

PROPOSED ESCKOM 400KV POWER TRANSMISSION LINE BETWEEN GARONA & ARIES SUB-STATIONS

Scoping Phase Report: Tourism Impact Study

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Terms of Reference

The Terms of Reference for the Draft Scoping Phase Report, Tourism Impact Study are outlined below.

Specific Activities included the following:

- Attendance of a site visit with the entire team i.e. all specialists, the lead consultants, authorities (provincial and national) and Eskom.
- Compilation of a Scoping Phase Report. This will be a brief desktop study report, identifying all the potential impacts of the powerline on existing and potential tourism activities. Tourism frameworks and strategies in place or planned for the region will be investigated. Existing tourism operations, destinations, guides, companies, protected areas and existing and emerging markets will be assessed. Broad alternatives will be provided.

Methodology

This draft report is meant to inform the scoping phase report and serves to provide a background to the tourism environment in the areas under study for the erection of a transmission line between Aries and Garona substations in Northern Cape. It also serves to describe potential issues which may need to be considered in the Environmental Impact Assessment. For this report a brief desktop study was undertaken and a site visit was carried out between July 12-15, 2005. The site was visited and assessed by air and by road, tourism enterprises were visited, and discussions were held with members of local municipality offices in Upington, Groblershoop and Kenhardt, tourism stakeholders, and tourism information officers in Upington, Groblershoop and Kenhardt in order to gain a complete picture of existing and potential tourism activities and destinations in the area.

The focus of this study is on the areas in between Aries and Garona in an area 15 kilometres on either side of the direct line between the two substations. The following study only discusses tourism in this specific area: roughly a 30 kilometre wide belt in between the two substations.

General Background

The Study Area is located in Northern Cape Province approximately 100 kilometres south of the regional centre of Upington. Key features inside the boundaries of the study area include the Orange River, the town of Kenhardt, the railway running east/west between the two substations, the N10 highway and the R10 highway. The area falls under two different municipalities: !Kheis Municipality (Groblershoop area) and Kai !Garib Municipality (Kenhardt area).

The study area lies in the transition zone between the Kalahari and the Karoo environments. It includes Kalahari, Nama Karoo, Karoo Mountain vegetation as well as riparian vegetation along the Orange River. It is characterized by flat expanses, grasslands, duneveld, open pans and scattered koppies. The land has low carrying capacities for wildlife and livestock and wildlife occurs at low densities and includes gemsbok, springbok, bat-eared fox and black backed jackals, except on private land where other species have been introduced, such as white rhino, cheetah and buffalo. Birdlife is characterized by several species of raptor, such as martial eagle and goshawk, sociable weaver, ostrich and waterbirds along the Orange River.

The area consists of large sheep farms (predominantly dorper), agriculture farms (predominantly wine) along the Orange River, and some tourism enterprises, and is sparsely populated with few scattered farmsteads in addition to the homes along the Orange River. The economy is centred heavily on agriculture and tourism is in its fledgling development phase. In terms of the proposed transmission line, most of the area is open and flat with sparse vegetation and few trees with the exception of the banks of the Orange River and the kopjes and mountains in the eastern part of the study area.

Tourism Background

The Northern Cape is the driest and most remote province in South Africa. As a result tourism is not as large a sector as in other parts of the country. However, there are numerous tourism drawcards for the region and several 'flagship' locations. The Province's mantras "Follow the sun, not the crowds", "The land of contrasts where less is more" and "A land of sunny days and starry nights" hone in on the tourism appeal of wide open spaces and big skies. However, while some parts of the province, such as Kgalagadi Transfrontier Park, Augrabies Falls National Park, and the Richtersveld are well known and growing tourism destinations, the majority of Northern Cape's tourism enterprises are small in comparison to the other parts of the country.

Green Kalahari Tourism Framework

The Northern Cape is divided into different sections for tourism development. The study area falls into the Green Kalahari Framework which has comparatively low tourism densities and lacks the larger, more well-known destinations, such as Augrabies Fall and Kgalagadi, which fall into the Kalahari Framework. It is marketed as a land of contrasts with the Orange River, bushman paintings, history, and the kokerboom forests as some of its main attractions.

In the Study Area tourism is at very low densities with few exceptions.

Primary tourism attractions in the area include:

- **Quiver Trees.** The area is in some parts blessed with unusually large stands of Quiver Trees. These are located outside Kenhardt at the Quiver Tree Forest National Monument,

a stand consisting of up to 5000 individual trees and on several private farms such as Spes Bona Farm, located approximately 15 kilometres north of Kenhardt.

- **Rock art.** Much of the draw to the area rests with the San Rock art on the scattered dolerite boulders in the area. These are located on several private farms in the area including:

- Spes Bona Farm
- Dwaal Gaesh Farm
- Gaasmond Farm
- N. Rougas de Loop Farm
- Pypklip Farm
- Kruissemond Farm
- Driekop A Farm
- Bokspuits Farm
- Sandruggies Farm

In addition, an unusual footprint in stone referred to as the *Matsieng*, is advertised in regional and local tourism materials.

- **War graves.** Located on the Driekop Farm.
- **Sites in Kenhardt Town.** There are several sites advertised as tourism destinations in Kenhardt, such as the old library building, the Obelisk War Memorial and the 600 year old camel thorn tree under which the town was founded.
- **Rooiberg Dam.** Located south of Kenhardt and used occasionally for picnics by locals.
- **Hunting.** Although this is a large industry in the province, most hunting takes place further north of the study area where game densities are higher. However, one tourism hunting enterprise has opened at Thuru Lodge, located near Groblersshoop.
- **Wine Tourism.** The wineries open to public viewing and tasting (such as Oranjerivier Wine Cellars) occur along the Orange River, but outside the study area. The wine farms in the study area and possible path of the transmission line are wholly for agriculture to supply wineries with grapes and not as tourism destinations.
- **B&Bs.** There are small guesthouses in the towns of Kenhardt and Groblersshoop of varying operational capacity, and there are several B&Bs along the Orange River in between Groblersshoop and Upington catering to passing motorists. In the study area, one was located, called the Headmaster's House B&B, located near to the railway crossing at the Orange River. This is the only one identified in the possible path of the transmission line.
- **Outdoor Tourism.** Aside from hunting, there are some tourism activities which are marketed by the region's tourism information centres, such as hiking, birdwatching, camping, canoeing, fishing and other river activities. These activities are undertaken by locals as recreational activities, as well as by some visiting tourists.
- **Transit Tourism.** The areas along the Orange River in the path of the potential line are crossed by the main road (N10) linking Upington and Kimberly. There is potential and existing transit tourism that takes place, utilizing B&Bs, as well as small shops and local businesses, such as wineries and raisin farms.
- **Stargazing.** Christo Botha of Groblersshoop offers services for stargazing.
- **E. Centenary Monument.** Monument to the Great Trek on the road in between Upington and Groblersshoop.

Existing and emerging tourism facilities

1. Thuru Lodge and Brulpan Game Ranch. Brulpan is a game ranch of 6000 hectares, located approximately 12 kilometres west of the N10 highway near to the railroad. It has a luxury lodge, Thuru Lodge, offering hunting, photo safaris, horse trails, quad bike activities, spa facilities and game viewing. On the property, there are eland, white rhino, buffalo, giraffe, and gemsbok, all of which are available for hunting. There are plans to re-introduce cheetah and there are plans to expand the game ranch to total 12,000 hectares, all of which is planned to still remain south of the railroad. The lodge caters to high-end clients for exclusive, luxury experiences focusing on tranquility and serenity. The game ranch and lodge are located near to the railroad, but no public infrastructure traverses the actual property.
2. Spes Bona Farm. This farm is 7000 hectares and is located approximately 15 kilometres north of Kenhardt. There is little tourism activity occurring at present, but plans are being investigated for tourism development. There are several rock art sites and Quiver Tree stands on the property and envisioned activities include abseiling, hiking, biking and the development of a tented camp. There are also possibilities for marble mining.
3. Headmaster's House B&B. This B&B lies off the N10 highway and is located on an operational grape farm along the banks of the Orange River. It is located near to the railroad bridge crossing the Orange River. Activities other than accommodation provision include picnics along the river under the bridge, birdwatching and visiting the farm. The building called the "Headmaster's House" is an unofficial historic site. Most of the clientele consist of passing motorists on the N10.
4. Guesthouses in Kenhardt. There are several small accommodation facilities located inside the town limits. Advertised guesthouses include: Bushmanland Guesthouse, Ou Werf Guesthouse, Arbeidsvreugd Guesthouse.

Summary of Potential Issues

The potential issues which will need to be investigated in planning the location of a transmission line linking Garona and Aries substations are described below. From a tourism perspective **visual impacts** and potential **disruption from construction activities** are the greatest possible issues.

Visual impacts

Tourism is a sensitive industry based primarily on subjective perspectives of visitors to an area. In destinations where tourism is focused on outdoors or based on natural elements, such as wilderness, sky, rivers, veld and wildlife, the tourism value rests largely on the experience which can be provided. The study area is such an area, and there is potential for negative visual impacts on tourism from the erection of a transmission line. This can potentially be an issue during the day as well as during the night. During the day, the line can potentially obscure views, degrade scenery and decrease the scenic value of the area or part

of the area. Additionally, any lighting which may potentially be used may extend the visual impact into the night in a part of the country renowned for its night skies and stargazing.

The lies in whether tourism will be impacted on by the site of a line of large transmission lines across the open veld. For people coming from overseas or even from other parts of South Africa who are seeking a pure experience in the wilderness, it is possible that they will not want the view which they have sought out obscured by electricity line. Such visual impacts can be put into perspective based on whether or not other visual impacts are already existing. In areas with no such infrastructure, such as pristine areas as found in national parks, infrastructure development such as transmission lines may have significant impacts on the tourism experience and tourism value of an area and pose a threat to local and regional tourism industries. For other areas, where the scenic integrity has already been affected by other developments, the impacts may be acceptable. The Interested and Affected Parties, specifically those owners and managers of existing and emerging tourism facilities, must be consulted as to their sentiments about possible detrimental or acceptable impacts on their businesses.

Cumulative impacts

There may also be cumulative impacts where the acceptable limit of visually displeasing infrastructure has been breached, reaching a point where the level of scenic degradation becomes unacceptable and damages tourism and its potential revenue. While one railroad, telephone line or electricity line might be acceptable from a visual point of view, several of them together may become too much and detract from the wilderness character of the environment on which tourism is based.

Disruption from construction activities

There is also the potential that construction activities carried out in close proximity to tourism enterprises or to places where tourists visit will negatively impact on and detract from the tourist experience. Such impacts could include noise, site disturbance during the construction phase, dust from vehicles and visual and aesthetic impacts from such construction and crew camps on the feeling of tourists having a serene and secluded nature experience. The location of work camps in close proximity to tourism enterprises can also be a potential issue in terms of noise, light, and feelings of solitude which tourists are seeking out.

Potential positive impacts

There are reports in the area of problems with the reliability and quality the power supply. If developments such as transmission lines can lead to better services for local people and for tourism enterprises seeking to provide a high standard of service, then there is potential for a positive impact, or spin off, from the development. By better servicing areas with electricity, this can create an environment where tourism can emerge or improve.

Significan of Potential Impacts on Tourism

Tables 1, 2, 3, 4, 5 and 6 summarize the significance rating for each of the route alignment alternatives using the method and formula based on DEA&T's (1998) Guideline Document: EIA Regulations. Appendix A provides information on the application of this rating system in evaluating the significance of an impact based on its magnitude, extent, duration and probability.

While impacts to tourism could potentially be experienced during the construction phase, the rating of the significance of impacts has focussed on impacts to tourism of completed project, as no significant enduring impacts to tourism are likely to occur solely as a result of the construction phase itself.

The major aspect of the project likely to impact on tourism is the visual impact of the completed project. The significance of the project's impact on tourism has thus been evaluated with respect to the potential which the projects visual impacts may negatively affect tourism.

Impacts on Tourism: Northern Section of Study area

Table 1: Alternative 1A Northern Section

Issue/Imp act	Corrective measures	Impact					Significan ce
		Nature	Extent	Duration	Magnitude	Probability	
While the power transmission lines will cause a notable change in landscape characteristics, the potential significance of impacts on tourism are perceived as MEDIUM to LOW as few tourism activities are currently taking place in the in the immediate vicinity of this routing.	No	Negative	2	4	4	3	30 Medium
Corrective / Mitigation Measures							

Table 2: Alternative 1B Northern Section

Issue/Impact	Corrective measures	Impact					Significance
		Nature	Extent	Duration	Magnitude	Probability	
The power transmission line will cause a moderate change in landscape characteristics over localized area, however the significance of potential impacts on tourism are perceived as MEDIUM to HIGH, as this option involves routing the transmission line within close proximity to Thuru Lodge.	No	Negative	2	4	8	4	56 Medium
Corrective / Mitigation Measures							

Impacts on Tourism: Central Section of Study Area

Table 3: Central Section

Issue/Impact	Corrective measures	Impact					Significance
		Nature	Extent	Duration	Magnitude	Probability	
With no existing tourism activities taking place in this section and the significance of changes to the landscape and key views being minor, the significance of any potential impacts on tourism have been assessed as LOW.	No	Negative	2	4	2	2	16 Low
Corrective / Mitigation Measures							

Impacts on Tourism: Southern Section of Study Area

Table 4: Alternative 2A Southern Section

Issue/Impact	Corrective measures	Impact					Significance
		Nature	Extent	Duration	Magnitude	Probability	
With few existing tourism activities taking place in this section and the significance of changes to the landscape and key views being minor, the significance of any potential impacts on tourism have been assessed as LOW.	No	Negative	2	4	2	3	24 Low
Corrective / Mitigation Measures							

Table 5: Alternative 2B Southern Section

Issue/Impact	Corrective measures	Impact					Significance
		Nature	Extent	Duration	Magnitude	Probability	
The power transmission line will cause a moderate change in landscape characteristics, however the potential impact on tourism of this alternative has been assessed as MEDIUM as this routing would impact to a degree on the Quiver Tree Forest National Monument which is in the nearby vicinity.	No	Negative	2	4	4	4	40 Medium
Corrective / Mitigation Measures							

Table 6: Alternative 2C Southern Section

Issue/Impact	Corrective measures	Impact					Significance
		Nature	Extent	Duration	Magnitude	Probability	
The power transmission lines will cause a notable change in landscape. The significance of this option on tourism has been assessed as MEDIUM to HIGH as the routing of this option has the potential to directly impact tourism associated with the Quiver Tree Forest National Monument as well as potential tourism opportunities in the town of Kenhardt.	No	Negative	2	4	8	4	56 Medium
Corrective / Mitigation Measures							

Conclusion

When the alternative routes are broken down into different segments, it is clear that the central section poses the least concern regarding potential future impacts on tourism. Tourism is not practiced in that area and the significance of impacts on future tourism in the vicinity are assessed as being low.

In the Northern and Southern segments, there are two primary places of concern with respect to impacts on tourism: Thuru Lodge in the north, and the Quiver Tree Forest in the south. Both alternatives 1B and 2C were rated to have the greatest significance with respect to potential impacts on tourism. Alternative 1B lies in close proximity to Thuru Lodge. During the construction phase, as well as the operating phase, 1B will likely impact on tourism activities practiced there which are heavily reliant on tranquillity and wilderness. Alternative 2C will lie in close proximity to the Quiver Tree Forest National Monument, where transmission lines have a strong possibility of adversely affecting the tourist experience through their negative visual impact. These are, therefore, not recommended routes.

In the far Northern areas, all routes will eventually cross the Orange River and be near to tourism enterprises such as B&Bs (such as the Headmaster's House B&B). This is reflected in the ratings, but it is not considered that the significance of the impact will be high, assuming that the transmission lines are located a suitable distance away from the any B&B.

The following route alignment is thus proposed, as it would have the least impact on tourism.

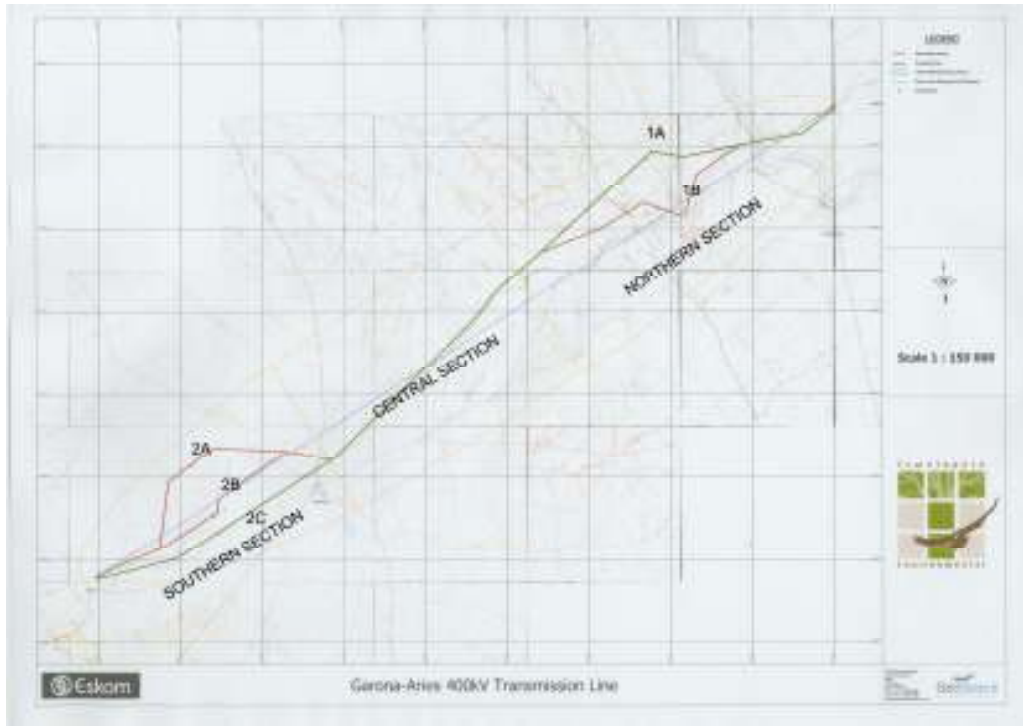
Northern Section: Alternative 1A

Central Section: As per plan

Southern Section: Alternative 2A

If tourism is to be valued as having high importance in the overall decision of which route to take, Alternatives 1B and 2C should be avoided.

APPENDIX A
ESKOM ROUTE MAP



APPENDIX B

Method of Assessing Significant Impacts

The assessment of impacts will largely be based on DEAT's (1998) Guideline Document: EIA Regulations. The assessment will consider impacts arising from the construction and operation phases of the proposed project both before and after the implementation of appropriate mitigation measures.

It is proposed that the impacts will be assessed according to the criteria outlined below. Each issue is ranked according to extent, duration, magnitude (intensity) and probability. From these criteria, a significance rating is obtained, the method and formula is described below.

Nature of Impact

The impacts are to be assessed as either having a:

- negative effect (i.e. at a 'cost' to the environment),
- positive effect (i.e. a 'benefit' to the environment), or
- neutral effect on the environment.

Extent of the Impact

- (1) Site (i.e. within the boundaries of the study area),
- (2) Local (i.e. the area within 10 km of the study area),
- (3) Municipal
- (4) Provincial (i.e. Northern Cape Province),
- (5) National (i.e. South Africa), or
- (6) International (i.e. Southern Africa and beyond).

Duration of the Impact

The length that the impact will last for is described as either:

- (1) immediate (>1 year)
- (2) short term (1-5 years),
- (3) medium term (6-15 years),
- (4) long term (the impact will cease after the operational life span of the project),
- (5) permanent (no mitigation measure of natural process will reduce the impact after construction).

Magnitude of the Impact

The intensity or severity of the impacts is indicated as either:

- **(0)** none (where the aspect will have no impact on the environment),
- **(2)** Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),
- **(4)** Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
- **(6)** Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),
- **(8)** High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
- **(10)** Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).

Probability of Occurrence

The likelihood of the impact actually occurring is indicated as either:

- **(0)** None (the impact will not occur),
- **(1)** improbable (the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions)
- **(2)** low probability (there is a possibility that the impact will occur),
- **(3)** medium probability (the impact may occur),
- **(4)** high probability (it is most likely that the impact will occur), or
- **(5)** definite / don't know (the impact will occur regardless of the implementation of any prevention or corrective actions, or you don't know what the probability will be based on too little published information).

Significance of the Impact

Based on the information contained in the points above, the potential impacts are assigned a significance weighting (**S**). This weighting is formulated by adding the sum of the numbers assigned to extent (**E**), duration (**D**) and magnitude (**M**) and multiplying this sum by the probability (**P**) of the impact.

$$\mathbf{S}=(\mathbf{E}+\mathbf{D}+\mathbf{M})\mathbf{P}$$

The significance weightings are given below:

- **(<30)** low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- **(30-60)** medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),

- (>60) high (i.e. where the impact must have an influence on the decision process to develop in the area).