

Tabor 400kV Powerline EIA

Social Impacts - Alternative 1

Significance Rating Table

Construction Phase								
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job expectations	Nature of impact:	The powerline can create employment expectations for job seekers. Along this route, the job seekers may be from Weltevedere. High unemployment rates in the Makhado Local Municipality could be the driver of the possible influx of job seekers						
	with	3	1	0	2	8	Low	Medium to high
	without	3	2	4	4	36	Medium	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before construction starts Identify possibilities and creation of a liaison desk 4 months before construction starts Communication strategy well in advance of project start Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g vegetation clearing, food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during construction e.g for vegetation clearing, each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction starts 						
	degree of impact on irreplaceable resources:	N/A						
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities						
	with	1	1	0	1	2	Low	Medium to high
	without	1	1	6	3	24	Low	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. The toilets shall be emptied and cleaned regularly and the contractor shall ensure that waste is not spilled. This can be done through measures such as covering the ground with a water proof material. Furthermore, the toilets and their tanks shall be serviced on a regular basis and where necessary replaced. Construction workers are required to be treated for worms 						
	degree of impact on irreplaceable resources:	N/A						
Health Impacts as a result of exposure to waste (domestic and industrial)	Nature of impact:	Waste on site can become a nuisance for community members and on farms and also pose a danger to the health of people and animals						
	with	1	1	0	1	2	Low	High
	without	1	2	2	3	15	Low	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Littering on site should be prohibited and the ECO should inspect this Fines could be implemented for littering" Waste shall be collected at regular intervals in sealed containers that will removed from site and camps before overflowing. The containers will then be disposed of at recognised facilities. The waste shall be separated before removal from the site and any reusable or recyclable waste identified 						
	degree of impact on irreplaceable resources:	N/A						
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the area within which work is being undertaken						
	with	1	1	2	2	8	Low	Low
	without	2	1	6	3	27	Low	Low
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. "Condoms should be distributed by placing them at centrally located points and by ensuring that construction workers and community members are aware of the availability and location of condoms. The distribution of condoms should be approached with the necessary cultural sensitivity". Local women who may form relationships with construction workers should be empowered through measures such as job creation on the project as this will result in them becoming financially independent and in turn reduce their likelihood of having relationships with construction workers in return for financial favours. Access at the construction site should be controlled to prevent sex workers from either visiting and/or loitering at the construction village. Other diseases eg TB, measles All construction workers should be treated for these and proof of this should be retained 						
	degree of impact on irreplaceable resources:	N/A						

Conduct of construction workforce; Good relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
degree of impact on irreplaceable resources:	N/A								
Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided <ul style="list-style-type: none"> As far as possible, locals must be provided with employment on the power line to reduce any tensions between the locals and community members 							
degree of impact on irreplaceable resources:	N/A								
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route especially as material used in powerlines is often stolen even along powerlines that are in operation							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
degree of impact on irreplaceable resources:	N/A								
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
degree of impact on irreplaceable resources:	N/A								
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
degree of impact on irreplaceable resources:	N/A								
Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be places along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
degree of impact on irreplaceable resources:	N/A								
	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							

Loss of land leading to economic losses	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	3	6	4	40	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 								
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 								
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	1	8	3	30	Low	-	Medium to high	
	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction								
degree of impact on irreplaceable resources:	N/A									
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers								
	with	1	1	2	1	4	Low	-	Medium to high	
	without	1	1	6	3	24	Low	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 								
degree of impact on irreplaceable resources:	N/A									
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present								
	with	1	1	2	4	16	Low	-	Medium to high	
	without	1	1	10	4	48	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 								
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur									
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	2	1	8	3	33	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 								
degree of impact on irreplaceable resources:	N/A									
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised								
	with	1	1	2	1	4	Low	-	Medium	
	without	1	1	6	2	16	Low	-	Medium	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liase with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 								

	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	Put a firm negotiated contract in place during the operational phase							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:								
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the power line is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	Put a firm negotiated contract in place during the operational phase							
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
	degree of impact on irreplaceable resources:	N/A							
Decrease in property values and number of visitirs to lodges and other areas that are popular with	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist								

tourists due to the visual impacts of powerlines	degree of impact on irreplaceable resources:	N/A								
Security issues as a result of the presence of maintenance workers on properties	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	1	4	4	24	Low	-	High	
	degree to which impact can be reversed:	Ensure that construction workers are easily identidy identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liaise with landowners to advice them on the dates of construction of the powerline on his propoerty as well as informing them about the number of personell expected, the landownner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons								
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occuring								
	with	1	1	2	2	8	Low	-	Medium	
	without	1	1	8	4	40	Medium	-	High	
	degree to which impact can be reversed:	Eskom must liaise with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maitenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property								
	degree of impact on irreplaceable resources:	N/A								
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability								
	with	1	1	0	1	2	Low	-	Medium to high	
	without	1	1	2	2	8	Low	-	Medium to high	
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.								
	degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal								
	with	1	1	0	1	2	Low	-	Medium to high	
	without	1	1	2	1	4	Low	-	Medium to high	
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maitenece during seasons when there is likely to be high activity on farms.								
	degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destnations are likely to be very minimal as they will only involve maitenance								
	with	1	1	0	1	2	Low	-	Medium to high	
	without	1	1	2	1	4	Low	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In game farms, maintenance can be undertaken outside the hunting season. In lodges, maintenance can be undertaken during low peak seasons and this can also be extended to weekdays when guests are likely to be fewer. 								
	degree of impact on irreplaceable resources:	N/A								
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible								
	with									
	without	3	5	8	5	80	High	+	Medium	
	degree to which impact can be reversed:	N/A								
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as touriam in the Makhado Local Municipality								
	with	3	4	2	4	36	Medium	+	Medium	
	without	2	1	6	4	36	Medium	+	Medium	
	degree to which impact can be reversed:	N/A								
Increase of electricity supply making it available for agriculture, tourism	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital								
	with									
	without	3	5	8	5	80	High	+	Medium	
	degree to which impact can be reversed:	N/A								

and other industries. The increase in electricity can also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved electricity supply	degree of impact on irreplaceable resources:	N/A							
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
The provision of electricity to services such as health facilities will cease	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:								
	with								
	without	3	5	8	5	80	High	+	Medium
Electricity will be available to numerous rural settlements that do not have this service	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
without	3	5	8	5	80	High	+	Medium	
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Influx of job seekers	Nature of impact:	Creating employment expectations for job seekers							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	2	2	2	10	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before decommissioning starts; Identify possibilities and creation of a liaison desk 4 months before decommissioning starts; Communication strategy well in advance of decommissioning start. Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g., food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during decommissioning, e.g. each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact. Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction start 							
degree of impact on irreplaceable resources:	N/A								
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. 							
degree of impact on irreplaceable resources:	N/A								
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:	An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well.							
degree of impact on irreplaceable resources:	N/A								
Conduct of construction workforce; Good relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
degree of impact on irreplaceable resources:	N/A								
Nature of impact: These can result from factors such as differences in beliefs and cultural backgrounds									

Conduct of construction workforce; Bad relationships between community members/farm workers and Eskom Construction workers leading to violence	with	2	1	2	2	10	Low	-	
	without	2	1	6	4	36	Medium	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided 							
	degree of impact on irreplaceable resources:	N/A							
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often the targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the 							
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
Land owners denying contractors access to their properties	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
Loss of crops leading to economic losses	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
Loss of land leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops 							
	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase 							
	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	degree of impact on irreplaceable resources:	N/A							
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction 							
	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
Theft of game and stock	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
without	1	1	10	4	48	Medium	-	Medium to high	

Security concerns as a result of poaching of game, stock theft and crop theft	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advice landowners and community members about construction and maintenance dates 							
	degree of impact on irreplaceable resources:	N/A							
Safety of community members/farm workers/animals	Nature of impact:								
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Put a firm negotiated contract in place during the operational phase 							
	degree of impact on irreplaceable resources:	N/A							
Cumulative Impacts									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase 							
	degree of impact on irreplaceable resources:	The impact will high where endangered species such as Rhino occur							
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Municipality	Nature of impact:	Tourists visit places to relax and be immersed in nature and the presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Liase with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact 							
	degree of impact on irreplaceable resources:	N/A							
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No-Go Alternative									
	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Not constructing the Powerlines linking the Tabor substation to the new Bokmakirie (Nzhelele) Substation	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline Powerlines linking the Tabor substation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construct the powerlines 							

	degree of impact on irreplaceable resources:	N/A							
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
	degree of impact on irreplaceable resources:	N/A							
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may also hinder the undertaking of other activities that may only be possible with electricity supply	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	
	without	3	4	8	4	60	Medium	-	
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium to high
	without	3	5	10	4	72	High	-	Medium to high
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							

Tabor 400kV Powerline EIA

Social Impacts - Alternative 1a

Significance Rating Table

Construction Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route especially as material used in powerlines is often stolen even along powerlines that are in operation							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:								
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
	degree of impact on irreplaceable resources:	N/A							
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
	degree of impact on irreplaceable resources:	N/A							
Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be placed along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
	degree of impact on irreplaceable resources:	N/A							
Loss of land leading to economic losses	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 							
	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high

Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
	degree of impact on irreplaceable resources:	N/A							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their Identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liase with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
degree of impact on irreplaceable resources:	N/A								
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	Put a firm negotiated contract in place during the operational phase							
degree of impact on irreplaceable resources:	N/A								

Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
degree of impact on irreplaceable resources:									
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
degree of impact on irreplaceable resources:	N/A								
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
degree of impact on irreplaceable resources:	N/A								
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	Put a firm negotiated contract in place during the operational phase								
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
degree of impact on irreplaceable resources:	N/A								
Decrease in property values and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
degree of impact on irreplaceable resources:	N/A								
Security issues as a result of the presence of maintenance workers on properties	Nature of impact:								
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction workers are easily identidy identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liase with landowners to advice them on the dates of construction of the powerline on his propoerty as well as informing them about the number of personell expected, the landownner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								

Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liaise with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maintenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property							
degree of impact on irreplaceable resources:	N/A								
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maintenance during seasons when there is likely to be high activity on farms.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destinations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
degree of impact on irreplaceable resources:	N/A								
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as tourism in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
Increase of electricity supply making it available for agriculture, tourism and other industries. The increase in electricity can also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved electricity supply	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can means that activities that can only take place where electricity is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
The inadequate provision of electricity to services such as health facilities will cease	Nature of impact:								
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								

Electricity will be available to numerous rural settlements that do not have this service	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often the targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:	N/A							
Loss of crops leading to economic losses	Nature of impact:	Crops can be lost during this phase as the activities are almost as intense as those during the construction phase							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that decommissioning takes place when the land is fallow and with no crops 							
	degree of impact on irreplaceable resources:	N/A							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Decommissioning can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Decommissioning should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, decommissioning can occur after this has taken place and fire management can take place after decommissioning							
	degree of impact on irreplaceable resources:	N/A							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
	degree of impact on irreplaceable resources:	N/A							
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Decommissioning should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high

Security as a result of the presence of workers on farms and communities	degree to which impact can be reversed:	<ul style="list-style-type: none"> • Advice landowners and community members about decommissioning dates • Advice landowners and community members about the number of workers expected • Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively • Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked • Construction workers should also carry their identity documents with them and the land owner should be allowed to inspect these • The landowner should be allowed to check the identification cards and note the names of construction workers present on site. • Landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised • In general, access to farms must be according to Agrisa's Protocol for access to farms 							
	degree of impact on irreplaceable resources:	N/A							
Safety of community members/farm workers/animals	Nature of impact:	As decommissioning involves the dismantling of structures, the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	• Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites							
degree of impact on irreplaceable resources:	N/A								
Cumulative Impacts									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase							
degree of impact on irreplaceable resources:	The impact will high where endangered species such as Rhino occur								
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Local Municipality	Nature of impact:	Tourists visit places to relax and be immersed in nature the presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Liaise with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact							
degree of impact on irreplaceable resources:	N/A								
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
No-Go Alternative									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	• Construct the powerlines							
degree of impact on irreplaceable resources:	N/A								
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
degree of impact on irreplaceable resources:	N/A								
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium

other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may also hinder the undertaking of other activities that may only be possible with electricity supply	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages . The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	Medium to high
	without	3	4	8	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such health as facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium
	without	3	5	10	4	72	High	-	Medium
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							

Tabor 400kV Powerline EIA

Social Impacts - Alternative 1b

Significance Rating Table

Construction Phase								
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job expectations	Nature of impact:	The powerline can create employment expectations for job seekers. Along this route, the job seekers may be from the Louis Trichart town area. High unemployment rates in the area could be the driver of the possible influx of job seekers						
	with	3	1	4	2	16	Low	Medium to high
	without	3	2	8	4	52	Medium	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before construction starts Identify possibilities and creation of a liaison desk 4 months before construction starts Communication strategy well in advance of project start Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g vegetation clearing, food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering Where possible, ensure that all interested community members get an opportunity to work on the project during construction e.g for vegetation clearing, each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction starts 						
	degree of impact on irreplaceable resources:	N/A						
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities						
	with	1	1	0	1	2	Low	Medium to high
	without	1	1	6	3	24	Low	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. The toilets shall be emptied and cleaned regularly and the contractor shall ensure that waste is not spilled. This can be done through measures such as covering the ground with a water proof material. Furthermore, the toilets and their tanks shall be serviced on a regular basis and where necessary replaced. Construction workers are required to be treated for worms 						
	degree of impact on irreplaceable resources:	N/A						
Health Impacts as a result of exposure to waste (domestic and industrial)	Nature of impact:	Waste on site can become a nuisance for community members and on farms and also pose a danger to the health of people and animals						
	with	1	1	0	1	2	Low	Medium
	without	1	2	2	3	15	Low	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Littering on site should be prohibited and the Environmental Control Officer (ECO) should inspect this Fines could be implemented for littering" Waste shall be collected at regular intervals in sealed containers that will removed from site and camps before overflowing. The containers will then be disposed of at recognised facilities. The waste shall be separated before removal from the site and any reusable or recyclable waste identified 						
	degree of impact on irreplaceable resources:	N/A						
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the						
	with	1	1	2	2	8	Low	Medium
	without	2	1	6	3	27	Low	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. "Condoms should be distributed by placing them at centrally located points and by ensuring that construction workers and community members are aware of the availability and location of condoms. The distribution of condoms should be approached with the necessary cultural sensitivity". Local women who may form relationships with construction workers should be empowered through measures such as job creation on the project as this will result in them becoming financially independent and in turn reduce their likelihood of having relationships with construction workers in return for financial favours. Access at the construction site should be controlled to prevent sex workers from either visiting and/or loitering at the construction village. Other diseases eg TB, measles All construction workers should be treated for these and proof of this should be retained 						
	degree of impact on irreplaceable resources:	N/A						
Conduct of construction workforce; Good	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise						
	with	2	1	2	2	10	Low	Medium to high
	without	2	1	6	4	36	Medium	Medium to high

relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	-	Low
	without	2	1	6	4	36	Medium	-	Low
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided 							
degree of impact on irreplaceable resources:	N/A								
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often the targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	1	1	8	4	40	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
degree of impact on irreplaceable resources:									
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	3	1	6	3	30	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
degree of impact on irreplaceable resources:	N/A								
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
degree of impact on irreplaceable resources:	N/A								
Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be placed along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
degree of impact on irreplaceable resources:	N/A								
	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high

Loss of land leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their presence							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their Identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. Provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liaise with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
degree of impact on irreplaceable resources:	N/A								
	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high

Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	Put a firm negotiated contract in place during the operational phase							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoiled							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:	N/A							
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoiled							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
Decrease in property values and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
degree of impact on irreplaceable resources:	N/A								

Security issues as a result of the presence of maintenance workers on properties	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High
	degree to which impact can be reversed:	Ensure that construction workers are easily identify identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liaise with landowners to advice them on the dates of construction of the powerline on his propoerty as well as informing them about the number of personell expected, the landownner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liaise with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maitenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property							
degree of impact on irreplaceable resources:	N/A								
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maintenece during seasons when there is likely to be high activity on farms.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destniations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
degree of impact on irreplaceable resources:	N/A								
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as touriam in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
Increase of electricity supply making it available for agriculture, tourism	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							

and other industries. The increase in electricity can also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved electricity supply	degree of impact on irreplaceable resources:	N/A							
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
The inadequate provision of electricity to services such as health facilities will cease	Nature of impact:								
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
Electricity will be available to numerous rural settlements that do not have this service	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Influx of job seekers	Nature of impact:	The decommissioning of a powerline can create employment expectations for job seekers against the background of low employment rates in the Makhado Local Municipality and because it is possible that by the time this powerline is decommissioned, the size of the town will have grown and the influx of job seekers may be higher than during the construction phase							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	2	2	2	10	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before decommissioning starts; Identify possibilities and creation of a liaison desk 4 months before decommissioning starts; Communication strategy well in advance of decommissioning start. Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g., food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during decommissioning, e.g. each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact. Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction start 							
degree of impact on irreplaceable resources:	N/A								
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. 							
degree of impact on irreplaceable resources:	N/A								
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. 							
degree of impact on irreplaceable resources:	N/A								
Conduct of construction workforce; Good relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contractors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
degree of impact on irreplaceable resources:	N/A								
Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds								

Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	with	2	1	2	2	10	Low	-		
	without	2	1	6	4	36	Medium	-		
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided <ul style="list-style-type: none"> As far as possible, locals must be provided with employment on the power line to reduce any tensions between the locals and community members 								
	degree of impact on irreplaceable resources:	N/A								
Theft of material from camps and along construction sites	Nature of impact: Material can be stolen from construction sites and in areas along the route									
	with	1	1	0	1	2	Low	-	Medium	
	without	2	1	8	4	44	Medium	-	Medium	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the 								
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact: It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the									
	with	2	1	2	2	10	Low	-	Medium	
	without	2	1	6	3	27	Low	-	Medium	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 								
Land owners denying contractors access to their properties	Nature of impact: This would be expected from landowners who are opposed to the project									
	with	1	1	2	2	8	Low	-	Medium	
	without	1	2	6	4	36	Medium	-	Medium	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 								
Loss of crops leading to economic losses	Nature of impact: Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline									
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	3	6	4	40	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops 								
Loss of land leading to economic losses	Nature of impact: Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads									
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	3	6	4	40	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase 								
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact: Construction can disturb activities on farms									
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	1	8	3	30	Low	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction 								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact: This can lead to conflicts with community members and farmers									
	with	1	1	2	1	4	Low	-	Medium to high	
	without	1	1	6	3	24	Low	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 								
	degree of impact on irreplaceable resources:	N/A								
	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present								

Security concerns as a result of poaching of game, stock theft and crop theft	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their presence							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates 							
Safety of community members/farm workers/animals	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liase with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
Cumulative Impacts	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Put a firm negotiated contract in place during the operational phase 							
	degree of impact on irreplaceable resources:	N/A							
	Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase 							
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makado Municipality	degree of impact on irreplaceable resources:	The impact will high where endangered species such as Rhino occur							
	Nature of impact:	Tourists visit places to relax and be immersed in nature the presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	degree to which impact can be reversed:	<ul style="list-style-type: none"> Liase with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact 							
	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
No-Go Alternative	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
	Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construct the powerlines 							
The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
with	1	1	2	1	4	Low	-	Medium	

No increase in the voltage stability	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
	degree of impact on irreplaceable resources:	N/A							
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may also hinder the undertaking of other activities that may only be possible with electricity supply	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	Medium to high
	without	3	4	8	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium
	without	3	5	10	4	72	High	-	Medium
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
degree of impact on irreplaceable resources:	N/A								
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							

Tabor 400kV Powerline EIA

Social Impacts - Alternative 2

Significance Rating Table

Construction Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job expectations	Nature of impact:	Employment expectations for job seekers along this route will mainly be from Hamagau, Kranskraal and Harmony. Low employment rates in the Makhado Local Municipality (MLM) area could be the driving force behind the influx of job seekers							
	with	3	1	0	2	8	Low	-	Medium to high
	without	3	2	4	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before construction starts Identify possibilities and creation of a liaison desk 4 months before construction starts Communication strategy well in advance of project start Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g vegetation clearing, food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during construction e.g for vegetation clearing, each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction starts 							
	degree of impact on irreplaceable resources:	N/A							
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. The toilets shall be emptied and cleaned regularly and the contractor shall ensure that waste is not spilled. This can be done through measures such as covering the ground with a water proof material. Furthermore, the toilets and their tanks shall be serviced on a regular basis and where necessary replaced. Construction workers are required to be treated for worms 							
	degree of impact on irreplaceable resources:	N/A							
Health Impacts as a result of exposure to waste (domestic and industrial)	Nature of impact:	Waste on site can become a nuisance for community members and on farms and also pose a danger to the health of people and animals							
	with	1	1	0	1	2	Low	-	High
	without	1	2	2	3	15	Low	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Littering on site should be prohibited and the ECO should inspect this Fines could be implemented for littering" Waste shall be collected at regular intervals in sealed containers that will removed from site and camps before overflowing. The containers will then be disposed of at recognised facilities. The waste shall be separated before removal from the site and any reusable or recyclable waste identified 							
	degree of impact on irreplaceable resources:	N/A							
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. "Condoms should be distributed by placing them at centrally located points and by ensuring that construction workers and community members are aware of the availability and location of condoms. The distribution of condoms should be approached with the necessary cultural sensitivity". Local women who may form relationships with construction workers should be empowered through measures such as job creation on the project as this will result in them becoming financially independent and in turn reduce their likelihood of having relationships with construction workers in return for financial favours. Access at the construction site should be controlled to prevent sex workers from either visiting and/or loitering at the construction village. Other diseases eg TB, measles All construction workers should be treated for these and proof of this should be retained 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Good	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high

relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	-	Low
	without	2	1	6	4	36	Medium	-	Low
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided <ul style="list-style-type: none"> As far as possible, locals must be provided with employment on the power line to reduce any tensions between the locals and community members 							
degree of impact on irreplaceable resources:	N/A								
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route especially as material used in powerlines is often stolen even along powerlines that are in operation							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
degree of impact on irreplaceable resources:									
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
degree of impact on irreplaceable resources:	N/A								
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
degree of impact on irreplaceable resources:	N/A								
Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be placed along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
degree of impact on irreplaceable resources:	N/A								
	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high

Loss of land leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their presence							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their Identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liaise with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
degree of impact on irreplaceable resources:	N/A								
Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible								
with	1	1	2	2	8	Low	-	Medium to high	

Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	Put a firm negotiated contract in place during the operational phase							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:	N/A							
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
Decrease in property values and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:								
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High

Security issues as a result of the presence of maintenance workers on properties	degree to which impact can be reversed:	Ensure that construction workers are easily identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liaise with landowners to advise them on the dates of construction of the powerline on his property as well as informing them about the number of personnel expected, the landowner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liaise with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maintenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property							
degree of impact on irreplaceable resources:	N/A								
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maintenance during seasons when there is likely to be high activity on farms.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destinations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
degree of impact on irreplaceable resources:	N/A								
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as tourism in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
Increase of electricity supply making it available for agriculture, tourism and other industries. The increase in electricity can also allow for the undertaking of other activities that may have	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								
The inadequate provision	Nature of impact:								
	with								
without	3	5	8	5	80	High	+	Medium	

of electricity to services such as health facilities will cease	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Electricity will be available to numerous rural settlements that do not have this service	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Influx of job seekers	Nature of impact:	Creating employment expectations for job seekers							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	2	2	2	10	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before decommissioning starts; Identify possibilities and creation of a liaison desk 4 months before decommissioning starts; Communication strategy well in advance of decommissioning start. Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g., food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during decommissioning e.g. each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact. Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction start 							
	degree of impact on irreplaceable resources:	N/A							
Health Impacts as a result of exposure to sewage from construction camps and on construction sites	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. 							
	degree of impact on irreplaceable resources:	N/A							
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:	An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well.							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Good relationships between community members/farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Bad relationships between community members/farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	-	Low
	without	2	1	6	4	36	Medium	-	Low
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided 							
	degree of impact on irreplaceable resources:	N/A							
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the							
	degree of impact on irreplaceable resources:								

Loss of crops leading to economic losses	Nature of impact:	Crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> • Ensure that construction takes place when the land is fallow and with no crops • Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops 							
	degree of impact on irreplaceable resources:	N/A							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Decommissioning should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, decommissioning can occur after this has taken place and fire management can take place decommissioning							
	degree of impact on irreplaceable resources:	N/A							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> • Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. • Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
	degree of impact on irreplaceable resources:	N/A							
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> • Construction should only take place outside the hunting season • Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. • Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	• Advise landowners and community members about construction and maintenance dates							
	degree of impact on irreplaceable resources:	N/A							
Safety of community members/farm workers/animals	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	• Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites							
	degree of impact on irreplaceable resources:	N/A							
Cumulative Impacts									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S)=(E+D+M)*P	Status (+ve or -ve)	Confidence	
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase							
	degree of impact on irreplaceable resources:	The impact will high where endangered species such as Rhino occur							
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Municipality	Nature of impact:	Tourists visit places to relax and be immersed in nature the presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Liaise with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact							
	degree of impact on irreplaceable resources:	N/A							
Increase in power supply and in the stability of the network. In turn numerous	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							

existing developments such as lodges and other tourist attractions can be improved.	degree of impact on irreplaceable resources:	N/A							
No-Go Alternative									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	Construct the powerlines							
degree of impact on irreplaceable resources:	N/A								
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
degree of impact on irreplaceable resources:	N/A								
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
degree of impact on irreplaceable resources:	N/A								
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	
	without	3	4	8	4	60	Medium	-	
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
degree of impact on irreplaceable resources:	N/A								
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	
	without	3	5	10	4	72	High	-	
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
degree of impact on irreplaceable resources:	N/A								
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
degree of impact on irreplaceable resources:	N/A								

Tabor 400kV Powerline EIA

Social Impacts - Alternative 3

Significance Rating Table

Construction Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Conduct of construction workforce; Good relationships between / farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	As this route runs through farms good relationships between contactors and farm workers are possible							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Bad relationships between farm workers and Eskom Construction workers leading to violence	Nature of impact:	As this route runs through farms bad relationships between contactors and farm workers are possible. These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided <ul style="list-style-type: none"> As far as possible, locals must be provided with employment on the power line to reduce any tensions between the locals and community members 							
	degree of impact on irreplaceable resources:	N/A							
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route especially as material used in powerlines is often stolen even along powerlines that are in operation							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:	N/A							
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
	degree of impact on irreplaceable resources:	N/A							
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
	degree of impact on irreplaceable resources:	N/A							
Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high

Loss of crops leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be placed along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
	degree of impact on irreplaceable resources:	N/A							
Loss of land leading to economic losses	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 								
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. Provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								

Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liase with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Put a firm negotiated contract in place during the operational phase 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:								
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	It is not certain if these do occur, but there is a perception that they are harmful to the health of humans and animals							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not placed at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	Put a firm negotiated contract in place during the operational phase							
	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high

Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
	degree of impact on irreplaceable resources:	N/A							
Decrease in property values and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
degree of impact on irreplaceable resources:	N/A								
Security issues as a result of the presence of maintenance workers on properties	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High
	degree to which impact can be reversed:	Ensure that construction workers are easily identidy identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liase with landowners to advise them on the dates of construction of the powerline on his propoerty as well as informing them about the number of personell expected, the landowner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liase with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maintenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property							
degree of impact on irreplaceable resources:	N/A								
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maintenance during seasons when there is likely to be high activity on farms.							
degree of impact on irreplaceable resources:	N/A								
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destniations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
degree of impact on irreplaceable resources:	N/A								
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with	3	5	8	5	80	High	+	Medium
	without								
	degree to which impact can be reversed:	N/A							
degree of impact on irreplaceable resources:	N/A								

An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as tourism in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Increase of electricity supply making it available for agriculture, tourism and other industries. The increase in electricity can also allow for the undertaking of other activities that may have	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
The inadequate provision of electricity to services such as health facilities will cease	Nature of impact:								
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Electricity will be available to numerous rural settlements that do not have this service	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often the targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:	N/A							
Loss of crops leading to economic losses	Nature of impact:	Crops can be lost during this phase as the activities are almost as intense as those during the construction phase							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that decommissioning takes place when the land is fallow and with no crops 							
	degree of impact on irreplaceable resources:	N/A							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Decommissioning can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Decommissioning should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, decommissioning can occur after this has							
	degree of impact on irreplaceable resources:	N/A							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
	degree of impact on irreplaceable resources:	N/A							
	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high

Security concerns as a result of poaching of game, stock theft and crop theft	degree to which impact can be reversed:	<ul style="list-style-type: none"> Decommissioning should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	• Advice landowners and community members about decommissioning dates							
	degree of impact on irreplaceable resources:	N/A							

Cumulative Impacts

Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase. Signs should be fitted with							
	degree of impact on irreplaceable resources:	The impact will be high where endangered species such as Rhino occur							
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Local Municipality	Nature of impact:	Tourists visit places to relax and be immersed in nature. The presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Liaise with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact							
	degree of impact on irreplaceable resources:	N/A							
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							

No-Go Alternative

Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline. Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	• Construct the powerlines							
	degree of impact on irreplaceable resources:	N/A							
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
	degree of impact on irreplaceable resources:	N/A							
No increase and assurance of electricity supply making it unavailable for	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							

agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may also hinder the undertaking of other activities that may only be possible with electricity supply	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	Medium to high
	without	3	4	8	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium
	without	3	5	10	4	72	High	-	Medium
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							

Tabor 400kV Powerline EIA

Social Impacts - Alternative 4

Significance Rating Table

Construction Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job expectations	Nature of impact:	The location of this route, particularly the southern portion is located close to numerous rural settlements such as Muraleni, Hamantsha and Madaheni. It is possible that high unemployment rates which are prevalent in teh Makhado Local Municipality could also extend to these villages and others close to it. As a result of this, the powerline is likely viewed as a high employment opportunity							
	with	3	1	4	2	16	Low	-	Medium to high
	without	3	1	8	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before construction starts Identify possibilities and creation of a liaison desk 4 months before construction starts Communication strategy well in advance of project start Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g vegetation clearing, food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during construction e.g for vegetation clearing, each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction starts 							
	degree of impact on irreplaceable resources:	N/A							
Health Impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	4	32	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. The toilets shall be emptied and cleaned regularly and the contractor shall ensure that waste is not spilled. This can be done through measures such as covering the ground with a water proof material. Furthermore, the toilets and their tanks shall be serviced on a regular basis and where necessary replaced. Construction workers are required to be treated for worms 							
	degree of impact on irreplaceable resources:	N/A							
Health Impacts as a result of exposure to waste (domestic and industrial)	Nature of impact:	Waste on site can become a nuisance for community members and on farms and also pose a danger to the health of people and animals							
	with	1	1	0	1	2	Low	-	High
	without	1	2	2	3	15	Low	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Littering on site should be prohibited and the ECO should inspect this Fines could be implemented for littering" Waste shall be collected at regular intervals in sealed containers that will removed from site and camps before overflowing. The containers will then be disposed of at recognised facilities. The waste shall be separated before removal from the site and any reusable or recyclable waste identified 							
	degree of impact on irreplaceable resources:	N/A							
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	4	36	Medium	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. "Condoms should be distributed by placing them at centrally located points and by ensuring that construction workers and community members are aware of the availability and location of condoms. The distribution of condoms should be approached with the necessary cultural sensitivity". Local women who may form relationships with construction workers should be empowered through measures such as job creation on the project as this will result in them becoming financially independent and in turn reduce their likelihood of having relationships with construction workers in return for financial favours. Th eempowering of women is important as a majority of the population within the Makhado Local Municipality (MLM) are women and men who may be potential partners are few. Furthermore, a majority of women in MLM are unemployed and will most likely seek to make an income in any way possible Access at the construction site should be controlled to prevent sex workers from either visiting and/or loitering at the construction village. Other diseases eg TB, measles All construction workers should be treated for these and proof of this should be retained 							
	degree of impact on irreplaceable resources:	N/A							

Conduct of construction workforce; Good relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
degree of impact on irreplaceable resources:	N/A								
Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds							
	with	2	1	2	2	10	Low	+	
	without	2	1	6	4	36	Medium	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP) ,state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided 							
degree of impact on irreplaceable resources:	N/A								
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
degree of impact on irreplaceable resources:									
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
degree of impact on irreplaceable resources:	N/A								
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
degree of impact on irreplaceable resources:	N/A								
Loss of crops leading to economic losses	Nature of impact:	Crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be places along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
degree of impact on irreplaceable resources:	N/A								
Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high

Loss of land leading to economic losses	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	The location of this route, particularly the northern portion runs along numerous game farms. This is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their presence							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their Identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liaise with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
degree of impact on irreplaceable resources:	N/A								

Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:	N/A							
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	It is not certain if these do occur, but there is a perception that they are harmful to the health of humans and animals							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	Put a firm negotiated contract in place during the operational phase							
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
	degree of impact on irreplaceable resources:	N/A							
Decrease in property values and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
	degree of impact on irreplaceable resources:	N/A							
Security issues as a result of the presence of maintenance workers on properties	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High
	degree to which impact can be reversed:	<p>Ensure that construction workers are easily identy identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liase with landowners to advice them on the dates of construction of the powerline on his propperty as well as informing them about the number of personell expected, the landownner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons</p>							
	degree of impact on irreplaceable resources:								

	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							
Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liase with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maitenance.Despite this, the Landowner nust still be informed of when maintenance will take place on the route on his property							
	degree of impact on irreplaceable resources:	N/A							
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability as the northern posrtion of this route runs along numer							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
	degree of impact on irreplaceable resources:	N/A							
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maitenece during seasons when there is likely to be high activity on farms.							
	degree of impact on irreplaceable resources:	N/A							
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destniations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:	N/A							
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as touriam in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Increase of electricity supply making it available for agriculture, tourism and other industries. The increase in electricity can also allow for the undertaking of other activities that may have	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricy connections can imply that activities that can only take place where electricy is present will be possible							
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
The inadequate provision of electricity to services such as health facilities will cease	Nature of impact:								
	with								
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Electricity will be available	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with								
	without	3	5	8	5	80	High	+	Medium

to numerous rural settlements that do not have this service	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence	
Influx of job seekers	Nature of impact:	The decommissioning of a powerline can create employment expectations for job seekers against the background of low employment rates in the Makhado Local Municipality which may continue up to the period when the powerline is decommissioned. It is also possible that by the time this powerline is decommissioned, the size of the settlements close to this powerline will have grown and the influx of job seekers may be higher than during the construction phase							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	2	2	2	10	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Identify all labour requirements before decommissioning starts; Identify possibilities and creation of a liaison desk 4 months before decommissioning starts; Communication strategy well in advance of decommissioning start. Ensure that there is a Community liaison officer from affected communities and together with them study possibilities of jobs for community members e.g., food vendors Where the jobs have been identified, these must also be formalised through issuing of permits to avoid conflicts within the community and to avoid loitering. Where possible, ensure that all interested community members get an opportunity to work on the project during decommissioning e.g., each community member can be allocated a period of working and when this period elapses, other community members should be given an opportunity to also work and generate some impact. Have clear rules and regulations for access to the camp / site office to control loitering. Consult with the local SAPS to establish standard operating procedures for the control and/or removal of loiterers at the construction site. Ensure that community members are aware of the possible results of loitering before construction start 							
	degree of impact on irreplaceable resources:	N/A							
Health impacts as a result of exposure to sewage from construction camps and on construction camps	Nature of impact:	If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surrounding communities							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Workers are prohibited from using their surroundings to relieve themselves Pit latrines are prohibited on the construction camps or sites. Only mobile or portable toilets shall be used and these must be sufficient for all workers at a ratio of 1 toilet to 15 persons and provided with toilet paper. 							
degree of impact on irreplaceable resources:	N/A								
Health impacts from construction sites and camps as a result of infectious diseases	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm workers in the							
	with	1	1	2	2	8	Low	-	
	without	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> An intense HIV/AIDS and STI awareness campaign should be launched. These should be directed at all construction workers and communities as well. 							
degree of impact on irreplaceable resources:	N/A								
Conduct of construction workforce; Good relationships between community members/ farm workers and Eskom Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise							
	with	2	1	2	2	10	Low	-	Medium to high
	without	2	1	6	4	36	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place 							
	degree of impact on irreplaceable resources:	N/A							
Conduct of construction workforce; Bad relationships between community members/ farm workers and Eskom Construction workers leading to violence	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds. These differences are likely to be more pronounced in the rural settlements in which the Tab-Nzh 4 is proposed							
	with	2	1	2	2	10	Low	-	Low
	without	2	1	6	4	36	Medium	-	Low
	degree to which impact can be reversed:	<ul style="list-style-type: none"> In the Environmental Management Plan (EMP), state that no unauthorised personnel are to enter the site without permission from the site officer/ Environmental Control Officer (ECO) An Environmental Control Officer (ECO) must be appointed to ensure contractors conduct themselves in an appropriate way. A fining system for non-compliance must be set in place; Liasing with the local police and having security personnel on the site will ensure that any possible eruption of violence can be avoided <ul style="list-style-type: none"> As far as possible, locals must be provided with employment on the power line to reduce any tensions between the locals and community members 							
	degree of impact on irreplaceable resources:	N/A							
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the 							
degree of impact on irreplaceable resources:									

Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	3	6	4	40	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops 								
	degree of impact on irreplaceable resources:	N/A								
Loss of land leading to economic losses	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	3	6	4	40	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase 								
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 								
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Construction can disturb activities on farms								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	1	8	3	30	Low	-	Medium to high	
	degree to which impact can be reversed:	Decommissioning should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, decommissioning can occur after this has taken place and fire management can take place after decommissioning								
	degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers								
	with	1	1	2	1	4	Low	-	Medium to high	
	without	1	1	6	3	24	Low	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of decommissioning; where this the construction team should place measures in place to ensure that the structures they are dismantling will not harm any farm infrastructure. Where this occurs, the infrastructure must be fixed to the satisfaction of its owner (farmer) 								
	degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present								
	with	1	1	2	4	16	Low	-	Medium to high	
	without	1	1	10	4	48	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Decommissioning should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 								
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened by their								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	2	1	8	3	33	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates 								
	degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	During decommissioning the dismantling of structures can result in possible injury to humans and animals								
	with	1	1	2	1	4	Low	-	Medium	
	without	1	1	6	2	16	Low	-	Medium	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites 								
	degree of impact on irreplaceable resources:	N/A								
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible								
	with	1	1	2	2	8	Low	-	Medium to high	
	without	1	4	8	4	52	Medium	-	Medium to high	
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Put a firm negotiated contract in place during the operational phase 								
	degree of impact on irreplaceable resources:	N/A								
Cumulative Impacts										
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)	Status (+ve or -ve)	Confidence		
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present								
	with	2	3	4	3	27	Low	-	Medium to high	
	without	5	5	8	4	72	High	-	High	
	degree to which impact can be reversed:	Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase								
	degree of impact on irreplaceable resources:	The impact will be high where endangered species such as Rhino occur								
Loss of a sense of place resulting in economic	Nature of impact:	Tourists visit places to relax and be immersed in nature; the presence of powerlines can therefore spoil this experience for them								
	with	1	2	2	2	10	Low	-	Medium to high	

resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Local Municipality	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Liase with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact							
	degree of impact on irreplaceable resources:	N/A							
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No-Go Alternative									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	Construct the powerlines							
degree of impact on irreplaceable resources:	N/A								
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
degree of impact on irreplaceable resources:	N/A								
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may also hinder the undertaking of other activities that may only be possible with electricity supply	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is							
	with	2	1	4	2	14	Low	-	Medium to high
	without	3	4	8	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
degree of impact on irreplaceable resources:	N/A								
Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium
	without	3	5	10	4	72	High	-	Medium
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
degree of impact on irreplaceable resources:	N/A								
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							

Tabor 400kV Powerline EIA

Social Impacts - Alternative 5

Significance Rating Table

Construction Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from construction sites and in areas along the route especially as material used in powerlines is often stolen even along powerlines that are in existence							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:								
Negative attitudes towards the project and the formation of community groups, NGO's, in response to the project;	Nature of impact:	It is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are important to their livelihoods will oppose the project							
	with	2	1	2	2	10	Low	-	Medium
	without	2	1	6	3	27	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that there is ongoing communication with the affected parties and provide contact details of persons that they can contact should they have queries or comments about the project Highlight the benefits of the project. 							
	degree of impact on irreplaceable resources:	N/A							
Land owners denying contractors access to their properties	Nature of impact:	This would be expected from landowners who are opposed to the project							
	with	1	1	2	2	8	Low	-	Medium
	without	1	2	6	4	36	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> There must be communication with landowners in regards to procedures for entering onto farms Eskom must ensure that land owners are informed of the construction dates as well as dates for maintenance 							
	degree of impact on irreplaceable resources:	N/A							
Loss of crops leading to economic losses	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction takes place when the land is fallow and with no crops Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of crops Where power lines can't be placed along property boundaries, ensure that construction takes place when the land is fallow and with no crops Discuss with land owners that the loss of land will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended 							
	degree of impact on irreplaceable resources:	N/A							
Loss of land leading to economic losses	Nature of impact:	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, powerline towers should be located along the boundary of the farm to lessen the loss of land Discuss with land owners that the loss of some land may be temporary and will only be during the construction phase as some activities such as crop farming can still occur below the powerline after construction has ended; in addition after construction, land will be rehabilitated to as close as possible to its original status 							
	degree of impact on irreplaceable resources:	<ul style="list-style-type: none"> Where the loss of land is permanent, Eskom should discuss compensation with landowner 							
	Nature of impact:	Construction can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high

Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	degree to which impact can be reversed:	Construction should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, construction can occur after this has taken place and fire management can take place before construction							
	degree of impact on irreplaceable resources:	N/A							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible towers should be placed on the edges of farm boundaries and along any existing roads as infrastructure is likely to be minimum or absent with the exception of farm fences and gates which if damaged by contractors should be fixed. Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
degree of impact on irreplaceable resources:	N/A								
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Construction should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur								
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about construction and maintenance dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their Identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. provide the landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							
degree of impact on irreplaceable resources:	N/A								
Safety of community members/farm workers/animals	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites Liase with community leaders/farm owners to ensure that they warn community members/farm employees of the possible dangers of moving close to the construction sites Ensure that animals are secured during construction for their safety as well as that of construction workers 							
degree of impact on irreplaceable resources:	N/A								
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Put a firm negotiated contract in place during the operational phase 							
degree of impact on irreplaceable resources:	N/A								

Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan construction in those parts so that hunting season is avoided; Choose those corridors that will have the least impact on the gaming industry; Construction camps should not be placed in or close to game farm areas 							
	degree of impact on irreplaceable resources:								
Operational Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Perceived electromagnetic fields impacts on humans and animals during the operational phase	Nature of impact:	It is not certain if these do occur, but there is a perception that they are harmful to the health of humans and animals							
	with	1	3	2	1	6	Low	-	Medium
	without	1	5	4	2	20	Low	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Inform communities and landowners about the perceived impacts of powerlines Ensure that there are no developments below the powerline so that although adverse impacts are uncertain, communities are not paces at risk. On farms ensure that no buildings either for human or animal habitation are placed below powerlines 							
	degree of impact on irreplaceable resources:	N/A							
Loss of a sense of place/income on game farms – Tourists want to see "Africa" and the power line can disturb the rustic African setting;	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views will be spoilt							
	with	1	1	2	3	12	Low	-	Medium
	without	3	4	8	4	60	Medium	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Plan maintenance so that hunting season is avoided Choose those corridors that will have the least impact on the gaming industry 							
	degree of impact on irreplaceable resources:	N/A							
Poor maintenance of the power line access roads: conflict between Eskom and the landowners on whose responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Nature of impact:	It is possible that access routes can be of such poor state that maintenance of the powerline is not possible							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	4	8	4	52	Medium	-	Medium to high
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	Put a firm negotiated contract in place during the operational phase							
Impact of the power lines on aircraft as there are airports within the study area; one is the Louis Trichardt airport and the other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Nature of impact:	Where powerlines are not visible or known, plane crashes can result and in turn electricity outages may occur							
	with	1	2	2	2	10	Low	-	Medium to high
	without	4	5	6	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Information not available on Louis Trichardt airport. National aviation should provide information on seriousness of this issue; Consult legislative restrictions and possible permit application. Ensure that powerlines are clearly visible to aircrafts; Distribute information on the presence of new powerlines to relevant air transport organisations 							
	degree of impact on irreplaceable resources:	N/A							
Decrease in property values and number of visits to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	Nature of impact:	These can lead to economic losses							
	with	1	3	4	1	8	Low	-	Medium to high
	without	2	5	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Vegetation can be used to screen the powerlines and other measures can be discussed with Visual Impact Specialist							
	degree of impact on irreplaceable resources:	N/A							
Security issues as a result of the presence of maintenance workers on properties	Nature of impact:	The presence of construction workers can result in the treat of safety and can possibly lead to actual crimes being committed on some properties							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	4	4	24	Low	-	High
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that construction workers are easily identify identified by construction clothes with logos and identification cards with photographs. The landowner should be allowed to check the identification cards and note the names of maintenance workers present on site. Even with mitigation however, farmers may still feel unsafe on their properties; liaise with landowners to advice them on the dates of construction of the powerline on his propeerty as well as informing them about the number of personell expected, the landownner can also be provided with contact details of Eskom to report any unacceptable behaviour on his site as well as the presence of what seem to be unauthorised persons 							
	degree of impact on irreplaceable resources:	The impact can be high where endangered species such as Rhino occur							

Land owners denying contractors access to their properties	Nature of impact:	This can result in maintenance not occurring							
	with	1	1	2	2	8	Low	-	Medium
	without	1	1	8	4	40	Medium	-	High
	degree to which impact can be reversed:	Eskom must liaise with farmers in regards to procedures for entering onto farms. Both Eskom and farmers must agree on the procedures.eg it can be agreed that, farmers must not to change locks to gates without informing Eskom, and where necessary, providing them with spare keys for easy access to their properties during maintenance.Despite this, the Landowner must still be informed of when maintenance will take place on the route on his property							
	degree of impact on irreplaceable resources:	N/A							
Poaching of game as well as stock theft and theft of crops	Nature of impact:	This is a high probability							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	2	8	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance will only occur once in 1 or 2 years (depending on Eskom) the likelihood for activities such as poaching will be minimal as contractors will only be on site for a short period and may not have the time to plan a theft of stock or poaching of game.							
	degree of impact on irreplaceable resources:	N/A							
Impact on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	During the operational phase, impacts on farm activities are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:	As maintenance during the operational phase is of a shorter duration than construction, the impacts on these activities will be for a significantly shorter duration, but must at all costs be avoided. This can be through measures such as undertaking maintenance during seasons when there is likely to be high activity on farms.							
	degree of impact on irreplaceable resources:	N/A							
Impact on farming activities such as hunting in game farms leading to economic losses. Impacts can also be on guests in lodges leading to economic losses	Nature of impact:	During the operational phase, impacts on activities and on guests to lodges and other tourist destinations are likely to be very minimal							
	with	1	1	0	1	2	Low	-	Medium to high
	without	1	1	2	1	4	Low	-	Medium to high
	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:	N/A							
Increase in the voltage stability	Nature of impact:	An increased voltage will ensure that activities that were not able to take place will be possible							
	with	3	5	8	5	80	High	+	Medium
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
An assurance of a reliable electricity supply	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as tourism in the Makhado Local Municipality							
	with	3	4	2	4	36	Medium	+	Medium
	without	2	1	6	4	36	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Increase of electricity supply making it available for agriculture, tourism and other industries. The increase in electricity can also allow for the undertaking of other activities that may have	Nature of impact:	In order to grow the economy of the Makhado Local Municipality, electricity is vital							
	with	3	5	8	5	80	High	+	Medium
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No more backlogs in electricity Connections	Nature of impact:	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present will be possible							
	with	3	5	8	5	80	High	+	Medium
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
The inadequate provision of electricity to services such as health facilities will cease	Nature of impact:								
	with	3	5	8	5	80	High	+	Medium
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
Electricity will be available to numerous rural settlements that do not have this service	Nature of impact:	The presence of electricity to rural areas will improve the lives of many who live in poverty							
	with	3	5	8	5	80	High	+	Medium
	without	3	5	8	5	80	High	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							

Decommissioning Phase									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Theft of material from camps and along construction sites	Nature of impact:	Material can be stolen from the sites where decommissioning is taking place as material used in electricity is often the targeted by criminals							
	with	1	1	0	1	2	Low	-	Medium
	without	2	1	8	4	44	Medium	-	Medium
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Fencing shall be erected around the construction camp and access shall be controlled through a lockable gate and security personnel. The fence shall be constructed of high quality material bearing the SABS mark. Furthermore, the fence shall be inspected on a daily basis and any damages should be fixed as soon as it is practicable. To increase security, shadecloth can be attached to the fence and similar to the fence, shall be inspected daily and fixed as soon as it is practicable. Storage facilities shall be lockable. In addition to the above, all persons or vehicles entering or leaving the construction camp shall be subjected to a search At each site, ensure that there is security personnel 							
	degree of impact on irreplaceable resources:								
Loss of crops leading to economic losses	Nature of impact:	Crops can be lost during this phase as the activities are almost as intense as those during the construction phase							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	3	6	4	40	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Ensure that decommissioning takes place when the land is fallow and with no crops 							
Impacts on farming activities such as sowing, harvesting, and fire management programmes leading to economic losses	Nature of impact:	Decommissioning can disturb activities on farms							
	with	1	1	2	2	8	Low	-	Medium to high
	without	1	1	8	3	30	Low	-	Medium to high
	degree to which impact can be reversed:	Decommissioning should not take place during seasons when there is likely to be high activity on farms. In the case of sowing, construction can occur before this happens, in the case of harvesting, decommissioning can occur after this has taken place and fire management can take place after decommissioning							
Damage to farm infrastructure e.g. irrigation equipment, gates, fences	Nature of impact:	This can lead to conflicts with community members and farmers							
	with	1	1	2	1	4	Low	-	Medium to high
	without	1	1	6	3	24	Low	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Where possible, farm infrastructure can be moved for the duration of construction; where this is not possible, the powerline route can be altered to avoid the damage to the infrastructure 							
Security concerns as a result of poaching of game, stock theft and crop theft	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	1	1	2	4	16	Low	-	Medium to high
	without	1	1	10	4	48	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Decommissioning should only take place outside the hunting season Where possible, animals should be fitted with tracking devices or placed in secure enclosures for the duration of construction. Land owner can also appoint guards to ensure that construction workers and their equipment are inspected prior to leaving the property 							
Security as a result of the presence of workers on farms and communities	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may feel threatened							
	with	1	1	2	2	8	Low	-	Medium to high
	without	2	1	8	3	33	Medium	-	Medium to high
	degree to which impact can be reversed:	<ul style="list-style-type: none"> Advise landowners and community members about decommissioning dates Advise landowners and community members about the number of workers expected Upon arriving in a community or farm, workers must inform the community leader and farm owners or managers respectively Ensure that construction workers are easily identifiable by construction uniform with logos and identification cards with logos and a photograph of the worker. Construction vehicles must also be marked Construction workers should also carry their identity documents with them and the land owner should be allowed to inspect these The landowner should be allowed to check the identification cards and note the names of construction workers present on site. Landowners and community members should be provided with contact details of Eskom and the local SAPS to report any suspicious behaviour on their property as well as the presence of what seem to be unauthorised In general, access to farms must be according to AgriSA's Protocol for access to farms 							

	degree of impact on irreplaceable resources:	N/A							
Safety of community members/farm workers/animals	Nature of impact:	As decommissioning involves the dismantling of structures, the safety of people and animals can be compromised							
	with	1	1	2	1	4	Low	-	Medium
	without	1	1	6	2	16	Low	-	Medium
	degree to which impact can be reversed:	• Ensure that the construction sites and camps are fenced off and signage, in local languages, placed in a conspicuous place near the construction sites							
	degree of impact on irreplaceable resources:	N/A							
Cumulative Impacts									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Poaching of game impacting on the loss of game and in turn affecting the tourism industry of the Municipality and that of the country at large	Nature of impact:	It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where Rhino is present							
	with	2	3	4	3	27	Low	-	Medium to high
	without	5	5	8	4	72	High	-	High
	degree to which impact can be reversed:	Where possible, animals should be fitted with tracking devices or placed in secure enclosures during the construction and decommissioning phases as well as during maintenance as an activity of the operational phase							
	degree of impact on irreplaceable resources:	The impact will high where endangered species such as Rhino occur							
Loss of a sense of place resulting in economic losses especially for tourism sector in turn impact on the economic growth of the Makhado Local Municipality	Nature of impact:	Tourists visit places to relax and be immersed in nature and the presence of powerlines can therefore spoil this experience for them							
	with	1	2	2	2	10	Low	-	Medium to high
	without	3	4	6	3	39	Medium	-	Medium to high
	degree to which impact can be reversed:	Liaise with Visual Impact specialist to get the best mitigation measures; other suggested measures would be to use a tower type with the least adverse visual impact							
	degree of impact on irreplaceable resources:	N/A							
Increase in power supply and in the stability of the network. In turn numerous existing developments such as lodges and other tourist attractions can be improved.	Nature of impact:	An increase in the power supply and in the stability of the network would be vital to the Makhado Local Municipality as electricity is one of the hindrances to the development of the area and in turn an improved economy							
	with	3	4	6	4	52	Medium	+	Medium
	without	3	4	6	4	52	Medium	+	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
No-Go Alternative									
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or -ve)	Confidence
Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation will not be constructed.	Nature of impact:	There is voltage instability as the Polokwane Customer Load Network (CLN), including the Tabor and Spencer power is the weakest part of the Northern Grid Network due to being operated beyond its reliability. There is therefore a need for a new powerline Powerlines linking the Taborsubstation to the new Bokmakirie (Nzhelele) Substation in order to strengthen the northern grid or that the expansion of the Bokmakirie substation to accommodate the new 400kV infrastructure							
	with	2	1	2	1	5	Low	-	Medium to high
	without	4	5	8	3	51	Medium	-	Medium to high
	degree to which impact can be reversed:	• Construct the powerlines							
	degree of impact on irreplaceable resources:	N/A							
No increase in the voltage stability	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects such as loss of data and the inability to undertake certain activities on farms etc.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	3	48	Medium	-	Medium
	degree to which impact can be reversed:	Ensure that the voltage is stabilised							
	degree of impact on irreplaceable resources:	N/A							
No increase and assurance of electricity supply making it unavailable for agriculture, tourism and other industries as well as allowing for the undertaking of other activities that may not have been possible before. The absence of an increase in electricity may	Nature of impact:	An unreliable electricity supply can result in some activities not being undertaken. These can be in the agricultural, tourism, manufacturing, and mining sectors. A lack of electricity therefore means that the economic growth of the Makhado Municipality may be compromised.							
	with	1	1	2	1	4	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Increase electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained							
	degree of impact on irreplaceable resources:	N/A							
Continuation of backlogs in electricity connections	Nature of impact:	The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that require the use of electricity is impossible when there is no electricity available.							
	with	2	1	4	2	14	Low	-	Medium to high
	without	3	4	8	4	60	Medium	-	Medium to high
	degree to which impact can be reversed:	The Makhado Local Municipality must put measures in place to reduce backlogs. This can include increased budgets to allow for an increase in staff numbers to carry out the job and to have adequate material available							
	degree of impact on irreplaceable resources:	N/A							

Continuation of the inadequate provision of electricity to critical services such as health facilities	Nature of impact:	In services such as health facilities, lack of electricity can result in losses of lives							
	with	1	1	0	2	4	Low	-	Medium
	without	3	5	10	4	72	High	-	Medium
	degree to which impact can be reversed:	The necessity of electricity to critical services is imperative and the proposed powerline can ensure that adverse impacts are avoided							
	degree of impact on irreplaceable resources:	N/A							
Continuation of the unavailability of electricity in numerous rural settlements	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to use the wood for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation and the possible loss of protected species.							
	with	1	1	2	2	8	Low	-	Medium
	without	3	5	8	4	64	High	-	Medium
	degree to which impact can be reversed:	Provide electricity to rural areas							
	degree of impact on irreplaceable resources:	N/A							