by the mining industry which contributes 27% of the total Gross Geographic Product (GGP) of the province of R52 billion. The contribution of mining to GGP in the province fluctuated in the period 1995-2008 with a low of 19% in 1996 and a high of 28.9% in 2002. Trade/hospitality, financial/ business services and government are other sectors of importance, contributing between 11% and 13% each. These contributions have remained fairly stable throughout the period 1995 to 2008.

Historically economic growth in the province has usually been lower than national growth figures and this occurred again in 2008 when the provincial GGP growth was 2.1% compared to the South African GDP growth of 3.7%. The industry contributions to the regional economy of the Namakwa DM area can be found below:

**Figure 3.3: Contributions of different industries to the Namakwa DM GGP**

The Namakwa DM area contains a historically important mining node in the province, namely the area surrounding the town of Springbok, and the mining industry has been one of the main productive forces in the DM area. The Namakwa DM LED plan (Urban Econ, 2009) indicates that mining continues to dominate the economic landscape in that area with a contribution of 52%. In general it appears that the Namakwa DM area is not economically diversified and therefore more prone to economic shocks in its key
industries, especially the mining industry. This happened in 2008 during the global economic crisis, when the economy was adversely affected to a significant degree due to a number of mining operations closing down temporarily in the Springbok area (Urban Econ, 2009).

The Local Economic Development (LED) documentation for the Namakwa DM area indicates that distance from markets and a lack of infrastructure represent the biggest challenges to development as economic growth as these factors both limit the ability of businesses to access major markets in a cost effective manner. Furthermore, the DM area and the Northern Cape Province is currently experiencing population decline, putting a severe constraint on available local skills for growth and development.

According to the above documentation the economic development strategies and future target areas of the DM area focuses on the development, diversification and stabilization of the regional economy by:

- Developing and supporting agriculture that will increase autonomy of local communities and better food security in each region, especially in the case of land obtained by previously disadvantaged communities or individuals.
- Developing the tourism industry and maximising tourism resources, especially in light of their non-expendable nature if well managed. Three areas of strong potential that have been identified are mining or history-related tourism, eco-tourism and adventure tourism.
- Encouraging local skills development initiatives to support the above economic interventions, including the development of new local institutions of learning that can supply the skills needed specifically in that region.
- Encouraging entrepreneurial endeavours in line with the opportunities above and providing support, advice and funding where possible.
- Maintaining and expanding infrastructure to ensure better access to the respective regions.
- Promoting projects for which a sparsely populated area with an arid climate would be an advantage. Examples would be the square-kilometre telescope array, solar energy and wilderness tourism.

This is in line with development plans in other regions in the province as the strengths and opportunities across the Northern Cape are similar.

Table 3.5 below provides an overview of the employment and economic sectors of the study area. Although there has been a reduction in the employment rate between 2001 and 2007, the study area is still characterised by a high employment rate where, on average, just over three quarters of the working age population (excluding the not economically active population) within the study area were formally employed in 2007.
Table 3.5: Overview of Employment and Economic Sectors

<table>
<thead>
<tr>
<th></th>
<th>KhaiMa Municipality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2001</td>
</tr>
<tr>
<td>Employed*</td>
<td>53.1%</td>
<td>51.9%</td>
</tr>
<tr>
<td>Unemployed*</td>
<td>9.8%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Not economically active</td>
<td>37.2%</td>
<td>34.5%</td>
</tr>
<tr>
<td>Employment rate**</td>
<td>84.5%</td>
<td>79.2%</td>
</tr>
<tr>
<td>Predominant industry</td>
<td>Agriculture (49.6%)</td>
<td>Agriculture (23.2%)</td>
</tr>
</tbody>
</table>

* This is the percentage employed/unemployed of the entire working age population and should not be read as the unemployment rate, i.e. the not economically active population is included in this segment.

** In order to reflect a more accurate employment rate, the not economically active population has been excluded from this segment.

So What?

- The baseline economic profile gives an indication of how people in the area make their living and the economic activities within a given society. This is required in an attempt to minimise any potential negative impacts on people’s livelihoods.
- Despite the high employment levels in the local area, unemployment is still high. The project might provide some employment relief, depending on the hiring practices used during the project and the extent to which local employment is prioritised.
- Loss of access to land for grazing purposes is likely to be the main local negative economic impact.

Economic Change Processes

Economical change processes relate to the changes brought about to the employment and general economic profile of an area as a result of the introduction of any development. For example, job opportunities might be created as a result of the construction and maintenance of the proposed transmission power line and associated infrastructure. Employment creates a source of income, which in turn enables the employed individual to access services as a support mechanism for his/her family.

The economical change processes and expected impacts are summarised in table 3.6.

Table 3.6: Economical Change Processes and Expected Impacts

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Economical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>Contracts between the project proponent and its appointed contractors normally stipulate employment requirements, which usually include gender quotas, youth quotas and quotas for local labour to be employed during the project. In addition, they might also require that a certain proportion of time for</td>
</tr>
<tr>
<td>ISSUE</td>
<td>Economical Change Processes</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td></td>
<td>which construction workers are paid must be spent on skills development initiatives.</td>
</tr>
</tbody>
</table>

| EXISTING IMPACT | Although there has been a reduction in the employment rate between 2001 and 2007, the study area is still characterised by a high employment rate. Noteworthy, however, is the reduction in agriculture as the predominant employment industry – from 49.6% in 2001 down to 23.2% in 2007, which indicates a reduction in this industry. |

| PREDICTED IMPACT | The proposed development can enhance economic opportunities by creating and affording job opportunities to local community members. However, it is not foreseen that such opportunities would be sustainable as most of the jobs will be restricted to the construction phase. It is furthermore unlikely that vast numbers from the local community will find employment during the construction phase due to the skills levels required and the sensitivity of the construction material used (e.g. in the past temporary staff from local communities were responsible for copper theft, which resulted in time delays and cost implications for Eskom). Even if local community members are not utilised as part of the construction team, it is important to note that 206 positions will still be created, which means that there will still be 206 employment opportunities available on a national level. These individuals will still gain financially from employment on the project, whether they are local or not. The proposed project can furthermore lead to a boost in the local formal and informal trade market as it is likely that some local services can be utilised, albeit on a temporary basis. The expansion of the municipal services network can take place if more electricity becomes available. This means that more households can be connected to the electricity grid, which would enhance their quality of life. In addition, the expansion of the electricity grid could stimulate economic growth in the area, which in turn would have a positive economic impact on the area as more jobs become available. |

<table>
<thead>
<tr>
<th>IMPACT ASSESSMENT</th>
<th>Pre-Mitigation</th>
<th>Post-Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal Scale</td>
<td>Short term</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Individual/Household</td>
<td>Localised</td>
</tr>
<tr>
<td>Severity/Beneficial Scale</td>
<td>Slightly beneficial</td>
<td>Moderately beneficial</td>
</tr>
<tr>
<td>Significance Scale</td>
<td>Low</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**ENHANCEMENT MEASURES**
- Unskilled job opportunities should be afforded to local residents. Local trade unions or the local municipality could assist with the recruitment process to counteract the
potential for social mobilisation.

- Develop a procurement policy that is easy to understand and ensure that local subcontractors also comply with the procurement policy and any other applicable policies.
- Ensure that local subcontractors receive the necessary support in terms of resources.
- Agree on specific performance criteria prior to appointment.
- Identify the segment that might benefit from informal indirect opportunities, and promote skills development and subsidisation initiatives that are sustainable.
- Encourage construction workers to use local services.
- Individuals with the potential to develop their skills should be afforded training opportunities. Eskom or its appointed contractors should be involved in this process.
- Mechanisms should be developed to provide alternative solutions for creating job security upon completion of the project. This could include formal and/or informal training on how to look for alternative employment, information on career progression, etc. to ensure that people are equipped to seek other jobs with the skills that they have gained.
- Payment should comply with applicable Labour Law legislation in terms of minimum wages.
- Where local labourers are employed on a more permanent basis, cognisance should be taken of the Labour Law in terms of registering the worker with the Unemployment Insurance Fund (UIF), Pay as You Earn (PAYE), workman’s compensation and all other official bodies as required by law. This would enable the worker to claim UIF as a means of continuous financial support when the worker’s position on the construction team has either become redundant or once the construction phase comes to an end.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Economical Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>potential for social mobilisation.</td>
</tr>
<tr>
<td></td>
<td>- Develop a procurement policy that is easy to understand and ensure that local subcontractors also comply with the procurement policy and any other applicable policies.</td>
</tr>
<tr>
<td></td>
<td>- Ensure that local subcontractors receive the necessary support in terms of resources.</td>
</tr>
<tr>
<td></td>
<td>- Agree on specific performance criteria prior to appointment.</td>
</tr>
<tr>
<td></td>
<td>- Identify the segment that might benefit from informal indirect opportunities, and promote skills development and subsidisation initiatives that are sustainable.</td>
</tr>
<tr>
<td></td>
<td>- Encourage construction workers to use local services.</td>
</tr>
<tr>
<td></td>
<td>- Individuals with the potential to develop their skills should be afforded training opportunities. Eskom or its appointed contractors should be involved in this process.</td>
</tr>
<tr>
<td></td>
<td>- Mechanisms should be developed to provide alternative solutions for creating job security upon completion of the project. This could include formal and/or informal training on how to look for alternative employment, information on career progression, etc. to ensure that people are equipped to seek other jobs with the skills that they have gained.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>- Where local labourers are employed on a more permanent basis, cognisance should be taken of the Labour Law in terms of registering the worker with the Unemployment Insurance Fund (UIF), Pay as You Earn (PAYE), workman’s compensation and all other official bodies as required by law. This would enable the worker to claim UIF as a means of continuous financial support when the worker’s position on the construction team has either become redundant or once the construction phase comes to an end.</td>
</tr>
</tbody>
</table>

### 3.4 Institutional and Legal Processes

Institutional and Legal processes refer to the role and efficiency of the local authority and other service providers in the area in terms of their capacity to deliver a quality and uninterrupted service to the local area.

**Baseline Institutional and Legal Processes**

Table 3.7 below provides an overview of the municipal services of the KhaiMa area in relation to the Namakwa District and the Northern Cape Province as a whole. No data could be obtained for the overall municipal service delivery in South Africa.
### Table 3.7: Overview of Municipal Service Delivery

<table>
<thead>
<tr>
<th></th>
<th>South Africa</th>
<th>Northern Cape</th>
<th>Namakwa District</th>
<th>KhaiMa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Cooking</td>
<td>-</td>
<td>Electricity (77.2%)</td>
<td>Electricity (65.3%)</td>
<td>Electricity (88.2%)</td>
</tr>
<tr>
<td>Energy Heating</td>
<td>-</td>
<td>Electricity (64.9%)</td>
<td>Electricity (59.1%)</td>
<td>Electricity (85.7%)</td>
</tr>
<tr>
<td>Energy Lighting</td>
<td>-</td>
<td>Electricity (86.8%)</td>
<td>Electricity (77.5%)</td>
<td>Electricity (91.4%)</td>
</tr>
<tr>
<td>Refuse</td>
<td>-</td>
<td>Removed once a week (69.9%)</td>
<td>Removed once a week (73.3%)</td>
<td>Removed once a week (86.9%)</td>
</tr>
<tr>
<td>Sanitation</td>
<td>-</td>
<td>Equal or above RDP standard (81.6%)</td>
<td>Equal or above RDP standard (71.1%)</td>
<td>Equal or above RDP standard (95.5%)</td>
</tr>
<tr>
<td>Water</td>
<td>-</td>
<td>Equal or above RDP standard (80.3%)</td>
<td>Equal or above RDP standard (73.1%)</td>
<td>Equal or above RDP standard (92.5%)</td>
</tr>
</tbody>
</table>

Overall the municipal profile of the KhaiMa area compares favourably to the district and the province. In 2007 the majority of households made use of electricity for cooking, heating and lighting purposes and in most instances, this is an improvement from the 2001-profile. The majority of households in KhaiMa have access to water that is on par or above RDP standard (i.e. piped water within a 200m distance from the dwelling). The same holds true for other municipal services, i.e. sanitation and refuse services.

- **Emergency Services**

The KhaiMa Municipal area is serviced by 4 police stations, one in Aggeneys, one in Onseepkans, one in Pofadder, and one in Pella. According to the South African Police Service’s website, the ratio of police officers in the Northern Cape as at September 2010 was 1 police officer for every 196 citizens. On a population size of 21 235, theoretically this means that there are approximately 108 police officers deployed throughout the area.

For the purposes of this study only crimes against the person (murder, sexual crimes, attempted murder, assault with grievance bodily harm, common assault, armed robbery and common robbery) and property-related crimes (burglary and theft) were considered.
According to statistics supplied by the Crime Information Management Services of the South African Police Service\(^7\), there was a steady decline in the crime rate of the area up to 2007/08 (measured against the above mentioned police stations’ number of crimes reported for the years 2005-2010), where after it appears as if the crime rate started rising again, most notably in property related crimes. Figure 3.4 below provides a general overview of the crime profile in the KhaiMa area.

**Figure 3.4: General Overview of the Crime profile in the KhaiMa Municipality**

During the period under review a total of 260 crimes against the person and 729 property related crimes were reported. A breakdown per police station is provided in figure 3.5 below.

---

From this profile it is evident that Pofadder has the highest crime rate by far. In all areas it seems as if the crime rate was on the decline in the years 2005 - 2008, after which it seems as if there is a steady increase in the crime rate in most areas. In general, property related crimes are much lower than crimes against the person, most notably in Pella where the majority of reported cases were crimes against the person.

The issue is mentioned here because there is perception that crime increases in an area the moment that construction workers arrive on site. Because of this perception, occurrences of crime during the construction period are likely to be ascribed to the construction workers. This has a mental health impact, such as fear. However, it should be noted that in most instances it is not the actual construction worker who engage in criminal activities but more likely job seekers who loiter at the site in search of employment.

According to the KhaiMa Municipality IDP there is no doctor who services the municipal area and all emergency cases are referred to the doctor in Springbok. Pofadder has two ambulances that have to service the whole municipal area. The hospital in Aggeneys only provides services to mine employees.

So What?
- The baseline institutional and empowerment profile gives an indication of the municipal services available, the local municipalities’ ability to provide for additional connections if required (e.g. removing waste from site), and the capability of the area to provide in health and other emergency services.
This information enables the project proponent and its appointed contractors to plan ahead by ensuring that they include key aspects such as emergency management plans in their planning process and costing.

Institutional and Legal Change Processes

Institutional and Legal Change Processes assesses the way in which a development of this nature could change the face of service delivery in the affected area and how this change in turn could affect the quality of life of local residents.

The institutional and legal change processes and expected impacts are summarised as per Table 3.8 below.

Table 3.8: Institutional and Legal Change Processes and Expected Impacts

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Institutional and Legal Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>Construction workers will require housing. The need for housing is normally addressed by the contractor(s). The influx of job seekers might lead to an increase in opportunistic crime. The health and emergency services in the area might not be able to cope with accidents and emergencies, which will have obvious health impacts.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>The existing baseline municipal profile suggests that most of the basic municipal services are adequately supplied throughout the area.</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>Construction workers will require housing. In the past large segments of this group was housed successfully within the local community to avoid the use of a residential construction village as the presence of such a village brings with it its own set of socio-cultural change processes and resultant impacts. The need for housing is normally addressed by the contractor(s). The influx of job seekers might lead to an increase in opportunistic crime. The health and emergency services in the area might not be able to cope with accidents and emergencies, which will have obvious health impacts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ASSESSMENT</th>
<th>Pre-Mitigation</th>
<th>Post-Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal Scale</td>
<td>Short term</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Localised</td>
<td>Household</td>
</tr>
<tr>
<td>Severity/Beneficial Scale</td>
<td>Moderately severe</td>
<td>Slight</td>
</tr>
<tr>
<td>Significance Scale</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>

MITIGATION

- Negotiations with the affected local municipalities must be
### ISSUE

<table>
<thead>
<tr>
<th>MEASURES</th>
<th>Institutional and Legal Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>conducted and a “demand-side management” should be implemented.</td>
<td></td>
</tr>
<tr>
<td>Sufficient portable chemical toilets should be provided on site and at the construction village (if applicable).</td>
<td></td>
</tr>
<tr>
<td>If applicable, contractors should ensure adequate sanitation services (e.g. showers) at the construction village with effective drainage facilities to ensure that used water is carried away from the site.</td>
<td></td>
</tr>
<tr>
<td>The construction team should have sufficiently trained first aid officials.</td>
<td></td>
</tr>
</tbody>
</table>

| PREFERRED ALIGNMENT | No preference |

### 3.5 Socio-Cultural Processes

Socio-cultural processes relate to the way in which humans behave, interact and relate to each other and their environment, as well as the belief and value systems which guide these interactions.

**Baseline Socio-Cultural Processes**

As previously mentioned, the two closest towns are Aggeneys and Pofadder. Aggeneys is a small mining town that was established in 1976 to service the Black Mountain Mine. The mine currently employs over 600 permanent staff. Pofadder is located some 60 km from Aggeneys on the N14 between Upington and Springbok. The area surrounding both these towns is arid, sparsely populated and rugged. Some people say that Pofadder was named after Klaas Pofadder, who was a koranna Captain of the area. However, no record exists that this is in fact the case which means that the town could just have been named after the venomous snake that is common to the district.

**Socio-Cultural Change Processes**

Dissimilarity in social practices is more likely to come to the fore if construction workers are housed in a construction camp and if such a camp is located close to existing formal and informal settlements. This is because construction workers spend part of their free time at the construction camp and therefore social and cultural practices will be more evident at the camp than on site. Some of the most common problems associated with residential construction camps, include the following:

- An increase in prostitution: disempowered and desperate local women often view construction workers as financially well-off and therefore as a source of income to the women who, quite frequently has to support her own family. Apart from the wilful act of prostitution, other women are willing to enter into sexual relationships with
construction workers believing that they will gain financially, which is often not the case. This leads to an increase in pregnancies and teenage pregnancies and more often than not, both woman and child is left behind in the community without any financial support when the construction worker moves out of the area.

- An increase in casual sexual relationships has the obvious health implication of an increase in sexually transmitted infections, including HIV. Infection can work both ways – either the man infects the woman or vice versa. In any event, human beings are mobile which means that these infections are spread further when they enter a new area and engage in a new casual sexual relationship.

- Infrastructure and services (e.g. water and sanitation) that are not managed and maintained properly within a construction camp can lead to waterborne diseases such as cholera. Within concentrated living conditions, diseases are easily spread within not only the confines of the camp, but also to the surrounding community.

- Construction workers seldom spend their free time in the camp, but would rather venture into town in search of entertainment, which normally results in alcohol abuse leading to an increase in conflict and violence, as well as an increase in casual sexual relationships as outlined above.

At the time of the study, there was no apparent conflict within the local community or between the local community and the project proponent (Eskom) over the proposed expansion of the substation and the associated transmission power lines. The situation is unlikely to change if the project processes proceed in an open and transparent manner and therefore the issue has not been assessed in further detail.

The socio-cultural change processes and expected impacts are summarised as per Table 3.9 below.

Table 3.9: Socio-Cultural Change Processes and Expected Impacts

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>Socio-Cultural Change Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCUSSION</td>
<td>It is possible that construction workers and job seekers have a different cultural background and dissimilar social practices than local residents, which can lead to the development of conflict situations that impact on community cohesion and social well-being. The potential impact on socio-cultural behaviour and the related perception of environmental changes can have either a positive or a negative impact on sense of place (e.g. peace of mind vs. frustration/anger). The introduction of a new project to the area can be viewed as a positive impact if people perceive the project as infrastructural and/or economic development that is not intrusive on their lives and do not cause them immediate danger. Potential negative impacts include the visual impact and the resultant intrusion on sense</td>
</tr>
<tr>
<td>ISSUE</td>
<td>Socio-Cultural Change Processes</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td></td>
<td>of place.</td>
</tr>
<tr>
<td>EXISTING IMPACT</td>
<td>At the time of the study information was not available on the cultural dynamics of the affected local area. Also the level of place attachment that local residents have to the area was not known.</td>
</tr>
<tr>
<td>PREDICTED IMPACT</td>
<td>Apart from the obvious health implications, HIV infection in particular also has an economic impact. Conflict situations can impact on community cohesion and social well-being, although the potential for conflict is deemed to be very low.</td>
</tr>
<tr>
<td>IMPACT ASSESSMENT</td>
<td></td>
</tr>
<tr>
<td><strong>Temporal Scale</strong></td>
<td><strong>Pre-Mitigation</strong></td>
</tr>
<tr>
<td></td>
<td>Short term</td>
</tr>
<tr>
<td><strong>Spatial Scale</strong></td>
<td>Localised</td>
</tr>
<tr>
<td><strong>Severity/Beneficial Scale</strong></td>
<td>Moderately severe</td>
</tr>
<tr>
<td><strong>Significance Scale</strong></td>
<td>Moderate</td>
</tr>
<tr>
<td>MITIGATION MEASURES</td>
<td>• Inform construction workers on local social practices if any specific cultural customs are observed.</td>
</tr>
<tr>
<td></td>
<td>• Access at the construction site should be controlled to prevent sex workers from either visiting and/or loitering at the construction village or the construction sites.</td>
</tr>
<tr>
<td>PREFERRED ALIGNMENT</td>
<td>Alternative 2 as it is the furthest alignment from the Aggeneys Airport and the town itself. Following on the alignment of the N14, this alternative does not affect any scattered households. Where the alternative intersects with Alternatives 1 and 3, it should follow on with Alternative 1 following the alignment of the existing line as the area is already disturbed.</td>
</tr>
</tbody>
</table>
4. CONCLUSIONS AND RECOMMENDATIONS

As could be expected, the construction phase is characterised by a number of negative social impacts, which is mainly due to the nature of the activities that take place during this phase. Although the expected social impacts associated with the construction phase are mostly negative across all the change processes, these impacts are for the most part only temporary in nature and as such and expected to only last over the construction period.

However, even though all of the identified social impacts can be mitigated or enhanced successfully, it can only be done if Eskom, or its appointed contractor(s), commit to the responsibility of ensuring that the level of disturbance brought about to the social environment by the more negative aspects of the project, is minimised as far as possible.

In addition, the social specialist strongly recommends the following:

- Ensure that social issues identified during the EIA phase are addressed during construction. This could be done by engaging social specialists where necessary or by ensuring that ECOs used during construction have the necessary knowledge and skills to identify social problems and address these when necessary. Guidelines on managing possible social changes and impacts could be developed for this purpose.

- Always inform neighbouring landowners beforehand of any construction activity that is going to take place in close proximity to their property. Prepare them on the number of people that will be on site and on the activities they will engage in.

- Ensure that Eskom employees are aware of their responsibility in terms of Eskom’s relationship with landowners and communities surrounding power lines. Implement an awareness drive to relevant sections to focus on respect, adequate communication and the ‘good neighbour principle.’

- Incorporate all mitigation measures in the SIA that are relevant to the construction phase in the EMP to ensure these are adhered to by Eskom and the contractor.

Based on the results of the BSA, Alternative 2 following on Alternative 1 is deemed the most preferred alternative from a social perspective. This is based on the fact that:

- Alternative 2 as it is the furthest alignment from the Aggeneys Airport and the town itself;
- Following on the alignment of the N14, this alternative does not affect any scattered households; and
- Where the alternative intersects with Alternatives 1 and 3, it should follow on with Alternative 1 following the alignment of the existing line as the area is already disturbed.